WORKSHOP ON PRIMARY HEALTH CARE
INTERVENTIONS FOR WIDESPREAD COVERAGE
AUGUST 31 - SEPTEMBER 3, 1981
SOUSSE, TUNISIA

NEAR EAST BUREAU
BUREAU OF SCIENCE AND TECHNOLOGY/HEALTH
THE AGENCY FOR INTERNATIONAL DEVELOPMENT
WORKSHOP ON PRIMARY HEALTH CARE:
INTERVENTIONS FOR WIDESPREAD COVERAGE

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Summary

Under a contract with the Agency for International Development (AID), the American Public Health Association (APHA) in collaboration with the Ministry of Public Health in Tunisia, held a regional workshop entitled "Primary Health Care: Interventions for Widespread Coverage," in Sousse, Tunisia during August 31 - September 3, 1981. The workshop was developed in cooperation with the Near East Bureau of the Agency for International Development, and the Office of Science and Technology/Health together with a Tunisian planning committee.

Sixty participants from eight Middle East countries attended the workshop. Countries represented were Algeria, Jordan, Lebanon, Morocco, Sudan, Syria, Tunisia, and Yemen Arab Republic. In addition, APHA staff and consultants from the United States attended as did delegates from the region, USAID, Tunisia, Save the Children, International Planned Parenthood Foundation (IPPF), CARE-Medico, and the University Research Corporation.

The program was designed to: 1) provide a forum for the exchange of experiences and information among the personnel from the region, international and bilateral agencies, private and voluntary organizations, education and health professionals involved in the planning, development, delivery and extension of primary health care to unserved and rural populations; 2) explore and promote interventions for widespread coverage to be carried out by community health workers; 3) promote appropriate training for community health workers based on community needs.

In plenary sessions and workshops, the participants discussed oral rehydration, the selection and training of primary health care workers, the role of traditional birth attendants in primary health care, the community health worker in nutrition programs and water and sanitation in primary health care and a field trip to a primary health care program in Medjez El Bab was made. Many participants found that the inter-country exchanges were stimulating and helpful; they were also pleased to have an opportunity to meet with colleagues and discuss common problems in the region.

This workshop provided the first opportunity for some of the participants to travel outside of their country to attend such a meeting.
Foreword

Since the Declaration of Alma-Ata in 1978, the primary health care (PHC) approach to delivering basic health services has been widely publicized and has engendered a growing commitment among national and international health development groups.

Two major obstacles to primary health care are the reluctance of the established medical community to accept anything other than traditional approaches, and the lack of opportunities to exchange ideas among colleagues.

In a four-day workshop in Sousse in the late summer of 1981, health professionals from eight Middle Eastern countries met to discuss PHC interventions. Most knowledgeable people today agree that there exists a group of technical interventions that can be implemented in PHC programs, with a resulting significant impact on health status. These interventions include immunizations, oral rehydration, nutrition surveillance, and fertility control.

The purpose of the workshop was to exchange views on the technical, organizational, and managerial aspects of implementing effective programs for such interventions. In plenary sessions, participants examined specific measures for PHC services and heard detailed and critical accounts of programs. In small discussion groups, delegates examined the successes and failures of such approaches. Lively, frank discussions helped overcome scepticism and provided valuable information on how to make PHC programs work. It became apparent that a wide variety of approaches is required from country to country, and even within countries.

In some countries, delegates explained, traditional birth attendants (TBAs) had been successfully trained to modify certain harmful practices and were helping reduce infant mortality. Representatives from countries where there is considerable resistance to training TBAs heard these findings with interest. Likewise, discussions on oral rehydration therapy (ORT) sparked lively exchanges. In some countries ORT is considered an important and life-saving technique. A number of health ministries are modifying national programs to include the technique and adapt it to their local circumstances. Delegates returned to their countries with news of the acceptance of ORT.
In both the formal plenary sessions and the informal discussion groups, the need to adapt approaches was stressed. Each country has its own traditions, legal system, needs and obstacles to reckon with; success in one country (or region of a country!) cannot guarantee similar success in another. Still, all concluded that the sharing of experiences provided a stimulus and guidelines to adapt primary health care to local realities.

For many participants this was the first opportunity to exchange views on PHC outside their own country, and they welcomed the opportunity. Rarely had they been able to discuss in detail and with such openness the problems involved.

The problems of making PHC a reality are complex. Experience is still limited. It is critical that every means possible be used to increase knowledge and broaden experience.

The information from Sousse has contributed to removing the obstacles to primary health care. In doing so, it has taken us closer to worldwide implementation of primary health care.

Susi Kessler, M.D.
Director
International Health Programs
American Public Health Association
INTRODUCTORY REMARKS
The Health for All concept is being translated into action in the countries of the Middle East.

