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PAKISTAN HEALTH EDUCATION STRATEGY

A Report Prepared By PRITECH Consultant:  
RON PARLATO

During The Period:  
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May 31, 1989

To: Peter Spain, PRITECH

From: Ron Parlato, Consultant

Subject: PAKISTAN Health Education Strategy

1. As per my Terms of Reference, I arrived in Islamabad on May 9 to assist the Government of Pakistan develop a national health education strategy using mass media, particularly radio and television. Earlier in the year, the Health Advisor to the Prime Minister, Dr. Tariq Sohail, had set up three separate committees to develop strategies for using promised free air time - one on Health Education; one on Population Education; and one on Female Literacy.
2. My specific task, as defined by the USAID Mission (Anne Aarnes and Heather Goldman, HPN) and the Pakistani Coordinator of the strategy development activities (Dr. Sattar Choudhry), was to prepare the strategy document for the Health Education Committee. Given my background in management and institutional development, I was to give particular attention to organizational issues. Also, given my particular experience in nutrition education, I was to provide special assistance to the Health Committee in this area. Where possible, I was to offer advice to the Ministry of Health concerning the development of their overall Health Education Plan of Action for the period 1989 - 93.
3. The Final Draft Strategy I prepared for the Health Education Committee and representing a consensus of all the members of the committee as well as my own professional judgements is attached to this report. A separate Consultant Report, submitted to USAID, and containing a more direct statement of my own personal views and recommendations, is also attached. Together, they give complete details of the findings of my mission.
4. The Final Draft Strategy, having been revised with the comments of key members of the Health Education Committee, will now be reviewed by Sattar Choudhry, Anne Aarnes, and Heather Goldman, all absent during the last week of my mission. Choudhry will make any revisions he deems necessary, then forward it to Tariq Sohail, also absent during the three weeks of my mission. Although a short, summary strategy for Population Education has been recently done by a PCS Consultant (Moncef Bouhafa), additional work will be required to prepare a final strategy with more complete details on organization, management, financing, and operations. Little if any work has been done on Female Literacy. The preparation of a final strategy for using additional air time, therefore, requiring a consideration of the work of all

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three committees and a synthesis of recommendations, will not be immediately forthcoming.

5. As will be seen from my reports, there are still major issues to be resolved within Government. The most important among them is the issue of free time itself. There is no clear definition as to what this offer means: free prime time? free non-prime time? free spots only? free longer programs only? Because Pakistan Television has been commercialized, and is now run as a business, there is a natural reluctance to offer free time. The potential conflict between the proposal of free time, the existing mandate to operate with minimal losses, and other unconfirmed commitments (rebates for public service spots), will have to be resolved before the further development of the strategy can go ahead. Pakistan Broadcasting (radio), although not yet commercialized, has received authorization to begin the process, and is equally reluctant to provide free air time. Unless and until this issue is resolved, the development of a comprehensive strategy cannot proceed.

5. A second major issue concerns the use of advertising agencies. These agencies, thought to be an ideal resource for the production of health spots for both radio and television, are now looked at more realistically, if not circumspectly. They are unlikely to produce the quality messages envisaged unless they have far more supervision and control than was expected; unless they are held accountable for the quality and effectiveness of the ads they produce; and unless they are provided a profit margin which is at least comparable to what they currently get from commercial advertising. The extensive use of advertising agencies has been vigorously promoted and adopted in Pakistan without sufficient analysis to determine their most appropriate and realistic role. Without a more cautious approach to the use of these agencies, inappropriate messages in highly sensitive areas - such as AIDS - may appear on national radio and television. Unless the role of these agencies vis a vis government sectoral agencies, such as the Ministry of Health, Pakistan Television and Broadcasting, and international donors is clarified, a final strategy cannot be elaborated.

6. Attached also is a list of persons contacted during the mission.

List of Persons Contacted

Lieut. General Dr. Syed Azhar, Exec. Director, National Institute of Health (NIH), Islamabad

Dr. Zafar Ahmed, Dy. Director, Basic Health Services Cell, Ministry of Health, Islamabad

Dr. Mushtaq Khan, Chief, Health and Nutrition Cell, Planning and Development Division, Ministry of Planning, Islamabad

Dr. Sattar Choudhry, Health Education Advisor, Ministry of Health, Islamabad

Qamar-ul-Islam Siddiqui, Health Education Officer, EPI/CDD, NIH

Peter Godwin, Nutrition Education Advisor (ODA), NIH

Michel Plante, CIDA/NIH Communication/Motivation Support Project, NIH, Islamabad

Robert Karam, CIDA/NIH Communication/Motivation Support Project, NIH, Islamabad

Abdul Rashid Khan, Director of Communications, Population Welfare Division, Government of Pakistan, Islamabad

Javed Kasuri, Director, Institute of Educational Technology, Allama Iqbal Open University (AIOU), Islamabad

Razia Abbasi, Director, Bureau for University Extension and Special Programmes, AIOU, Islamabad

Dr. Sawat, WHO Advisor, CDD, NIH, Islamabad

Dr. Robert Castedot, Project Officer, World Bank, Pakistan Country Department, Washington

Dr. Hector Traverso, Global 2000, Islamabad

Midas Advertising, Ltd., Islamabad

Adage Advertising, Ltd., Islamabad

Audio-Visual Communications, Ltd., Islamabad

\_\_\_\_\_, Director of Programmes, Pakistan Broadcasting Corporation, Islamabad

Naseem ur-Rehman, Chief, Information/Communications, UNICEF, Islamabad

Pirko Heinonen, Chief, HPN, UNICEF, Islamabad

LuAnn Martin, Special Project Officer for Breastfeeding, UNICEF,  
Islamabad

Peter Werzel, Water and Sanitation Advisor, UNICEF, Islamabad

Dr. Tara S. Upreti, Training Advisor, Primary Health Care Project,  
Ministry of Health/USAID, Islamabad

Anne Aarnes, Dy. Chief, HPN, USAID, Islamabad

Heather Goldman, HPN, USAID, Islamabad

Ray Martin, Chief, HPN, USAID, Islamabad

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May 26, 1989

To: Anne Aarnes, HPN, USAID; and Heather Goldman, HPN, USAID

From: Ron Parlato, Consultant, PRITECH

Subject: Final Report

Attached you will find the Final Draft of the Plan of Action for Public Health Education Through Media, the Health Education Committee Report developing a strategy for the increased use of radio and television for health. It is considered a final draft because although three key members of the Health Education Committee have reviewed it - Lucia Ferraz-Tabor, Robert Karam, and Naseem-ur-Rehman - the Chairman of the Committee, Sattar Chaudhury, has not. He has been out of town all this week because of a family emergency. His most important comments should be obtained as soon as he returns. Michel Plante has also reviewed the document. The paper in this Final Draft form reflects the comments of Ferraz-Tabor, Karam, ur-Rehman, and Plante.

Since the Plan of Action is a work of consensus, I felt it would be useful for me to put down my own personal, professional observations about the health communications situation in the country, my personal reactions to the Plan of Action, and any particular recommendations I had concerning the development of a strategy and future programs. I would like to make my comments by addressing major issues.

Advertising agencies: I cannot emphasize too strongly the importance of a strong management and supervision of advertising agency activities. This management will come from Government. In a further section below, I will discuss the various institutional ways in which this management may be carried out.

Although advertising agencies hold a certain promise, and are a way to use existing private resources while limiting the creation of public infrastructure, they will perform best if they are satisfied with their profit margin. The margin for public sector activities must be no different than that for commercial activities or performance will be indifferent and subject to error.

Since advertising profits are now calculated as a fixed percentage (15) or air time costs, little or no such revenues will be realized from drastically reduced air-time charges. New contractual arrangements will have to be negotiated with advertising agencies, guaranteeing them a certain profit margin. However, the setting of this margin is not obvious. If the 15 percent figure is retained, on what base should it be

calculated? A hypothetical commercial run of six months (i.e., 15 percent of the total air time costs of an average six-month commercial campaign)? Three months?

It must be stressed that although some advertising agencies may be willing to work for less, the quality of their work may not be guaranteed. In a bidding process where one or more agencies are selected for production on a cost-plus-profits basis, if the profit margin is low, the amount of supervision required to assure compliance to contractual obligations will increase proportionately.

In order to assure such compliance, scopes of work and budgets will have to be written by categories. That is, one portion of scope of work will deal with audience research; another with creative development; another with pretesting; another with pretesting. Each element of the communications process must be carefully monitored and well-defined performance measurements established.

Perhaps most importantly, an independent post-broadcast evaluation of all spots produced by advertising agencies must be carried out to assure accountability. In a purely commercial and highly competitive market, advertising agencies' performance is assured by the market itself: if sales fall, advertising agency accounts will be cancelled. In a public sector market in a country like Pakistan, a surrogate competitive market must be established: independent evaluations of the impact of advertising campaigns on knowledge, attitudes, and practices must be carried out, and precise criteria for success or failure delineated.

Experience with advertising agencies in developing countries has also shown that because of their consumer product and middle/upper class bias, they are not familiar with the subtleties and complexities of health matters, and particularly the concerns of the rural populace. They can afford to make boardroom decisions (that is, without the benefit of exhaustive audience research) about the quality of a particular ad being considered because their creative people are among the very consumers of the product itself. Independent audience research may also have to be contracted separately.

I find that little of the circumspection required in dealing with advertising agencies is currently practiced in Government programs now contracting with these agencies. In future, expanded health communications programs, Government or expatriate advisory staff must be aware of advertising agency limitations and must be well-versed in their management and control. The use of advertising to promote social ends, derived from successful commercial models where many, if not most of the variables of success are absent (high disposable incomes; low cost of consumer products, given these incomes; low economic risk in product choice; media saturated environments; high advertising budgets, etc.) must be carefully and judiciously applied in

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Pakistan.