In early 1980, three sub-regional meetings were held in Damascus, Mogadishu and Kuwait where delegates worked on national strategies. An increasing number of countries are incorporating or have incorporated primary health development plans. Some countries, for example Libya, Oman, Pakistan, Somalia, Sudan and the Yemen Arab Republic, have asked for WHO cooperation in formulating, implementing and evaluating these programs.

Countries of the region are also cooperating as never before on regional studies and in meetings. This has led to concrete recommendations or guidelines for the use by Member States within and outside the Region. For example, Sudan has participated in the Interregional Workshop on Cost and Financing Patterns of PHC in 1980. Democratic Yemen took part in a joint WHO/UNICEF study on Country Decision-Making for PHC in 1981. Sudan and Iran contributed to the Interregional Study on "The Community Health Worker;" and delegates from six countries (Bahrain, Democratic Yemen, Lebanon, Saudi Arabia, Syria and Yemen Arab Republic) attended a working group meeting in 1981 to review the current status of PHC programs in the region and to identify basic elements for converting the Alma-Ata commitment into action. The recommendations were found to be useful to the Technical Secretariat of the Council of Arab Ministers of Health.

As for administrative and other reforms, countries such as Democratic Yemen, Egypt, and Sudan are gradually making social and economic reforms to support health development activities at the community level.

The Eastern Mediterranean Region, with its majority of Arabic-speaking countries and its increased use of radio and television constitutes an ideal audience for new health education materials which could be developed for regional distribution. Recently WHO has worked with several countries--Iraq, Lebanon, Libya, Pakistan, Saudi Arabia and the Yemen Arab Republic--to strengthen their health education programs.

These are just a few of the highlights of work being done in the region to achieve the goal of Health for All by the Year 2000.
This workshop is very important. This statement may seem trivial because such remarks inevitably precede all conferences. But in this case it is meaningful. Your thoughts on primary health care have important social, political and economic implications for the future of the international community. Your thoughts are part of the strategy of "Health for All," which is now sufficiently developed theoretically, but still needs to be applied in the field.

I am happy to note the presence of distinguished experts and policy makers in the field of health from kindred and friendly countries. They are here not to give speeches, but to analyze in depth practical means of achieving improved health.

The task is difficult but exciting; the road is long and full of pitfalls. Your thoughts are most important because they will help determine how to reach your goals. Health should be everyone's concern. It is therefore necessary that health specialists broaden the discussion to include the whole community, in order for the community to be aware that health is everyone's concern, and to cooperate effectively to achieve the goal.

I must admit that nothing concrete, apart from slogans at public affairs such as World Health Day, has really been done. We still have not learned how to involve all the members of the community to achieve our goals. But we have learned that our only chance of success is having policy makers in the other fields of development and all members of the community take part in this action.

Most policy makers feel that health is a matter for physicians and nurses. Therefore the approach to health that we present today may seem surprising. But when health problems become alarming, physicians, paramedics and health managers are considered to have almost failed in their mission. In truth, everyone is responsible.

For this reason, I hope that this workshop not only has scientific results, but also brings a new awareness to the public, and to managers at different levels of the political, economic and social structure: they should understand that everyone has to participate to achieve the goal of "Health for All."
This is most important because even in the field of public health, there are some who are not inclined to follow this evolution.

"Health for All in the Year 2000" is a common theme. But what do we mean by that? Maybe you, the participants, can agree on an answer to this question. But are we sure that in our countries, health professionals have the same definition of health and are striving to achieve this goal?

Certainly anyone who reads the very full program of your workshop and studies the different themes that you chose for discussion will understand just how many fields are covered by this concept of "Health for All." But who will read your program? How many managers will find 15 minutes to think about this document?

Allow me, a politician, to take a little time to explain some basic notions that you already accept but that you have to make others accept as well. This is why I have invited the Tunisian mass media to use this opportunity to contact you and to question you on these concepts that you know and use well but that has to be explained to others. Only then can we mobilize a wider public, and in particular physicians and public health care professionals, to work towards carrying out these concepts.

This effort to inform should also be aimed at all managers and at the population at large.

You will pardon me if my speech is a bit unusual. I think that nothing of merit can be achieved nowadays if we continue to open seminars with traditional speeches.

I recently had the opportunity to speak for 10 minutes about "Health for All in the Year 2000." This is the time that the Tunisian television allotted me on World Health Day. But is 10 minutes enough to explain several concepts and to mobilize the public for such a vast endeavor? Of course not! Saying this, I am critical of myself as a leader. Since World Health Day, I have been too busy with endless, daily responsibilities, and I have not been able to pursue my main mission. I have not taken up the white staff of the pilgrim to carry the word to the community.

We must start with information. Traditionally, we have direct contact with the people in this country. These are traditions that have proved to be strong. These are traditions President Bourguiba relied on to free the country and to build its future. This should be the main part of my mission, but this should be also the main part of the mission of everyone in the medical and health profession.
Health for all means that by the year 2000 all the people from all countries of the world should be able to lead a socially and economically productive life and to participate actively in the community.