Message Content and Research: The importance of background research cannot be overemphasized. There are simply too many unresolved issues concerning the major elements of a health education campaign to ignore the need for such research.

Firstly, breastfeeding. Although there is almost universal consensus that exclusive breastfeeding confers invaluable nutritional, immunological, and psycho-social benefits on the infant, there is by no means consensus on the realism of that proposal. The bottle for years has been an equally invaluable instrument for liberating women from an exceedingly time-consuming task - freeing them to become more economically productive members of society. Moreover, women in the 1940s and 1950s in the United States - at a time when outside-the-home work was declining - adopted the bottle in large numbers, indicating a more personal and social, rather than economic decision. Although the inroads made by the bottle in countries such as Pakistan may be the result of insidious marketing practices by infant formula countries, or by poverty (poor women who are lactating are severely undernourished, it is reported, and simply do not have breastmilk in sufficient quantities to satisfy their infant), or by simple ignorance of the salubrious properties of breastmilk, the economic determinants of the introduction of the bottle cannot be discounted.

The argument has often been given that a large percentage of rural women do not work out of the home, and thus economic considerations are not valid. Yet the valuation of women's work inside the home, long a mainstay of progressive reform movements in the United States, must also be done. The bottle may simply allow overworked women more time to fulfill their allotted domestic tasks.

The point is that a "Breast is best" campaign may not be enough. Women may well appreciate the intrinsic value of breastfeeding, and, all other things considered, may sincerely wish to do so exclusively. They may simply have put a higher value on other things. The job of communications is both to revalue breastmilk - that is to inform mothers of its immunological and nutritional properties; and to acknowledge the value of their own time - to both couch breastfeeding promotional messages within an acceptable and realistic context, and to provide mothers with reasonably acceptable alternatives when breastfeeding is not possible. If a mother feels she cannot breastfeed, what measures should she take? If the bottle should not be given because of the highly pathogenic environment existing when it is improperly washed, when then is an acceptable substitute? The cup? If the decline of breastfeeding is linked to labor patterns, what exactly are they in both the rural and urban areas? Perhaps messages stressing the limiting of cup feeding to one or two times a day would be best.

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Research must be done to elucidate the reasons behind the introduction of breastmilk substitutes. Only then can appropriate campaigns in which information is presented realistically be developed.

Secondly, ORS. Although, as in the case of breastfeeding, there is almost universal consensus on the value of ORS, the variables affecting the adoption of ORS are not fully understood. In many countries, mothers are reluctant to purchase ORS because they feel - rightly - that it does not cure diarrhea. Yet the concept of rehydration/dehydration is not a simple one: how does a mother know when the child is dehydrated? If she gives the child ORS at the onset of diarrhea and the child does not take it because the effects of dehydration have not begun, she may discontinue administering it. The rehydration of a severely dehydrated child takes hours. How can messages be devised to give mothers the conviction to have patience and not turn to anti-diarrheals (which are being discouraged) or to traditional cures? What is the role of home fluids? Should mothers be advised to give them at the onset of diarrhea, before dehydration, at which time ORS should be given?

At present the situation is complicated by the fact that the distribution of ORS packets has not been assured, nor has a coherent policy of home distribution been enunciated. How many packets of ORS should a mother coming to a health center with a child with diarrhea receive? Only enough to see the episode through? Enough to satisfy the needs of her child through one year? Enough for all her children? The type and character of communications and information will depend to a large degree on the availability of ORS and the distribution policy attendant to it. The social marketing of ORS has been discussed, and if through this means family access to ORS can be improved, the communications campaign will have greater acceptability.

Thirdly, neonatal tetanus. Once again, the advisability of giving tetanus toxoid to women before birth is universally accepted. Yet, there are practical problems. Firstly, the World Health Organization is now recommending five tetanus vaccinations for full protection, instead of the original two. This will dramatically complicate service delivery. If one assumes only two, to whom will they be given? Apparently the tetanus toxoid, if given in two doses, is good for five years before delivery. This means that girls of 11 and 12 could be given the tetanus vaccine. Unfortunately, children of this age just fall out of the routine for other vaccines. How can these older children be reached? Is a communications campaign talking about the dangers of neo-natal tetanus, and the importance of innoculating young girls realistic? Perhaps the message should only be for young women just married. If the message is directed only to pregnant women, severe resistances can be expected from mothers-in-law who have traditionally felt that any kind of inoculation during pregnancy should be forbidden. Background investigation needs to be done both on audience attitudes and on probable service

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delivery before any campaigns can be launched. Already, however, UNICEF is in the process of developing tetanus television spots for Lahore City Council - this without the benefit of in-depth research. I recommend that this proposed campaign be delayed until more background work is done.

Fourthly, AIDS: With any luck, AIDS will be prevented from becoming the scourge it is in many other countries. Only very few cases have been reported and sero-positivity levels are low. At the present time the Ministry of Health is beginning a media campaign on AIDS, and I was able to view one of the final cuts of a TV spot. I am concerned that not enough review of the existing situation has been done to warrant a nationwide exposure to TV messages. Firstly, transmission routes have not clearly been identified. Without some idea of the rate of spread and likely routes of transmission, few accurate spots can be produced. Secondly, careful review of any messages within the social, cultural, and religious context of Pakistan must be carried out. The unnecessary fear, social recriminations, and religious backlash that has occurred in other countries must not be allowed to happen in Pakistan.

Nutrition: Nutrition has received little attention in health education. Although efforts are of course being made to deal with proper dietary management of diarrhea, there has been no concerted effort to assess the nutritional problem in the country, and to develop a rational strategy to deal with it. Nutrition education, focussing on proper weaning practices, but also, within existing economic constraints, the diet of the pregnant and lactating mother, must be increased. Unfortunately nutrition is fragmented institutionally, with policy and planning done in the Ministry of Planning (at the federal and provincial levels), and some operational work done at NIH where there is currently an ODA-financed Nutrition Education Advisor. More concerted effort should be made to raise nutrition to a priority level at least that of CDD and EPI and assessments done to determine how messages can be either integrated within existing programs or be developed on their own.

Institutional issues are key to the successful implementation of the proposed strategy. As I indicated above, I think that the changing relationships with advertising agencies will dictate to a large degree the nature of institutional strengthening that will have to occur. As I said, I feel that government institutions will have to closely monitor these agencies, and that a strong management and supervisory capability will have to be built into them. The question, of course, is which institutions. In the Draft Strategy, we have suggested that either things continue as is - that is, that both the Health Education Unit and NIH allocate new professional staff which will be well-trained and supported with a sufficient budget; or that a new, autonomous Health Communications Agency be created to serve both ministries. Although the creation of an autonomous agency has distinct advantages: it can attract better people with higher

salaries; its streamlined bureaucratic structure can likely facilitate money flow to private contractors; it can ultimately save resources by eliminating duplication of effort; it can more easily attract bi-lateral funders, increasingly chary of public sector investments - its creation does add one more institution to Government, an institution Government is under obligation to carry for more than the life of any externally-supported project.

The option of a merger - the joining of NIH and the Health Education Unit into one Health Communications Unit - was not included in the Plan of Action, since it appeared that there were too many bureaucratic liabilities. Mergers usually imply my firm merging into your firm or your firm into mine, and agreements are seldom reached without scars. Some countries I know, such as Haiti, have successfully merged the Population Education and Nutrition Education Units into a Health Education Unit, but performance and output have not notably increased.

Whatever the final institutional cast is, the staff must have the following skills:

- \* management
- \* campaign planning
- \* inter-governmental department liaison
- \* research
- \* field health educator liaison

The staff as a whole, must have the ability to move through the communications process - to design and administer field research; to apply the data learned from this research to the development of appropriate messages, themes, and overall campaigns; to plan media-use programs, fully aware of the financial and contractual constraints of both project and national budgets; to oversee production; to plan and oversee monitoring and evaluation; and to assure a functional link between media campaigns and vital interpersonal contacts at the field level.

Interpersonal communications: This element has been treated only superficially in the Plan of Action document. Yet, without a well-developed campaign of field health educators, the media campaign can have only limited success. As importantly, the type of media campaign run in the short term, before a strong field presence is assured, must necessarily be of a general and informative (as opposed to motivational) nature. Most of the messages to be transmitted are complex ones, as I have tried to show above. Most of them, with few exceptions, will require further, in-depth discussion between client and provider. Questions need to be answered accurately by doctors, paramedical staff, and by health educators. Training of this personnel must

accompany the development of the media campaign. Once again, although the social marketing model has been taken from Western countries where product choice is made on the basis of advertising, such choice is dictated by social, economic, and market variables not always influencing decisions in Pakistan. The media will be limited by the personnel in the field.

Health education has, apparently, not been yet successfully integrated into the Primary Health Care system. This may be partially due to the fact that the Provincial Health Education Officers (under the Health Education Unit in Islamabad) have not had the technical support, training, and supervision that they require. Future efforts in strengthening the Primary Health Care system should carefully evaluate the Health Education Officers and determine their role within it.

#### Media production/air time

It is likely, that given the commercial constraints of PTV, that the offer of free air time is likely to mean the following:

(a) longer programs (5-15 minutes), produced and paid for by sponsoring agencies, will be aired free in the early morning (7AM - 8AM) and mid-afternoon (4PM - 5PM). These are not heavy viewership periods;

(b) spots shown in prime-time will be paid for at prime commercial rates, although selected spots may be shown at reduced cost (the prevailing rate for public spots seems to be 70 percent of commercial rates);

(c) spots shown in non-prime time may be shown free if they are included in the total time of the program (i.e., a program of 14 minutes plus 1 minute of total spot time);

(d) PTV is likely to agree to introduce health themes into existing broadcast formats at no cost; the integration of such themes into existing programs will have to be at the initiative of health personnel, and training will have to be given to local TV producers;

(d) PBC is likely to air most spots and externally-produced longer programs at no charge, but is increasingly anxious to increase its operating revenues through the sale of air time. Some time may have to be purchased by sponsors. Health programming at the local level will have to be initiated by Ministry of Health personnel.