Health for All means neither that all illnesses will be eradicated nor that physicians and nurses will have solutions for all medical problems.

As the Alma Ata conference indicated, Health for All starts at home, at school and in the workplace. I would add that it starts in the fields and on the roads. In other words, where people live, work and travel—that is where the battle for health is to be won or lost. This is a definition of health for Everyman, and this is what needs explaining. This is why the best way to achieve Health for All by the Year 2000 is to develop primary health care.

We also must explain to our citizens and our leaders what we mean by primary health care. Even for some physicians, the notion of primary health care is vague, obscure. Some physicians in training that I met recently have a very incomplete understanding of what primary health care means. Your workshop program gives a very clear idea of the concept of primary health care: a short and complete definition.

Contrary to popular belief, primary health care is not merely health care administered in posts located as close as possible to the inhabitants of rural areas. Indeed, if primary health care was only that we could never achieve our goal. To reach our goal, we also need to make the population more aware and to appeal to the sense of responsibility of other social structures.

Primary health care, whether preventive or curative, is administered on the front lines. But primary health care is something else, too.

The Declaration of Alma Ata indicates that primary health care has eight essential components. As an experiment, I asked several physicians, including primary health care practitioners, to list these components. Most of them could remember four or five; very few remembered all eight.

You know what these eight components are. At the top of my list I would place health education for the community and preventive and curative methods. I do so because this is the most neglected component in spite of the action of many well-intentioned professionals. This educational effort should start at the village level. It should be done by the physician and his or her team of nurses. It should also be done at the regional level as part of a national program.
Second on my list is the promotion of good nutrition and food policy. You will notice that the order of priority of these components is very personal. I believe that you have to educate the people if you want them to be responsible for and in charge of their own health.

It is also necessary to promote nutrition information and education. Indeed, you know as well as I do that good nutrition is the basis for good health. Health professionals must help correct bad nutrition habits. But other leaders must also help establish a strategy that gives priority to some crops in relation to the needs of the people.

The third component is a sufficient clean water supply. In this matter, health professionals can be catalysts, but depending on the country, the projects come under the ministry of agriculture or the ministry of water management. We must make these ministries sensitive to the importance of such projects and we should defend credits that, while not planned for the ministry of health, nevertheless are crucial for the protection of public health.

The fourth component is basic sanitation. We should make sure that sanitation projects are planned and carried out at the same time as are the new housing projects. This is our responsibility, but it is the responsibility of other ministries to carry out these projects.

The fifth component is the promotion of the protection of mothers and children, including family planning. I must apologize to specialists if I place this component fifth among my priorities. I did it purposely: I want to insist on education and other components whose importance is generally not sufficiently stressed.

Of course there are other components, such as:

- immunization against major infectious diseases;
- prevention and control of local endemic diseases;
- treatment of common illnesses and injuries and supply of essential drugs.

These components are just as important as the others I have mentioned, but I do not wish to take too much of your time. I just wanted to highlight those that, to my mind, may not be the most important, but are the least well known and have an indirect affect.

You are going to study a remarkable Tunisian experience in this field. I would like to take this opportunity to pay homage to the pioneers of this project.
As you may know, we began practicing community medicine when we gained independence. This concept of medicine has been honed and refined, especially in the framework of the World Health Organization. Tunisian specialists contributed to the definitions that I just submitted to you.

Although a small country, Tunisia can be proud of its achievements in the field of health. Indeed, since independence, we have considered our action in the field of health an integral part of social and economic development.

In 25 years of independence, Bourguiba's Tunisia has achieved important economic development, and the benefits of this development have been shared as equitably as possible.

Our task is not finished yet. We are not ashamed to admit that there are great gaps in the development between one region and another, between one individual and another. But we have made major progress in eradicating major calamities and illnesses. Thanks to our efforts, there is less poverty: we greatly developed education and the economy, thereby creating jobs that are in turn creating income for the poorest among our people.

But we are far from having achieved our goals. Development is a gigantic task that takes a long time. However, we know that we are on the right track. And we are proud to see that in many fields we have been in the forefront of what the international community now wants to achieve.

Whether fighting poverty or illness, Tunisia has been a pioneer in its effort to free the individual and improve his way of life, just as Tunisia has been a pioneer in the fight for national independence.

I do not wish to take up more of your valuable time. I now wish to welcome all of you distinguished specialists from kindred and friendly countries, and to say that we are honored by your presence. I wish to thank you for your participation and your interest in this meeting. I also wish to thank APHÄ and USAID for the help that made it possible for Tunisia to organize this meeting.

The choice of Tunisia for this workshop is not accidental. It is testimony to the fact that friendly countries and international organizations recognize our tireless development effort. It is no accident either that Tunisia is the first of Third World countries to have made an agreement with the World Bank to finance a network of primary health centers in eight regions of the country. This agreement is for 20 million Tunisian dinars in aid. It goes without saying that our national effort will be the key to the success or failure of the project.
I shall stop here and wish you a pleasant and fruitful stay in Tunisia, and that your workshop will make a positive contribution to the health of all in the region and in the world.
Preventive medicine for mothers and children was first officially developed in 1959 in Tunisia's Centers for the Protection of Mothers and Children. Prior to this, there were private initiatives by charitable groups directed mostly by the wives of senior civil servants. The work of these groups was to distribute milk made from whole or skimmed milk powder. Starting in 1950 (before independence), a group of doctors in Tunis began a voluntary organization called "Aid to Tunisian Children."

Encouraged by the success of these private actions, the government adopted a formal policy on maternal and child health called "National Children's Aid" and financed it through entertainment taxes. To carry out this policy, a special section to train midwives was created in the National School of Public Health.

In 1959, the first Center for the Protection of Mothers and Children was created. A "pilot center," the model was developed by the government, UNICEF and WHO. Its role was to train personnel for work with women and children. Between 1960 and 1981, 128 centers were opened throughout the country. Family planning, considered an essential element of maternal and child health, has been emphasized at the centers since 1969; from 1973, family planning activities were developed further.

Each MCH center is directed by a nurse midwife. Other personnel include public health auxiliaries and, whenever possible, a nutritionist, and a vaccination specialist from the Office of Preventive Medicine. A pediatrician or generalist is called in when necessary for consultation; the number of consultations varies according to need and can be daily if necessary. As departments of medicine have grown, it has been possible to provide physicians in the MCH facilities. In each MCH/Family Planning center in Tunis now there are two physicians on duty. In other centers, doctors are on duty only two or three times a week. In all centers, only doctors are allowed to carry out medical procedures; no prescription can be issued by a health care agent.

Pre- and postnatal care is carried out by a midwife; it must be pointed out, however, that this aspect of care has run into some difficulties. Family planning consultations are also handled by the midwife; a gynecologist is available two or three times a week.
To maintain better control, MCH/FP activities were centralized in a special office of the Ministry of Public Health (called the Service for the Protection of Mothers and Children) from 1959 to 1966. This centralization was deemed necessary to coordinate MCH activities in the regions and see the program through until it became accepted and part of local habits. To help the program along, the central service benefited from special prices on vaccines, milk, medicine, layettes and blankets. The service also had the final word on training and personnel transfers. In 1967, MCH activities were decentralized and came under the wing of the Regional Directorates. The National Institute for Infant Health took over the technical supervision of these centers. This should provide some idea of the Ministry's commitment to MCH.

As for the Institute itself, it has three tasks: training, care and prevention. We'll limit the discussion here to its preventive care and training activities. In the last seven years, the Institute has organized several seminars for pediatricians, public health doctors, paramedics, and representatives of national organizations. The seminars, many of them held outside Tunis, cover the link between maternal and infant care and family planning--pregnancy monitoring, infant nutrition, breastfeeding, oral rehydration, vaccinations, measles prevention, etc. Each seminar brings together about 50 participants and lasts two days; it is followed by an evaluation that takes a half day. Each participant is expected to share the information from the seminar with colleagues in the field who were not able to attend the seminar.

The Institute has put together the following materials for use by health workers and mothers:

- a practical guide to oral rehydration (in collaboration with the Directorate for Preventive Medicine);

- a slide presentation on rehydration and diarrhea prevention;

- education messages on cassette tapes for mothers who come to MCH centers;

- information file cards for public health doctors.
The Institute also uses radio and television for messages on diarrhea and malnutrition and shows films in the MCH centers.

How successful have these efforts been? Have the messages influenced their intended audiences? There is no denying the success in reducing the incidence of preventable illnesses. Tuberculosis, diphtheria, tetanus, and whooping cough still exist, but their incidence has been greatly reduced. The credit for this success goes to the MCH centers and to the Directorate for Preventive Medicine. On the other hand, malnutrition, albeit in a less severe form, still persists, digestive disorders remain serious, and respiratory infections are still common.

Digestive and respiratory infections remain the greatest problem. Thus, jammed with ailing children, the MCH centers are kept from carrying out their mission of prevention. For the same reason, the number of pre- and postnatal consultations remains ridiculously low.

In spite of the growing number of MCH centers, coverage is insufficient and reaches only the population closest to the center. This has created a need to greatly increase the number of places where nursing children and pregnant women can be monitored and has led to the idea of providing these services in health posts or dispensaries. The Directorate of Basic Health Care was recently created to carry out this work, but the idea has yet to be fully accepted by health agents and administrators.

The work of the Basic Health Care Center also covers areas served by mobil units and by vaccination and care teams. We have suggested the assembly points be fixed and that, for example, official locales, private homes, outposts of the MCH centers, and primary health care centers be used. The family health auxiliary would cover a population not larger than 2,000 to 3,000 inhabitants and would carry out tasks such as monitoring pregnant women (weighing, measuring arm circumference, screening for edema and arterial tension, taking general histories, recording previous pregnancies). The auxiliary could also monitor the weight of nursing infants and distribute nutrition information. He or she could also be in charge of family planning information.