There are a number of ways to work successfully within this system. Firstly, although negotiations have already begun between the Ministry of Health and the Ministry of Information and Broadcasting to secure free air time, no discussions have yet been held with local manufacturers to secure their sponsorship of health programs. There is no reason why producers of tea,

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cement, soap, or other products cannot be encouraged to lend their support to a government program. Private producers have a incentive to produce quality material when they have a guaranteed sponsorship, because the price paid to them by PTV is much higher than that for a non-sponsored show. Guaranteed sponsorship plus negotiations with PTV (already underway) for higher prices for higher quality, more complex shows, can ensure a self-sustaining system; can avoid conflicts with PTV about free time, and can assure a certain level of quality.

Secondly, training sessions for radio and TV producers has been quite successful in other countries in the area of population education (URTNA in Africa, for example). These sessions both motivate producers to introduce more socially relevant material, and give them the skills to adapt it properly. A strong working relationship between health personnel and radio and television producers, however, is essential.

Health Education Steering Committees: At present most health education material produced in the country is, in principle, screened by the Health Education Steering Committee. This committee, whose membership includes many expatriates, although important in helping to set national policy, cannot possibly execute the kind of review, planning, and development function required for successful communications efforts. It has assumed these responsibilities in the past, but should no more be given these additional responsibilities. Committees at best can review overall campaign strategies, but should not be involved in detailed production matters.

Child Spacing: Although a detailed examination of population issues has been out of the scope of work of this assignment, I feel, having read the Bouhafa report, admittedly done in a short space of time, that a far more structural analysis needs to be done. Although the institutional problems relating to population education are far simpler than that for health (Population Education is located in one place institutionally, and is likely to remain there), questions still need to be answered about the relationship between the Division of Family Welfare and the Ministry of Health both at the federal and provincial level. How is child spacing information and education to be integrated into health education programs? How are health personnel to be trained in child spacing? How can an effective media-interpersonal campaign be mounted with two separate programs operating?

Dr. Tariq Sohail has apparantly committed Pakistan to an aggressive campaign of child spacing in a speech before the International Aid Consortium in Paris this year. Given this renewed committment, and given still prevailing conservative social and religious convictions, how can the population education program become re-energized, newly creative and responsive to individual needs while respecting the rights and opinions of its populace?

Final Draft

Prepared by: R. Parlato, USAID/PRITECH Consultant

May 25, 1989

Comments on previous drafts incorporated: M. Plante, R. Karam, P. Godwin, N. ur-Rehman, L. Ferraz-Tabor

Plan of Action for Public Health Education  
Through Media.

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EXECUTIVE SUMMARY

The Ministry of Information and Broadcasting has offered free air time to encourage the promotion of educational messages on health, population education and female literacy. Dr. Tariq Sohail, Health Advisor to the Prime Minister, has convened three committees to develop comprehensive short- and long-term strategies to effectively use this additional air time. This document presents the strategy for Health Education.

The key areas of Health Education and the percentage of total air time given to them over the next five years is as follows:

CDD (Control of Diarrheal Disease).....	35 percent
Nutrition.....	35 percent
EPI.....	20 percent
Water and Sanitation.....	10 percent
Adult Diseases (Cancer, Hypertension, AIDS)....	10 percent

Key messages as part of the above are as follows:

- \* ORS
- \* Dietary management of diarrhea
- \* Breastfeeding
- \* Tetanus Toxoid vaccinations

\* Proper weaning foods

\* Anti-smoking

There will be a balance between longer programs of 5-20 minutes (75 percent of air time) and spots (25 percent).

In the short term (1989-90) existing spots and programs already produced by PTV/PBC and other Government agencies (Health Education Unit; NIH) will be aired.

In the medium- and long-term (1990-95), regular, systematic production will be assured by PTV/PBC and private, independent producers.

The institutional structure within which quality programs and spots are to be researched, conceived, planned, and produced must be carefully designated and strengthened:

PTV/PBC: training of producers to enable them to incorporate health messages within existing program formats as well as to produce new programs; supporting Radio's capacity to do village-level production.

MOH, Health Education Unit: strengthening the Unit's capacity to manage and supervise field operations of its system of health educators (Health Education Officers); strengthening its capacity to research, plan and develop quality radio and television spots on adult diseases.

NIH: Strengthening NIH's current capacity to research, plan, and develop radio and television spots on CDD and EPI, and to expand its capacity to similarly research, plan, and develop nutrition communications programs. Such nutrition programs should have a priority status in order to redress the past and current situation in which nutrition education has received little national attention.

Private sector: advertising agencies will continue their contractual obligations to produce spots, but will be under increased supervision to ensure high quality of programming in the difficult and sensitive areas of health education. Private research groups will assist in vital audience research activities.

Ministry of Planning: will participate actively with NIH in the development of nutrition education programs.

Universities: universities such as AIOU and the provincial medical colleges will provide background research facilities as well as production facilities (in the case of the Institute of Educational Technology of the AIOU)

International agencies: will continue to provide financial and technical support, with the goal of fully institutionalizing the communications process within Pakistani public and private organizations by the end of the Seventh Plan.

Introduction:

The National Health Policy of the Government of Pakistan includes Public Health Education as an important component of health service delivery:

"The health system must secure active cooperation of the people. They must realize that ultimately the health of the individual is his or her own responsibility. The need for aggressive and sustained health education campaigns cannot, therefore, be over stressed."

A continuous, regular, and integrated health education and communication program must be therefore put into place in order to secure this individual and community responsibility for health.

Plan of Action for Health Education using radio and television:

In order to increase public access to health information, Dr. Tariq Sohail, Adviser on Health and Population has requested the Ministry of Information and Broadcasting to grant free radio and television time.

It is understood that television air time will not exceed a maximum of 45 minutes per day for health, population, and female literacy programming; and thus health programming will comprise an average of 15 minutes per day.

It is equally understood that 120 minutes (2 hours) of radio air time will be provided free for similar longer programs and spots, and that health programming will therefore comprise an average 40 minutes per day.

Given this positive response of the Ministry of Information and Broadcasting, the Health Advisor directed that a Plan of Action for the productive use of this free time be prepared.

Three Committees were formed ( details are given in Annexure -I) to prepare a Plan of Action. The details of the Health Education Plan are included in this document; those for Population Education and Female Literacy are submitted separately.

Overall Objective of the Plan:

To provide quality health education to families of Pakistan to enable them to take intelligent, appropriate measures to improve their health and the overall health of the community.

Specific Objectives:

To create awareness, improved knowledge, and increased understanding of major health problems in the country through the increased use of mass media, and to provide information concerning remedial and preventive measures using these media.

To provide media support to health education efforts at the field level staff to provide additional sources of information to the public and to provide health workers with new subject ideas.

To launch an advocacy campaign on priority areas i.e. child health (EPI-CDD), infectious and chronic diseases, water and sanitation and nutrition.

Proposed Activities

To accomplish these objectives, radio and television programs and spots will be produced and aired on health including, by order of priority:

(a) causes, treatment and prevention of childhood diseases, most notably dehydration and malnutrition

caused by diarrhea;

- (b) the promotion of comprehensive vaccinations, particularly for children from birth to 11 months; the aggressive promotion of tetanus vaccinations for adolescent girls, new wives, and pregnant women;
- (c) the promotion of proper nutrition, particularly for children from birth to 3 years and for pregnant and lactating mothers; a special emphasis will be placed on the importance of continued breastfeeding and ways to improve hygienic practices of giving non-breast milk products when mothers insist on so doing
- (d) the promotion of improved sanitation: the communications support of water supply and low-cost sanitation programs; the promotion of better personal hygiene, particularly hand-washing;
- (e) adult health problems, such as AIDS, smoking, and high cholesterol diets.

In order to assure the production of these programs and

spots, the institutional framework within which they are to be developed must be strengthened. This institutional framework shall assure the following:

- (a) market and audience research, concerning the knowledge, attitudes, and practices of the target population, their media use and preferences;
- (b) media planning, message conception and development - using the results of research to formulate relevant and appropriate messages, thematic and graphic treatment; and to develop an efficient media-use strategy;
- (c) media production;
- (d) monitoring and evaluation;
- (e) functional relationships with field-level health education activities.

### Constraints

Although media production capacity exists within Pakistan to accommodate the demand for additional radio and television time, financial, personnel, and other constraints may limit the degree to which these resources may be used. PTV, run on a commercial basis is likely to be already heavily committed by existing demands for current and planned programs. Radio is likely to be more flexible, although in its desire also to become commercialized, may require a certain degree of financial support for the production of additional health programming.

As importantly, the institutional resources in both the public and private sector for the research, planning, and development of such programs have been limited. Because of a lack of sufficient research, and consequent inadequate development of themes and messages based on a knowledge of the audience, spots and programs have been frequently produced outside an appropriate socio-cultural context. Furthermore, no systematic post-campaign evaluations to test the impact of radio and television spots and programs have been carried out.

Following is a brief review of different institutions and their potential for participating in an expanded media program:

1. PTV/PBC: Although production facilities exist at PTV and the quality and output of these facilities is high, demands for current programming are likely to limit both the use of these facilities and personnel for health programming and the availability of air time either free or sponsored. Some hours of the day, however, such as early morning programming, are less committed, and the chance for longer health programming is increased. If health programs are produced through private producers (at less cost than PTV production, according to private industry sources) and sponsors secured, assurance of air time will increase.

Pakistan Broadcasting Corporation is under far fewer time constraints. It broadcasts for more hours of the day, with more stations, and more local production. It, however, is not yet commercialized, although it has been recently incorporated. Although it may have few problems with providing air time for health messages, it may require some financial support for their production. Rural programming, for example, could benefit from the provision of portable audio-visual equipment to enable its producers to record in the field.

Although PTV and Pakistan Broadcasting have in the past included health messages and themes within their existing program format, consensus is that these programs have been more academic and formal than would suit the general population.

PTV/Radio may be able to increase the rate at which health messages and themes are integrated within existing program formats, thus relieving the pressure to produce entirely new programs on health. Radio is particularly suited for this activity, and with initiative taken by Provincial and District Health personnel (such as those at DTUs), can likely include health information during currently programmed air time. This, however, requires experience and training in the media treatment of health subjects, and requires access to important background data on the knowledge, attitudes, and practices of the target population. PTV/Radio personnel will need appropriate training

in health programming, and bureaucratic mechanisms will need to be established within Government (discussed below) to assure technical assistance, supervision, and monitoring of production personnel.

2. Ministry of Health, Health Education Unit: This Unit has prime responsibility for overall national planning and policy. Although it has produced a number of radio and television spots on health (entrusted to private advertising agencies), it has not had either the budget or personnel for research, detailed campaign planning, management, supervision (e.g. of the PTV/Radio personnel, mentioned above). As will be seen below in later detailed discussions of advertising agencies current contractual arrangements do not encourage initiative in these important areas.

If this Unit is to continue to produce television and radio spots and the longer programs required by PTV and PBC, it will need to be strengthened with trained professionals capable of planning and managing research, development, and monitoring activities and an additional budget to assure regular and continuous operations.

An equally important role of this Unit is the management of a network of Provincial and District Health Education Officers. At present, however, given personnel (supervisory), training,

material, and logistic constraints, this network has not operated up to its potential. It must be strengthened to enable it to complement media broadcasts with effective interpersonal communication. Past experience has shown that without such interpersonal contact, little habit change occurs.

If the current programs of EPI and CDD as well as new nutrition efforts are incorporated more fully within Primary Health Care programs and integrated at the local level, the role of Health Education Officers becomes even more important.

3. NIH: NIH has played a major role in the implementation of national programs, such as EPI and CDD. With CIDA and PRITECH technical assistance and USAID funding for air time NIH will soon begin a major campaign on CDD/EPI using advertising agencies to produce radio and television spots. The role of NIH is to carry out research, and to supervise and monitor the activities of the advertising agencies.

NIH also has a Nutrition Education Advisor within its Nutrition Division. Although nutrition education projects are embryonic at this stage, the potential exists for the development of further programming, particularly if stronger functional links are made between the Ministry of Planning's Nutrition Division and the NIH Nutrition Division. Since nutrition education has received only minor, if not insignificant attention, in the past,

it is felt that an energized program - perhaps of high-priority status similar to that of EPI or CDD - may be the only way to redress the current deficiencies.

Although NIH now with CIDA and PRITECH assistance has a certain research, planning, and development capability, its communications activities are designed to be limited; that is, to leave to the private sector most of the responsibilities of media planning and production. It is unlikely, however, that advertising agencies will be either equipped or motivated to carry out all these functions (see below #6 Advertising Agencies). In order to successfully manage the production of radio and television spots, to carry out the necessary coordination with PTV and PBC to ensure quality longer programs, to manage and supervise the background research and post-campaign evaluations necessary to both guide and control private agencies, NIH staff will have to be further strengthened either through the recruitment of new staff or the retraining of existing personnel. Research budgets will have to be reconsidered in light of expected new demands.

In view of the expected increase in NIH-private sector contracts (i.e., with advertising agencies and private research firms), financial management and administrative procedures will have to be streamlined in order to assure uninterrupted operations and achievement of targets and deadlines.

4. Private independent producers: Private, independent video producers represent an important potential source of production capability, but no systematic review of these producers in terms of either number or quality has been carried out. It is estimated that such private producers account for only 1 percent of total television production. It is reported, however, that there are a number of capable, qualified independent producers in the country and that their number is increasing because they have been able to produce quality programs at lower cost than PTV. At present, however, such private producers are paid per program minute produced. This tends to encourage simple, inexpensive programs and offers no incentive for more complex treatments of more difficult subjects such as health. To fully involve private producers, this policy may have to be reviewed.

Little or no private production of radio programs occurs in Pakistan.

5. AIOU: AIOU's Institute of Educational Technology already produces educational programs for airing in the Open University format. They have some capacity to produce non-university programs, but very little. As with the other non-health institutions, they would need technical guidance and supervision in the development of appropriate programming. AIOU has already produced a number of health education programs either for the

public at large or within the Open University format. These programs would be available for airing during the first year of implementation of this health education strategy.

6. Advertising agencies: Advertising agencies have been used primarily for the production of health spots, sponsored either by the Health Education Unit or NIH. Because reliance on this private production facility has enabled Government to retain only an overall planning, policy, and administrative function, advertising agencies have played a major role in health education. They are likely to continue to do so, as contracts are likely to be signed with advertising agencies to produce spots on CDD/EPI for NIH.

There are constraints on advertising agency performance, however:

1. Due to the present fee structure, advertising agencies are paid 15 percent of total air time costs of spots broadcast. If spots are aired free of charge or at significantly reduced rates (e.g. 20 percent of current commercial rates as has been suggested in a separate Government proposal), advertising revenues are reduced. If Government agencies seeking to reduce costs purchase discounted time from PTV/Radio, then contract advertising agencies for production, only high profit margins built into these contracts will offset their loss of commercial

revenues. Agencies willing to take a loss by contracting with Government in the hope of further, more lucrative contracts, may not be of the high professional quality needed for sensitive, complex health education messages.

2. Advertising agencies have little or no experience with the production of longer programs. Furthermore, they stand to lose as much if not more on these longer programs since their producers will be occupied with a relatively low-profit enterprise as suggested above.

3. Even under acceptable cost-plus contracts in which specific research, development, and monitoring tasks are specified, advertising agencies may still feel under financial pressures to cut costs to maximize profits. Unless accountability is built into contracts in the form of an independent post-campaign evaluation, advertising agencies may not have the incentive to perform to the highest standards of excellence of which they are capable.

4. Advertising agencies have a distinctly urban and middle/upper class focus. Their recruiting policy, their creative and marketing perspective, are all directed to urban areas. Even with additional training, they are unlikely to quickly master the subtleties of rural education.

For these reasons, advertising agencies must have strong government guidance, technical support, and control to enable them to reach their full potential.

7. Private research organizations: Private research organizations have an important potential role to play in the development and execution of audience research on knowledge, attitudes, and practices relating to health behavior; on media usage and preference; and on the evaluation of existing and future media campaigns. These organizations, however, may not have the requisite experience in rural, sociological-type interviews, and their experience may be limited to a study of commercial, market behavior. Such private organizations must be screened carefully to assure their qualifications. Government educational institutions -- colleges and universities -- are also likely sources of research activities. They, too, should be considered and assessed.

8. Ministry of Planning: At the present time the Ministry of Planning operates a Nutrition Division, responsible for the setting of policy and overall national strategies on nutrition. It also has a network of Provincial Nutrition Coordinators to assure the effectuation of that policy at the local level. As suggested above in the discussion of NIH, it is felt that increased functional relationships between NIH and the Ministry of Planning would increase the potential for raising nutrition

education to its proper place in the panoply of programs to effect changes in health behavior.

9. International Agencies. International agencies have played a prominent role in supporting Government efforts in health education. Given that each agency has its own particular development philosophy, method of operation and support, and financing stream, it will be critical for Government to exert a strong coordinating role to see that the elements of its Health Education Media Strategy as well as its overall Health Education Plan are carried out in a logical way. This is of particular importance since major new health programs of which health education is an important component are soon to be negotiated.

10. An autonomous Health Communications Agency

Although media research, planning, and development activities could continue, as suggested above, in two separate institutions - the Health Education Unit and NIH, a separate, autonomous Health Communications Agency - similar to a parastatal organization - could be created. The advantages of this agency would be as follows:

1. Since all program functions would be centralized, there would be no duplication of either effort or resources.

2. Because of its autonomy such a parastatal organization would have the flexibility to offer increased salaries and attract a highly-qualified professional staff. Savings realized by avoiding the placing of additional staff in two existing agencies (Health Education Unit and NIH) could be spent on the recruitment of this staff.

3. External funding agencies, with their increased emphasis on private sector and parastatal agencies, would be more likely to fund such an agency than to provide funds for the strengthening of existing government infrastructure.

This agency could answer directly to the Director General of Health, but would serve the interests of both the Health Education Unit (which would continue in its current Policy and Planning and Field Health Education roles) and NIH (which would expand its research role).

To summarize the existing institutional situation and to place the proposed media program within it:

1. The production of longer programs and the effective management of private advertising agencies for the continued production of spots is likely to require:

(a) increased participation of PTV/PBC and private,

independent producers for the production of new, longer programs;

(b) increased research on prevailing knowledge, attitudes, and practices to ensure that producers have the basis on which to develop new programs;

(c) increased technical supervision and management of private agencies by Government agencies; overall campaign planning, development, and management by these agencies;

(d) training of PTV/Radio producers to encourage and enable them to both produce new programs and introduce health themes creatively within existing formats; also training of MOH staff in planning, management, program development, research, and monitoring for which they will be ultimately responsible;

(e) increased training and management of field-level Health Education personnel to assure appropriate interpersonal communication on the same themes and messages broadcast by radio and television.