The auxiliary should be chosen by the community and paid out of rural development funds. This scheme is now being tried in northwest Tunisia and is successful. Financial difficulties have prevented expanding the program as have laws concerning personnel recruitment.
If the community itself does not take charge of its own health, if the community does not recognize its duties and responsibilities, progress in bringing health care to rural and semirural areas will be a difficult if not impossible goal. In spite of the growing number of schools of medicine, in spite of the encouraging results using medical and auxiliary personnel, rural areas will remain deprived of medical personnel.

Still to be developed are attractive hospital facilities and this will remain true as long as the private sector is the source of funding. Doctors will continue to flock to urban areas as long as this is so. It is clear that we will have to increase the number of health auxiliaries for rural Tunisia; it is also clear that we will have to improve the educational level of communities in remote areas. It will be the role of institutions such as the National Institute of Child Health to see to this vital effort.

In developed countries and in certain developing countries, medical auxiliaries already play an important role. Even in the United States, medical assistants or nurse practitioners are accepted readily. It is rapidly becoming clear that this is the way to provide quality, affordable health care to rural and semi-urban populations, on the condition that appropriate legislation defines the prerogatives of medical auxiliaries. To quote the World Health Organization:

"The integration of health services and family planning provided by auxiliaries can help reduce population and, at the same time, contribute to general development. Such a program can be practical, constructive, applied immediately and relatively inexpensive."

Tunisia also has dispensaries and health centers. Thanks to the new policy of integrating prevention and care in the same service, these centers can be used to promote primary health care as long as the centers' tasks are clearly defined, the different institutions work together, and the personnel is trained for each task. Training should be planned according to these tasks and it may be possible to separate auxiliary training from that for hospital personnel. However the training is done, extensive information will have to be gathered beforehand. It must be remembered that maternal and infant health cannot be guaranteed by health services alone. Improving the health of mothers and children implies a multidisciplinary approach.
The idea that health depends exclusively on medical attention is obsolete. There are many causes for most common childhood diseases (gastroenteritis, respiratory infections, etc.). Infant mortality will not decline by building more hospitals and health centers alone; it will also take improving the educational level of families and their living conditions, developing agriculture, industry and communications.
ORAL REHYDRATION
Mothers, trained by health workers, prepared and gave dehydrated children a plain water, sugar, and salt oral rehydration solution (ORS). This simple treatment reduced infant mortality by an average 50 percent. That is the dramatic finding of a recent study by the Rural Health Department of the Egyptian Ministry of Health. The study, carried out in 1980, involved more than 29,000 children between the ages of one month and five years.

The Ministry, with the help of the WHO and USAID, undertook the study to combat one of Egypt's worst infant killers—dehydration caused by diarrheal diseases. Although children are only 17 percent of the population, they account for 50 percent of all deaths. About 80 percent of the infants die from just two diseases: diarrhea and lower respiratory tract infection. Sixty percent of these deaths are caused by diarrhea.

Public health officials were already aware that ORS could prevent many of these deaths and ORS packets were distributed to health facilities. But problems with accessibility and distribution meant that relatively few children actually were given ORS. Only about 60 percent of children sick with diarrhea are ever taken to a health practitioner. ORS supplies were neither regular nor sufficient and could only be had by prescription.

Given these and other problems, health officials wanted to know whether mothers could learn to make ORS from ingredients available at home and then use the fluid properly. In 1980, the Ministry studied four different ways to educate the public to use ORS. Two "control cells" served to check the results.

In the first group of mothers studied, health facility nurses distributed Oralyte, a prepackaged product, as part of their regular home visits (every four to six weeks). The nurses instructed the mothers how to use the packages. The nurses automatically replenished the mothers' supply during home visits.
In the second group, a stock of Oralyte was distributed to all shops and pharmacies free of charge. The shopkeeper or pharmacist could sell the package at the nominal price of three piasters (about US 4¢). Instructions on the use of Oralyte were to be repeated to the mother when she purchased her package. Visiting nurses taught mothers how to use the packets in the village shop or pharmacy.

The third group of mothers were instructed to prepare ORS by mixing five to six level teaspoons of granulated sugar with half a level teaspoon of salt in one liter of water. Nurses counseled mothers to add the juice of half a lemon, if possible, to improve the taste of the fluid and to give the child either tomato juice, orange juice, mashed banana or tea to increase potassium intake.

In the fourth group, nurses delivered a prepackaged sugar and salt mixture to the homes and showed mothers how to mix the ingredients with water.

In all four groups, mothers learned that if the child did not improve, the child should be taken to a health facility. Health facilities were assured abundant and regular supplies of ORT packets.

Health education in mosques and other public places supplemented the health education mothers received at home. In addition, village men attended talks given by a sanitarian at the mosque at least three times per month after Friday prayer meetings.

In the first control cell, health facilities continued to provide services as usual. In the second control cell, all health personnel were made aware of the importance of oral rehydration as a treatment for diarrheal diseases and a plentiful and regular supply of Oralyte was made available.

The study results show that with rehydration fluid made from household salt and sugar packets and backup supplies at health centers, mothers reduced infant mortality by an average of 50 percent. The Oralyte home distribution group was also successful: the death rate was reduced by 40 percent. The group that used commercially purchased packages reduced infant deaths by 15 percent. By contrast, the control cells reduced deaths by an average of 12 percent.
WORKSHOP REPORTS
ORAL REHYDRATION THERAPY

Obstacles:

1. Reluctance to use on the part of the medical corps and paramedics who continue to prescribe antidiuretics and antibiotics and other medication

2. Lack of education and information for mothers on the causes of hygienic diarrhea, water, food

3. Salts not available to all, especially in remote, underserved areas

4. Technical obstacles, e.g. one litre recipients not always available

5. Reluctance of populations who may consider treatment as second-class; mothers often find taste unappealing

6. Medical education in United States and European universities (where many developing country doctors trained) and in several developing countries often omit subject of oral rehydration; advertising by pharmaceutical companies that produce diuretics

Recommendations:

1. Make available to doctors and students information on methods and results of rehydration by Oralyte mixture.

2. Teach mothers (especially those whose children suffer from diarrhea) not only the rehydration methods, but also prevention through food hygiene, breastfeeding, good nutrition and the need to introduce diverse foods from the age of nine months.

3. Continue research to improve oral rehydration salts (in particular, consider reducing the level of sodium).

4. Each country create its own size package of rehydration salts to suit the kinds of containers likely to be used.
Disagreements:

1. Make oral rehydration products available to the public by distributing outside health facilities OR restrict distribution through health professionals or their trained co-workers who would train mothers to use the salts.

2. Sell products at a modest price so as not to devalue the product in the public opinion OR distribute the product fee.
The group discussed the following three points:

1. Personnel that will need training for an ORT program

2. Responsibilities of health auxiliaries and the measures necessary to reduce risks and remove obstacles

3. Obstacles

1. Personnel

The most pressing question is which personnel needs training and what sort of training should be given. Several participants pointed out that differing national contexts make it necessary to tailor even the most general guidelines. However, certain principles must underlie any approach:

a) All levels of health personnel must be trained in PHC. For example, in Sudan, ORT training is included in the curriculum of several levels of health personnel.

b) Special training should be given to health workers who have the most contact with families and communities; stress should be on measures to encourage mothers to maintain treatment as mothers are the key to a successful ORT effort.

c) Health personnel, in their work with mothers, should emphasize ways to prevent diarrhea and malnutrition; this should be considered an essential aspect of the health workers' duties.

d) In areas where high level health personnel is lacking and where much of the population is found in remote areas, "practical guides" will be especially necessary. These guides, or manuals, should offer clear and definitive information on training for ORT; this information should take into account local conditions and resources.

2. Agents' Responsibilities

In certain circumstances, health workers in charge of ORT cannot monitor the children or care for a severe case. For these reasons the following should be considered:
a) Legislative measures to minimize risks and define tasks of a program;

b) Harmonization of training and instruction for different levels of health workers to better define their responsibilities.

3. Obstacles

Doctors: Many are too overworked or influenced by more sophisticated technology to be interested because ORT:

a) requires too many explanations and time with patients;

b) does not correspond to their training (especially their nutrition background);

c) does not impress them because it requires no special qualification to administer it.

Pharmacists: Although pharmacists do not refuse to take part in national campaigns, it is difficult to motivate them because profits are minimal on the sale of ORT packets. In addition, they cannot always count on regular supplies.

Paramedicals: This category of health personnel usually has the most direct contact with mothers and is a key link if an ORT program is to succeed. However, these health workers usually make a profit on the sale of medicines used for treatment of diarrhea and, for this reason, may discourage ORT.
VISIT TO MEDJEZ EL BAB, PROGRAM FOR INTEGRATED MEDICINE
A TUNISIAN PROGRAMME OF COMPREHENSIVE MEDICINE

Health Team of Medjez El Bab

All of us are deeply concerned with improving the health of the community and winning its legitimate right to physical, social and mental welfare.

This is all the more urgent as the access to satisfactory health services is still the privilege of a tiny proportion of the population.

However, public health in these countries suffers from:

- irrational use of existing resources;
- bad distribution of material and human means;
- absence of reliable health information circuits;
- lack of operational study of health services;
- passive attitude of communities regarding their health problems.

To adapt the strategy proposed by WHO that recommends the "improvement of the basic health services," it is essential to solve these problems. Tunisia is among the countries that have signed the Declaration of Alma-Ata and that have already undertaken research for an appropriate model of organization of health services. The comprehensive Medicine Project of Medjez El Bab is only one example of our commitment.