2. To meet these requirements, the following will be required:

(a) additional research must be carried out, particularly in the areas of nutrition and AIDS where little currently has

been studied. As suggested above, research can be carried out by public institutions as Faisalabad University whose Masters Degree students can be engaged in field work; by the College of Home Economics, whose Masters Degree candidates can be similarly employed; by the Pakistan Council for Medical Research, by the Aga Khan Foundation, or by private sector research organizations.

(b) additional trained staff must be provided in the Ministry of Health to carry out the above-cited planning, management, and supervisory role. A minimum of two professionals at NIH and two assigned to the Health Education Unit would be required. One professional would be responsible for overall planning, development, and management; the other for research, message development, and private sector liaison;

(c) additional funds for the sponsorship or production of longer programs. Funds for the production of health spots for NIH are currently available, but must be replenished in the long term. The Health Education Unit also currently has funds (largely from Government of Pakistan resources), and these must be increased if the volume of production is to increase.

Thus, for the long term (1990-95):

1. A clear delineation of institutional responsibilities

must be made to determine acceptable roles for PTV/radio, MOH, NIH, private film producers, universities, and the private sector.

2. Funding should be secured to assure: research, planning and development, management, and training within the institutional context suggested above.

3. Funding should be secured for production costs of longer programs.

4. Training and materials production activities to support field Health Educators should be carried out and a rigorous supervision and in-service training program be established.

For the short term (1989-90):

1. NIH with PRITECH assistance will carry out a series of public health programming workshops for radio and television producers. In the course of these workshops, they will be encouraged to program more health messages and ideas within existing formats. They will be particularly encouraged to use available experts to discuss matters of health, just as experts now discuss (often in prime time) other matters of national interest.

2. PTV/PBC will increase both prime- and non-prime air time for selected already- and soon-to-be produced health spots at significantly reduced rates.

3. Existing PTV/radio programs on health education should be screened for appropriateness and aired. Similarly programs produced by AIOU programmes should be similarly screened.

4. Limited amounts of both MOH and NIH operating budgets (for air time) should be allocated for the evaluation of spots currently or soon to be on the air (i.e. puppet shows on ORS, AIDS, anti-smoking). A small focus-group type of study among both rural and urban residents should be done. CIDA currently has a budget for this. Two years ago such an exercise was completed, and a review of that methodology and the results of the survey should be carried out to determine the nature and extent of any further short-term evaluation exercise.

#### Program Content

CDD: Pakistan has already achieved high levels of awareness about CDD (85 percent). However this awareness may only reflect the positive connection between ORS and diarrhea, and may not indicate a full understanding of the concept of dehydration/rehydration, and the use of ORS as a sustaining

rather than curative agent.

The focus should also be on the use of home remedies to prevent dehydration. This priority reflects the growing concern in Pakistan about shortages of packaged ORS, difficulty of adequate supplies to each family in enough quantities to cover the expected diarrheal episodes of young children. It also reflects a growing realization within the world health community that home fluids - such as rice water, or thin lentil soup, properly prepared - can help prevent dehydration until ORS can be administered or medical treatment sought.

A second major focus of CDD should be better dietary management of diarrhea. In addition to providing properly constituted liquids, mothers must not stop either breastfeeding or supplementary feeding and increase feeding after diarrhea to make up for nutritional loss.

EPI: With the great success of the Pakistan program (85 percent awareness and large-scale coverage), planners are increasingly turning to maintenance - assuring that children in communities without certain diseases like measles or polio keep getting their vaccinations.

A second major focus is reaching children 0-11 months. Although the program has had its best success with the older

child, the young infant has not been reached nearly as well.

The third major communication focus of the EPI campaigns will be encouraging the use of health facilities for vaccinations. EPI mobile and outreach programs, because of their considerable cost, cannot continue indefinitely.

The fourth major focus of the EPI campaigns will be on neonatal tetanus. Recent studies done in Pakistan (Stanley Foster, Centers for Disease Control, Atlanta, 1986) indicate that as many as 120,000 infants per year die of neonatal tetanus. Such deaths can be prevented with two tetanus vaccinations given at least one month before delivery and as long as five years before delivery. Vaccinations, then, of not only pregnant women, but new wives and adolescent girls can be envisaged.

Nutrition: About two-thirds of the population of Pakistan consists of mothers and children. At present the IMR and MMR rates are very high. Children and mothers are particularly high risk groups. Infections diseases and malnutrition are the major health problems. Ninety percent of mothers are underweight, 40-50 percent of children suffer from varying degrees of malnutrition. Ninety percent of mothers still use the services of TBA's, regardless of their level of training.

The focus of nutrition education messages will be on the

child 0-5 years and will emphasize:

(a) the importance of exclusive breastfeeding for as long as possible, given existing constraints (see below), but for at least four months. Messages will focus on exclusive breastfeeding as a way to reduce contact with a contaminated environment; and on breast milk as a product superior to animal milk or synthetic formulas for child nutrition. Doctors, many of whom are complete advocates of breastfeeding, will be a very specific audience group for breastfeeding messages;

(b) the dangers of bottle feeding and the advisability of using a cup when breastfeeding is not desired (see below for further discussion);

(b) the importance of the introduction of supplementary feeding at 4-6 months. The campaign will discuss the issue of contamination, mentioned above and the particularly virulent infections that can breed in improperly-stored food; the importance of food supplementation for proper child development;

(c) the importance of continued good nutrition during diarrheal episodes;

A certain focus will be placed on maternal nutrition, but since this is largely a matter of economics - pregnant and

lactating mothers simply need more food of higher quality, implying greater expense - that education alone can do little.

A supporting message will be on the importance of prenatal care and medical control.

### Child Spacing

Although population education is the subject of a separate Committee report, it should be stressed that messages on child spacing, an important concept for the overall health and well-being of the family, will be integrated into educational efforts on maternal and child health. Close collaboration with the Ministry of Family Welfare will be maintained and guidance for child-spacing messages obtained.

### Water and Sanitation

Water and sanitation are important elements of any health education campaign. Informational programs on these subjects, however, should be tied to current developmental efforts. A large water and sanitation effort is currently underway in Quetta, with UNICEF assistance, and the World Bank/UNDP Decade program is also active in Pakistan. A close coordination with these efforts should precede any mass media effort on water and

sanitation.

At the present time UNICEF is negotiating a technical assistance and support agreement with the Ministry of Local Government and Rural Development to provide it assistance in the use of media to support water and sanitation programs. Officials responsible for the this initiative were not available during the course of preparation of this document. If this program is, in fact, developed, close coordination with its efforts and those envisaged by the Ministry of Health should be maintained.

#### Adult Education

--anti-smoking

-- AIDS

-- high cholesterol levels

-- high blood pressure

-- mental health.

Malaria remains a serious problem in Pakistan. However, without major eradication programs and the availability of

curative chloroquine treatment, education can have but a limited effect/ The situation should be assessed, however, and in those areas where chloroquine is readily available, education and informative efforts should be made.

Constraints limiting program content and quality

There are a number of issues which need to be resolved before effective media messages can be developed:

(a) ORS: Still not enough is known about mothers' understanding and appreciation of the concept of dehydration and the role of ORS as a temporary sustaining and not curative agent to be able to fashion an appropriate media campaign.

Far more investigation needs to be carried out concerning home fluids, their medical acceptability, and their use in the home.

ORS, because of its high sugar content, likely reconstitution with contaminated water, and high ambient temperatures in the home, is a particularly rich environment for the rapid growth of bacteria. If a liter of ORS, for example, is kept for 24 hours, it may be fermented by bacteria, become less effective in preventing dehydration and repairing electrolyte and metabolic abnormalities, and possibly further aggravate the intestinal infection

Because of this, additional information on practices of storage and discarding of ORS by mothers is required.

(b) Breastfeeding:

Pakistani women are introducing the bottle to their infants at an increasing rate, particularly in urban areas. Little is known, however, about the causative factors of this phenomenon. To what degree, for example, do female labor, family economy, rural-urban migration, and other largely economic factors limit the ability of women to breastfeed? Women are reported to discontinue breastfeeding because they say their milk is insufficient. To what degree are these responses accurate or to what degree do they reflect a more subtle but by no means less important desire to be simply freed from the time-consuming task of frequent breastfeeding? Although mothers in the United States, for example, are breastfeeding more and for longer amounts of time, bottles are introduced at a relatively early age to enable mothers to work. Breastfeeding was discontinued by the majority of American mothers in the post-war period of the 1940's and 1950's largely because of the freedom the bottle provided - and this at a time when female employment outside the home was decreasing. To what degree are Pakistani urban mothers different from rural mothers in their breastfeeding behavior; and what particular constraints affect each group?

(c) EPI: Although neonatal tetanus has recently been acknowledged as a serious health problem in the country, no communications strategy has yet been developed concerning it, and the development of this strategy has to do both with the way the vaccine is given and the beliefs of the population concerning it. Two inoculations are needed with 1-2 months between them for proper protection against tetanus (WHO is currently revising its standards to 5 inoculations). These inoculations can be given up to five years before the first delivery of the mother. Therefore, new wives and young girls can be given the vaccine. Since this group of the population has not been a focus of the current EPI program, it is not yet clear how these girls can be reached. Once the manner in which they can be reached is decided, it then must be determined whether or not they should be the recipients of the communications message, or their parents. If some messages are directed to mothers who already have children and are planning to have more, then two additional issues must be resolved: Firstly, there is a traditional prohibition in the country against any vaccinations during pregnancy. This is particularly adhered to by mothers-in-law. Secondly, two vaccinations have to be given in fairly rapid succession to be sure that the mother is protected, and media and service delivery have to be carefully coordinated.

(d) Nutrition: More needs to be known about the practical aspects of supplementary feeding: which members of the family

prepare and administer the food? If they are older siblings and older adults, are specifically-designed programs for them needed? Should particular recipes be promoted? If so, which ones? Is a pre-prepared weaning food feasible and desirable in Pakistan?

(e) AIDS: AIDS is not yet widespread in Pakistan, yet the history of other countries has shown that once it crosses borders it spreads rapidly. Does the current level of AIDS warrant a drastic and extensive media treatment? Is the distribution of condoms in health centers adequate enough to justify even the simple, informative messages planned such as: " AIDS is a serious infectious disease, but it is preventable. See your health center for details".

#### Coordination with non-media education programs

Mass media programming is quite limited. Despite their enormous reach, they can still provide only second-hand information. On matters of major change, such as health, people need to talk to people. Until a well-trained cadre of personnel exists in the field to take up where the media leave off, little habit change can be expected. In the early stages of media production before such trained personnel are brought fully within the national strategy, only simple, informative messages must be broadcast on all subjects. Once more complicated messages, or those urging contact with paramedical or medical personnel are

broadcast, or those urging the sale of a particular product which may not be available, are broadcast nationally, this personnel must be in place or severe problems of credibility will result.

### Media usage

Exact figures on radio and television viewership are not available, and estimates vary widely. Not only is the estimated number of viewers of television not known, for example, the number of times per week they have access, the amount of hours watched, their access to local-language programs, etc., needs to be further investigated.

Radio listenership is apparently significant in all areas of the country, but not enough is known about listenership patterns to be able to determine the type and quality of health education programs and spots to be developed.

### Schedule of activities

June 1, 1989 - December 31, 1989

\* airing with increased frequency (through reduced air-time costs sought from PTV/radio) of health spots already produced. An additional 3 spots aired per week is requested during prime

time

- \* training courses of PTV/PBC Academy staff

- \* 5 PTV/radio-produced health programs within existing program format, to be broadcast in prime time, if possible; and if not, during off-peak hours. These programs can either be taped versions of earlier appropriate programs; or ideally, new programs. It is recommended that at least 2 such programs per week be shown

- \* evaluation of existing radio and television spots on health.

January 1, 1990 - December 31, 1990

- \* health spots produced by NIH/CIDA/PRITECH and paid for by NIH/USAID. An estimated 10 spots on CDD and 10 spots on EPI at a frequency to be determined in the detailed implementation program of the NIH/CIDA project

- \* continued airing of existing MOH spots (paid) and additional airing of selected MOH and NIH spots in free prime time and/or at times of longer health programs. An ideal coverage of 5 spots per week requested.

\* initiating the process of establishing institutional framework for integrated health education planning, management, and development; progressively developing, through this framework, a systematized, regular health education media programme

\* beginning the extensive training and retraining of health workers to participate in comprehensive media-interpersonal programs

January 1991 - December 1995

Continuation of previous years' programs. Media coverage to a likely maximum of 15-20 minutes per day of health education programs and spots.

Tables

Table-I

Air time Averages (in minutes)  
by Health Category

Subject	Television		Radio	
	Daily	Weekly	Daily	Weekly
EPI	3.0	21.0	8.0	56

CDD	4.5	31.5	12.0	84
Nutrition	4.5	31.5	12.0	84
Water & Sanit.	1.5	10.5	4.0	28
Adult diseases	1.5	10.5	4.0	28
<b>Total:</b>	<b>15</b>	<b>105</b>	<b>40</b>	<b>280</b>

Table-II New Production of Spots and Programs

Spots & Programmes	Radio		T.V.	
	spots	programmes	spots	programmes
1989-90	5	3	5	5
1990-91	20	20	10	10
1991-92	20	40	10	20
1992-93	20	40	10	20
1993-94	20	20	10	10
1994-95	10	20	5	10

## Annexure-I

1. POPULATION EDUCATION COMMITTEE:

- |    |   |          |
|----|---|----------|
| 1. | Mr. Rashid Khan<br>Population Welfare Division        | Convener |
| 2. | Ms. Anne Aarnes.<br>USAID, Islamabad                  | Member   |
| 3. | Mr. Haider Bhurgri<br>AIOU                            | "        |
| 4. | Mr. Akhtar Zaidi,<br>Director of Population Education | "        |
| 5. | Representative of UNFPA                               | "        |

2. HEALTH EDUCATION COMMITTEE:

- |    |   |          |
|----|---|----------|
| 1. | Mr. Abdul Sattar Chaudhry<br>Health Education Adviser | Convener |
| 2. | Ms. Lucia Ferraz-Tabor<br>USAID PRITECH               | Member   |
| 3. | Mr. Naseem-ur-Rehman<br>UNICEF                        |          |

4. Mr. Bob Karam  
CIDA/NIH

"

5. Mr. Javed Qasoori  
AIOU

"

3. FEMALE LITERACY COMMITTEE:

1. Mr. Aziz Khan  
Joint Education Adviser

Convener

2. Ms. Razia Abbas  
AIOU

Member

3. David Spragues  
USAID

"

4. Ms. Rana Syed  
UNICEF

"

5. Representative of Women Division

"

6. Mrs. Pirzadah  
Principal College for Women  
F/6-2, Islamabad.

"

PROPOSAL FOR LIMITED INTERVENTION  
IN JORDAN

A Report Prepared By PRITECH Consultants:  
PETER L. SPAIN  
CAMILLE SAADE

During The Period:  
JANUARY 7 - 20, 1989

TECHNOLOGIES FOR PRIMARY HEALTH CARE (PRITECH) PROJECT.  
Supported By The:  
J.S. Agency For International Development  
AID/DPE-5969-Z-00-7064-00

AUTHORIZATION:  
AID/S&T/HEA:  
ASSGN. NO: STP 009-JO

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# Proposal for Limited Intervention in Jordan

PRITECH

Peter L. Spain and Camille Saade

January 1989

## Background:

The efforts in Jordan for the control of diarrhea diseases go back at least to 1980, when USAID invited Dr. David Nalin to Jordan to introduce new concepts for diarrhea management using oral rehydration therapy. An immediate result of this visit was the establishment of an ORT unit in Al-Bashir Hospital, the main government hospital in Amman. A cholera epidemic in 1981 decisively demonstrated the efficiency of ORT as compared to other therapies. Since then, Jordan's CDD activities have steadily accelerated - a growth documented by Pritech staff member Deborah Blum, M.D., in her report following a visit to Amman in April 1988. Most pertinent in Jordan's CDD history have been the start of local production of oral-rehydration solution by Al-Hikma Pharmaceuticals in July 1987 and the extensive public-education campaign during the summers of 1987 and 1988 in support of the local ORS product, which is called Aquasal. Both the ORS production and the public education about ORS have been underwritten by UNICEF.

The Ministry of Health's CDD program has introduced ORT to public-health facilities, though the government has not yet promulgated an explicit policy on diarrhea case-management. The MOH has been pushing hard to ban all import and production of pediatric anti-diarrheals and antibiotics specific for diarrhea, in accord with recent WHO/EMRO advisories. This ban, while not yet complete, has greatly reduced the availability of these useless and often harmful drugs from Jordanian pharmacies.

The most telling statistics available about the Jordan CDD situation comes from a June 1988 WHO Program Review, which reports an under-five mortality rate from diarrhea of only one per 1000. This is down from the five per 1000 rate found in a late 1985 survey. Jordan can be proud of these gains.

What challenges now is to consolidate these gains, and to continue to push proper diarrhea case management at all levels. There are certain potential threats on the horizon that might cause the program to slip back if pressure is not maintained to control diarrheal disease. These include:

- the upcoming integration of the MOH CDD program into the other child-survival programs of the Ministry, such as Maternal and Child Health and the Expanded Program on immunization. While the CDD program has been a vertical program, its visibility has been heightened not only at the central level, but also at the level of the seven governorates. Reorganization should not imply that efforts can be slackened.
- UNICEF's support for the summer media campaign of 1987 and 1988 will continue through 1989 and 1990, and then stop. Evaluation of this campaign has been very encouraging (MOH/UNICEF, 1988). Its disappearance should not imply that ORS needs no further promotion among the public.
- The current devaluation of the Jordanian dinar means that imported raw materials used by AL-Hikma in the production of Aquasal have increased in price, up 40%. Al-Hikma has not realized much profit anyway from Aquasal because of its low price; the impact of the dinar's fall must be monitored to ensure that Aquasal continues to be available in Jordan.
- Al-Hikma and UNICEF have run some seminars for private pharmacists and physicians, but both Al-Hikma and UNICEF acknowledge a need for more to be done. The picture today of the Aquasal market is that the "pull" from the public is greater than the "push" from pharmacists and physicians. Aquasal, being low in price, runs counter to the profit incentives of the pharmacist, and the physician, who charges his professional fee, is often reluctant to prescribe Aquasal, a product promoted on TV that is very cheap at a pharmacy or free at a MOH facility.
- The training for future doctors, nurses, and pharmacists is generally deficient in terms of diarrhea case management, implying a continual challenge for retraining and reorienting health professionals after graduation.

All of these threats, however, can be foreseen and each represents an opportunity. While A.I.D. resources are limited, those that A.I.D. cannot address can still be brought to the attention of UNICEF and other donors to be sure that Jordan continues to reduce morbidity and mortality among its children.

#### Recommendations:

Pritech recommends two areas for A.I.D. support now, (1) medical education (including education for doctors, nurses, and pharmacists) and (2) promotion of Aquasal among physicians and pharmacists.