Characteristics of the Area & Resources of the Programme

Started in 1975 as the "Project of Improvement of Basic Health Services in Beja," the project was limited to the health region of Medjez El Bab. The project first came under a WHO expert. It was transferred to the Directorate of Social and Preventive Medicine in July 1977. Since December 1977, it has been directed by a young Tunisian team.

The area covered by the project is the Northwest of Tunisia and is crossed by Medjerda river; it is mainly an agricultural region. Most of the approximately 115,000 inhabitants are rural: thus, only 35% live in communal areas and are supplied drinking water; about 100 springs and wells provide water for the rest of the population.
The early health facilities were developed to include:
- 3 small hospitals with about 100 beds (one bed for 1,000 inhabitants);
- 3 maternal and infant protection centers;
- 22 health centers or dispensaries;
- assembly points.

These facilities have:
- five official public health general practitioners and four free practitioners;
- one pediatrician;
- one chemist.

This means there is one physician for 10,000 inhabitants, fewer than the national average. The rest of the medical staff includes:
- about 10 midwives in three maternity hospitals;
- about 60 health auxiliaries.

Community participation has been rather modest in improving the infrastructure of the region.

Definition of Comprehensive Medicine

Comprehensive medicine was defined during a national seminar held at Tabarka in July 1979, less than a year after Alma-Ata conference on "Comprehensive Medicine and Primary Health Care." It is a dynamic concept of health services which implies global approach to cure, prevention and education. The concept aims to:

- answer the needs of the population;
- make the structures and the expenses profitable;
- make the best use of staff by forming complementary sanitary teams.

However, such an approach to medicine can come about only when supported by well-defined laws.

WORK METHODOLOGY

The sanitary team of Medjez El Bab had two aims:
- tackle public health problems seriously;
- make all the members of the health team feel responsible.
The team had four principles:

- plan and coordinate activities of the health council;
- program quantified objectives and precise timing;
- integrate curative, preventive and educational activities at different levels with a physician at the head of every sector;
- regularly evaluate results and correct objectives, i.e. bring health services close to the population and try to improve community health, make the most of available resources, decide priorities, improve care of high risk population and improve team work.

Function and Activities

The members of the team are complementary and must take complete care of the health needs of the population. The physician is responsible for infant and maternal care, health in schools, area hygiene, staff training, in addition to his curative activities in the hospital services and health centres. He is also responsible for supervising employees in his sector.

The rest of the medical staff supports this role. For example, when a child comes for care, the nurses check both his vaccination record and his height and weight chart, and take measurements if needed.

The health needs of mother and infants are looked after from conception to adolescence by a mobile team supervised by a midwife, a pediatric nurse and a nutrition nurse who pay regular visits to the health centers in the sector.

These activities are synchronized at different levels:

- hospitals
- centers of maternal and infant protection
- hygiene service
- statistics unit to collect epidemiological information and analyze data
- documentation unit with a scientific library
- coordination through the health council that groups representatives of physicians and other medical staff, the managers and, occasionally, community representatives.
Health centers see to basic and emergency care, medical consultation and orientation, weekly visits by the mobile teams and epidemiological supervision.

On the periphery there are regular visits by a public health employee (the meeting place can be a school, a shop, a club, etc.). The employee sees to preventive care of children under 6 (weight, vaccination, nutrition advice), collects demographic and epidemiological data and promotes health education.

SAMPLE RESULTS

I. IMPROVEMENT OF DATA COLLECTION

The collection of reliable data and its interpretation by the team make the evaluation of the work and the readaptation of the objectives possible. Among the means used:

- a demographic census of the population recorded on a card that allows the diagnosis of the family and sociological and sanitary characteristics (housing, drinking water evacuation system of excreta...). This work made it possible for all children under 6 to be vaccinated in 1978;

- monthly collection of civil status information: births and deaths to keep data current;

- an enquiry into the infant death rate;

- maps of the region: epidemiology, demography, wells, springs;

- wall chart listing: consultations, vaccinations, prenatal visits.
Some operational research work has been undertaken by the team to gather more thorough information:

- experimentation with a new type of index card system for adults, children under six and married fertile women. This system is based on the coding system of the main chronic cases (tuberculosis, mental illness, heredity, etc.) or preventive acts (vaccination, weight graph). The chart also has a bill-book for appointments;

- evaluation of the nutrition status of the community;

- enquiry into the screening of people affected by tuberculosis and the efficiency of the BCG vaccine in the sector of Teboursouk;

- study of the cost and means of financing of health equipment.