## 1. Medical Education:

The Pritech Technical Unit has just completed, in collaboration with WHO/CDD/Geneva, the production of a complete diarrhea-disease curriculum for medical students. This curriculum, which includes up-to-date technical material and guidance for health professionals in communicating with their patients, represents a resource that can be made available to Jordanian health educators. Lecture materials for professors, student quizzes, readings, visuals - the Pritech materials contain everything that would be needed for a full presentation on CDD. Pritech proposes to send a technical consultant to Jordan to work with health educators here to extract, in whole or in part, from the curriculum whatever materials can improve the local education of doctors, nurses, and pharmacists.

The counterpart for this consultant will be Dr. Kandil Shaker Shubair, Professor of Internal Medicine at the University of Jordan and Director of the University's Center for Educational Development. Dr. Shaker is chairperson of the University's Medical Curriculum Committee, and his Center provides support both in course content and in instructional techniques. The center recognizes that a medical-school professor, for instance, must not only know his subject thoroughly but also be able to communicate that subject skillfully. And taking this one step further, the center recognizes that the medical-school (nursing-school, pharmacy-school) student needs not only to learn his subject but to be able to communicate skillfully with his patients for full effect. Dr. Shaker has welcomed this opportunity to work with Pritech.

Keen interest has been shown by the chairmen of the Department of Pediatrics and the Department of Community Medicine within the Faculty of Medicine at the University of Jordan, and by the Deans of the Nursing Faculty and the Pharmacy Faculty, also at the University of Jordan. In its broad outlines, this proposal was also welcomed by the President of the University, who urged Pritech to work out the details with appropriate deans and chairpersons, and to work through the Center as a point of entree.

We have also discussed this curriculum material with, and have been welcomed by, the Director of the Jordan College of Nursing in Amman and with the USAID-funded team from John Short Associates that is working to strengthen the curriculum of the nursing colleges in Jordan. Additional contacts with the Medical School of the Jordan University for Science and Technology in Irbid and with the two other Jordan Colleges of Nursing, in Irbid and Zarqa, may be initiated in the future, when and if solid progress has been made with these institutions in Amman.

A.I.D. funds from the Bureau of Science and Technology in Washington up to \$15,000 are available for technical assistance in CDD curriculum development, and these funds could support a consultant for 5-6 weeks in-country. We propose that this be carried out beginning early April 1989. If additional time or future technical assistance is called for, USAID funds in the form of a buy-in to Pritech would be called for.

## 2. Promotion of Aquasal:

This will be a multi-year activity, a three-way arrangement involving Al-Hikma, an advertising firm, and USAID. Pritech will be involved to provide technical review of the material produced, but no external technical assistance is anticipated. USAID will fund this promotion directly, without buying-in to Pritech.

Our discussions with two advertising firms suggest that strong promotional material can be created and produced for physicians and pharmacists for \$32,000 per year, and we recommend a four-year commitment by USAID. A total contract for no more than \$128,000 over four years could be let on a tender basis to a local advertising agency for the production of brochures, point-of-sale materials, educational information, and handouts for mothers, all promoting Aquasal and reinforcing the MOH effort to eliminate dangerous drugs altogether from the diarrhea picture. These materials will be distributed by the Al-Hikma sales force.

We suggest four years (four summer diarrhea seasons in Jordan) because the current Pritech contract runs through August 1992, allowing Pritech to review these materials for their technical content. Beyond 1992, a new Pritech contract is anticipated, but 1992 would be a time for USAID to re-assess this support for the marketing of Aquasal. The attached annex on the private sector gives a full rationale for this intervention.

The tender for this promotion should be published very soon, for materials to be ready for the 1989 diarrhea season beginning in May. Pritech could assist in the review of the proposals received in response to these bids. To save costs, any Pritech participation in this activity, Promotion of Aquasal, could be done from Washington by courier service.

## Other Concerns

We noted above some additional threats/opportunities for the Jordan CDD program, to which we wish to suggest some options for USAID.

First, the reorganization of the CDD program within the MOH is something to watch, so that activities do not slacken. In our view, the MOH/CDD as currently constituted does not represent an adequate counterpart for non-resident technical assistance. What is needed is fulltime in-country donor pressure if the MOH/CDD is to define areas of need and make use of donor support to meet those needs. If the MOH/CDD situation changes so that its absorptive capacity for TA is increased, USAID might wish to call upon central A.I.D projects to provide that assistance.

Second, the change in UNICEF's focus after the summer of 1990 may leave a gap that another donor can/should fill. The television campaign has created substantial increases in awareness and use of Aquasal; its disappearance could forfeit those gains. With the messages already produced, USAID could consider underwriting whatever costs are called for to keep these messages on the air; if need be, new messages or revisions might be considered as appropriate. Pritech could respond to a USAID-supported need.

Third, the upward pressure on imported new materials caused by the devaluation of the dinar might discourage Al-Hikma from future production of Aquasal. Al-Hikma already suggests that Aquasal may be more trouble than it is worth. If production costs rise and if corresponding price rises for Aquasal are not allowed by the MOH, Al-Hikma could be tempted to quit the field. Project SUPPORT, an S+T-funded project, is designed specifically to assist local production of ORS and could assist Al-Hikma with raw materials or additional equipment. We advise USAID to maintain regular contact with Al-Hikma; Aquasal is an excellent product, locally produced. Yet the market is small, not lucrative, and sensitive to currency fluctuations. USAID should monitor the situation closely, and consider assistance if necessary.

BUDGET

	<u>FY 89</u>		<u>FY 90</u>		<u>FY 91</u>		<u>FY 92</u>		<u>TOTAL</u>	
	<u>S+T</u>	<u>USAID</u>								
1. Medical Education										
a. Technical Assistance	15,000								15,000	
B. Materials Reproduction		1,000								1,000
2. Promotion of Aquasal										
a. Detailing Folder to doctors		7,000	7,000							14,000
b. Detailing Folder to pharmacists		2,000	2,000		2,000		2,000			8,000
C. Medical Reprints to doctors		500	500		500		500			2,000
d. Leaflet holders		2,000	2,000		2,000		2,000			8,000
e. Mother leaflets		5,000	5,000		8,000		8,000			26,000
f. Stickers, shelf-talkers		4,000	4,000		8,000		8,000			24,000
g. Pre-testing of material		1,500	1,500		1,500		1,500			6,000
h. Aquasal plastic bags		10,000	10,000		10,000		10,000			40,000
	15,000	33,000	32,000		32,000		32,000		15,000	129,000
									144,000	=====

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1. SITUATION ANALYSIS:1.1 Background:

Aquasal was introduced in July 1987 both in Jordan's private market and in the MOH. 1987 sales reached around 46,000 packs of 6 sachets, and Aquasal became the market leader far ahead of other ORS brands such as Servidrat, Pedialyte and Rehydrate, thanks to a vigorous introductory campaign. The campaign was 2-pronged: a public campaign through TV run by the MOH and UNICEF, and a professional campaign which started by a series of regional seminars conducted by Al-Hikma, MOH, and UNICEF, addressed to pharmacists and physicians in the private sector. The seminars were followed-up by detailing efforts using the MOH 40-page Arabic booklet designed initially for the training of health workers. 5,000 of these booklets were distributed in 1987. Promotional efforts included also free goods of up to 20% on large orders put by pharmacies.

A new TV campaign was run in 1988. However, promotional efforts to the professionals were limited to distribution of the same 40-page Arabic booklet to doctors and up to 20% free goods to pharmacists. Sales decreased by 6% reaching 43,000 packs by end 1988.

1.2 Market of Anti-diarrheals

The total market of anti-diarrheals was estimated by end September 1988 (12 months to date) at 332,000 units or \$537,000.

- The larger group was formed by anti-diarrheals/anti-bacterials combinations, such as Enterosediv=90,000 units of which 46,000 in syrup form, Streptomagma=27,000, Gabroral=21,000 and Kaomycin=25,000.

- The mobility inhibitors group in tablet forms including Imodium, Lomotil, and Vacontil represented 54,000 units. (Vacontil drops, though banned, sold some 4,000 units.)

- Intestinal absorbants sales included Eucarbon tablets, 12,000, and Kaopectate suspension, 4,000.

- The remaining group, the Oral Electrolyte Replacers (ORS) accounted for 85,000 units of which Aquasal is the market leader: 43,000, followed by Servidrat, 10,000; Pedialyte, 18,000; and Hydralyte, 15,000. Rehydrate sales were negligible. It should be noted that Hydralyte (produced by APM in plastic bags containing the ready-made solution) was introduced in April 1988.

The market of anti-diarrheals experienced dramatic changes since end 1987, due to the banning of the pediatric form of the mobility inhibitors and of diodohy droxyquinoline combinations. They were replaced partly by the ORS brands but mostly by the anti-diarrheal/anti-bacterials combinations whose sales jumped from 52,000 units in 1987 to 173,000 units in 1988.

### 1.3 Market Trends

The different ORS brands made in-roads in the anti-diarrheal market. However, if the MOH does not extend its banning of useless and harmful products which include all anti-diarrheal/anti-bacterial combinations, the progress of ORS use will be hampered in the private sector. Doctors feel they have to prescribe something, "they owe it to their patients" who pay 5 to 7 J.D. and expect a prescription in return, and not a mass-advertised product such as Aquasal. At the pharmacy level, Aquasal cannot compete with higher-priced anti-diarrheals or imported ORS brands which generate more profit for the pharmacists.

We received conflicting messages concerning a possible ban of anti-diarrheals. Apparently a recommendation was submitted to the Drug Technical Committee, but according to Dr. Jalal, no action was taken yet to suspend the drugs. This was confirmed by Al-Hikma who reported that all anti-diarrheal combinations were still freely sold.

However, Ms. Hind El-Khatib from UNICEF was adamant that all anti-diarrheal/anti-bacterial combinations were banned. A further checking with Mr. Nabil Farraj from Upjohn confirmed that the above combinations needed as of Sept. 88 a special authorization from the MOH to be allowed to be imported. Upjohn will discontinue sales of Kaomycin after exhaustion of actual inventory. They will maintain Kaopectate.

### 1.4 Al-Hikma Promotional Resources:

Al-Hikma has rapidly risen to become one of the top 3 pharmaceutical companies in Jordan. It shares this position with APM, the oldest manufacturer in Jordan, and Roche. Al-Hikma exports 85% of its production mainly in neighboring Arab countries. Al-Hikma is recognized for the quality of its products and for its aggressive marketing. It has a team of 12 salesmen divided into 3 product lines. Aquasal is promoted within the OTC line which includes an analgesic, a cough preparation, a mouthwash, a sweetener, etc. The 4 medical representatives responsible of the OTC line call on general practitioners and pediatricians as well as on pharmacies. They cover some 1000 doctors and 650 pharmacies every cycle (equivalent to 1 month). Al-Hikma plans for Aquasal promotion in 1989 are limited to a reminder and sampling of Aquasal during the diarrhea season running from May through September (5 months).

Al-Hikma is not ready to invest more efforts on Aquasal as they prefer to allocate their resources on more profitable products.

The lack of active promotional efforts, especially in this early stage of Aquasal's life cycle, will irremediably stifle what otherwise can be a successful ORS implementation.

## 2. KEY ISSUES AND STRATEGIES:

### 2.1 Demand-generation by consumers (mothers) is critical to Aquasal sales and should be reinforced:

Asking for Aquasal by brand name is probably the most powerful reinforcement for the converted as well as the yet uncommitted health provider.

#### Strategy:

2.1.1 Along with the mass-media campaign conducted by the MOH and UNICEF (until 1990), Al-Hikma should reinforce Aquasal presence to the mother in the store (the pharmacy) through merchandising activities such as positioning the packs in a highly visible place i.e., in the baby-products section; displaying of eye-catcher items, i.e., shelf talker, sticker; and making available a colorful, illustrated, simple leaflet carrying health instructions on prevention of diarrhea and proper use of Aquasal.

### 2.2 Physician's prescription for Aquasal is not yet a routine in the treatment/prevention of dehydration due to diarrhea:

Physicians still tend to prescribe obsolete and useless anti-diarrheals due to their outdated training and the pressure of the drug companies.

#### Strategies

2.2.1 In coordination with MOH and WHO, Al-Hikma should champion the definitive ban of anti-diarrheals from the Jordanian market. Pritech can provide support from different sources on anti-diarrheals' side-effects.

2.2.2 Al-Hikma should develop adequate Aquasal detailing material to physicians, as they do for all of their products. The detailing material should reinforce the physician's confidence in Aquasal and strengthen its position as the only treatment of dehydration in case of diarrhea. Backing material from the medical literature will confirm the superiority of the modern ORS over the obsolete anti-diarrheals. An 8-page folder emphasizing Aquasal's benefits in short, crisp points should transmit a powerful message to the physician.

Pritech can help outline the objectives and provide support material for the development of the detailing folder. It can also provide the technical overview of the final copy.

Pritech will also mail its Technical Literature Update to all pediatricians through the pediatrics society and the MOH pediatric department.

2.2.3 Al-Hikma will make better use of its detailing force if they are properly trained in sales techniques, as well as in detailing Aquasal and in handling objections.

2.3 Pharmacist support is critical for both availability and active recommendation of Aquasal

Pharmacist's role in his/her community should be emphasized versus the often perceived image of glorified grocery keeper. Aquasal can just be the tool to confirm/establish his/her professional role in the community. Often the pharmacist is the first reference for parents of children with diarrhea. According to Al-Hikma's own evaluation of the seminars and follow-up detailing on both physicians and pharmacists, the latter were the more responsive as Al-Hikma went out of its way to "honor" the pharmacist unaccustomed to this professional attention from drug companies.

Strategies

2.3.1 In line with the previous efforts, Al-Hikma should persevere in gaining the pharmacist's support by appealing to his/her professional image and ego through the development of a pharmacist-specific detailing material. Such material should be simple enough to be also distributed to all pharmacy personnel who most often deal with customers.

We recommend a 4-page folder in Arabic, with simple copy including key communication tips to the pharmacist dealing with parents of a child with diarrhea, i.e., right questions, sanitation advice, proper ORS mixing, and adequate feeding.

2.3.2 Commercially, Al-Hikma may want to continue its free-goods policy on determined quantities to provide incentives to high-volume orders.

### 3. INCREMENTAL COSTS

In order to salvage and strengthen the successful launch of Aquasal, detailing and merchandising material are needed (for a 5 month campaign each year):

3.1 Detailing folder to doctors (8 page, laminated, English copy, full color) Quantity: 6000	Est. Cost: \$7,000
3.2 Detailing folder to pharmacists (4 page, Arabic, full color) Quantity: 3000	Est. Cost: \$2,000
3.3 Medical reprints on superiority of ORS versus anti-diarrheals and I.V. solutions (3 to 5 reprints) Quantity: 300 each	Est. Cost: \$500
3.4 Leaflet holder (cardboard) Quantity: 2000	Est. Cost: \$2,000
3.5 Mother leaflets (colored, 2 page illustrated) Quantity: 500,000	Est. Cost: \$5,000
3.6 Merchandising material i.e., stickers, shelf-talkers Quantity: 4000	Est. Cost: \$4,000
3.7 Pretesting of material with doctors and pharmacists	Est. Cost: \$1,500
3.8 Aquasal recyclable plastic bags 300 to each pharmacy Quantity: 200,000	Est. Cost: <u>\$10,000</u>
Total Incremental Cost:	\$32,000

### 4. TIMING

All the above material should be ready before the start of the diarrhea season, meaning before May 1989. Time is thus extremely tight if we want to fully exploit the opportunity of the next season.

The following is a tentative calendar based on a fast-track project:

<u>Activity</u>	<u>Duration</u>	<u>Deadline</u>
- RFP, selection and briefing of agency	2 weeks	Feb. 5
- development of creative concept & testing	4 weeks	Mar. 5
- lay-out & copy approval of all material	4 weeks	April 2
- final artwork approval and printing	3 weeks	April 23
- distribution to sales force & training	1 week	April 30
- launch of new campaign		May 1

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## 5. FUTURE ACTIVITIES

Same level of activities is recommended for 4 years and as of 1991 possibility of mass-media intervention as UNICEF pulls out in 1990. Less professional detailing will be required and as of 1991, more consumer-oriented promotion will prevail. Aquasal should by then be considered a household item to be kept in the pharmacy closet at home as an aspirin or an antacid.

## People Contacted

### USAID/Jordan

Mr. Richard Johnson, Deputy Director  
Dr. William Jansen, Chief of HPN Office  
Ms. Doris El-Khazen, Program Specialist, HPN Office

### Ministry of Health

Dr. Sulieman Qubain, Director of Primary Health Care  
Dr. Abdul Rahim Jalal, CDD Program Manager

### UNICEF

Ms. Hind El-Khatib, Program Officer, IEC

### Al-Hikma Pharmaceuticals

Mr. S. T. Darwazah, General Manager  
Ms. Rana Dajani Mihyar, Registration and Scientific Department  
Mr. Mazen Darwazeh, Sales Manager

### Jerusalem Advertising/Intermarkets Jordan

Mr. Bassem Dajani, General Manager

### CMCS (Cubeisy Management Consultancy & Services) Advertising

Ms. Leila Cubeisy, Design Executive  
Mr. Ziad Mahsi, Design Executive

### University of Jordan, Amman

Dr. Abd Al Salam Majali, President  
Dr. Kandil Shaker Shubair, Professor of Internal Medicine and  
Director, Center for Educational Development for Health  
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Ms. Ikram Rida Tawfiq, Head, Educational Research Department, CEDHP  
Dr. Faris Madanat, Chairman of Pediatrics Department, Faculty of  
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Dr. Magda Zaky Eldeen, Dean, Faculty of Nursing  
Dr. Walid Al-Turk, Dean, Faculty of Pharmacy  
Dr. Mahmoud M.S. Abu-Khalaf, Chairman of General Surgery Department,  
Faculty of Medicine; Editor Journal of the Jordan Medical  
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Jordan College of Nursing, Amman

Ms. Samira Quomok, Director  
Ms. Nawal Haddad, PHC Nursing Development Project

John Short Associates, PHC Nursing Development Project

Ms. Maureen T. Brown, Chief of Party  
Dr. Charlotte Ferguson  
Ms. Penny Hatcher, Curriculum Development  
Ms. Cindy Fehrs

The Jordan Pediatric Society

Dr. Farouk Daher Khatib, President  
Dr. Samir Faouri, Vice-President, Head of Neonatology Unit,  
Al-Bashir Hospital, Amman

Al-Bashir Hospital, Amman

Dr. Said Alazab, Head of Pediatrics Department, Director of the ORT  
Unit

Royal Medical Services (military)

Dr. Nael Ajlouni, Director

National Medical Institution (NMI)

Dr. Rizk Rashdan, Deputy Director General  
Mr. Badie Qawasmi, Chief of Supply

United Nations Relief and Works Administration (UNRWA)

Dr. Suleiman Subeihi, Chief, Preventive Medicine  
Dr. K. Abdalla, Chief, Training and Research Officer

Academy for Educational Development

Ms. Anne H. Roberts, Resident Advisor, Healthcom

Noor Al-Hussein Foundation

Dr. Seema Bahous, Healthcom Project Director  
Ms. Abeer Hamdan, Healthcom Project Coordinator

Upjohn Pharmaceuticals

Mr. Nabil Farraj, Sales Manager

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