II. PROMOTION OF SANITARY STRUCTURES

- increase the average rate of occupied hospital beds at Medjez: from 30% in 1975 to 66.5% in 1980;

- add new hospital at Testour;

- double the capacity at Teboursouk hospital after its integration in the region;

- convert all the health rooms into dispensaries and open new centers in the areas concerned (The number of health centers has increased from 7 in 1977 to 25 in 1981.);

- create a network of 86 assembly points and form a "health belt";

- widen the activities of Medjez laboratory (bacilloscopia: not practiced in 1977; by 1980 1025 laminas examined with 42 positive);

- place laboratories in Testour and Teboursouk for checking those affected by diabetes and tuberculosis.
III. EXTENSION OF COVERAGE

- with the extension of the program to include the sector of Teboursouk, the population covered by this work has grown from 75,000 in 1978 to 115,000 in 1980

- immunization: 94% with BCG for newborns 1980, 70% for measles and 80% for diphtheria, pertussis; Tetanus for infants 0-6 years

- delivery rate by qualified midwives has grown from 20% in 1975 to 52% in 1980

- extension of prenatal consultations included 30% of pregnancies in 1980 with systematic antitetanus immunization and referral of risk cases

- popularization of family planning procedures

- medicine for immunization and systematic visits

IV. FOLLOW-UP OF HIGH RISK POPULATION

- For infants 0-6 years:
  a. regular control of health notebook to record immunization and nutrition
  b. health education mainly for hygiene and nutrition
  c. prevention of malnutrition and diarrhea through oral rehydration

- For pregnant women:
  a. introduction and systematic use of antitetanus immunization during the prenatal period
  b. reinforcement of prenatal and postnatal consultations for newborns
  c. integration of FP into the other activities of maternal and infant care

- For chronic diseases:
  a. tuberculosis: in 1980, 61% of diagnosed cases are Bacillus Koch (BK+); 37% were taken care of totally by public health, hospitalization included; 80% followed an intensive treatment, 27% of the cases stopped coming to Medjez and Testour; and 27% did not report for follow-up care
b. diabetes: evaluation  
c. hypertension: study; hypertension and diabetes card-
index is being elaborated

V. BETTER SUPERVISION OF INFECTIOUS DISEASES

- compulsory notification of cases
- regular epidemiological enquiries and special programs to stop the infection
- health education with the help of the local authorities
- reinforcement of food control

VI. IMPROVEMENT OF TEAM WORK

- work coordination, i.e. periodic meetings in the health council
- participation of technicians in a collegiate hospital administration
- use of the special skills of the team members
- close collaboration between specialists and general practitioners
- creation of commissions for study and elaboration of specific programs: hospital hygiene, diabetes and so on

VII. CONTINUING EDUCATION

- presentations and demonstrations for staff
- first aid practice for ambulance personnel working in urgency departments (region has large number of road accidents)
- seminars and study visits
- the preventive and social medicine directorate and the faculty of medicine have chosen the region as a training field and allowed about 50 resident medical students to be introduced to public health activities
- non-professionals working with the team have included teachers, social assistants and omdas (local authorities) but lack of resources has limited such an approach
PRIMARY HEALTH CARE PROGRAMS: Problems, results and lessons learned

T. Nacef, B. Zouari, H. Omar

It was relatively easy to obtain consensus on the Alma Ata declaration and its goals; reaching these goals is proving to be much more difficult. Each country will encounter specific problems regarding the content of its PHC and the model to choose to put its program into action. However, we all face some of the same problems. For this reason, it is most interesting to exchange experiences and benefit from the lessons learned elsewhere.

We intend to outline some of the problems we have encountered in Tunisia. We will also retrace the steps taken to solve these problems rather than propose ready-made solutions for others.

1. Difficulties and potential difficulties

Rather than offer a list we have grouped problems in loose categories; keep in mind that problems and their causes overlap.

a) Rapport with the public: it is generally admitted that the desires of the community must be given priority; the success of the programs depends on whether the population agrees with the goals and is satisfied with the results.

It is undeniable that the average Tunisian considers it natural to consult a physician when he is sick; experience using "community health agents" or "medex" personnel would therefore be risky and politicians are well aware of this. Thus we have made great efforts to improve and expand medical training. This has not made it any easier to make distribution of doctors in rural and underserved areas more equitable; distribution obeys the law of supply and demand and socially and economically less advanced rural areas remain underserved.

A second difficulty concerns the role of the community. Existing organizations are called on too often and too easily to perform any number of tasks. Local organizations often depend on voluntary help and do not have time to do all that is asked of them. It might be more efficient to seek the help of "informal" representatives of the community, for example, elders, heads of communities, etc.
Unfortunately, identifying these representatives, outlining their duties and how these duties will be "integrated" with existing services are very difficult tasks.

In addition, it is unusual for the public to be involved in decisions on where to set up projects. Past policy usually favored construction of gigantic hospitals. These projects met with uneven success and delays caused by lack of planning or incompetent entrepreneurs. Public participation, when it was offered, usually consisted of building an outlying building. This help usually embarrassed health authorities who, not notified in advance, had not arranged equipment, budget or personnel to carry out the work. Wells installed in rural areas and then left abandoned are examples of such planning gaps.

And finally, health centers—especially those in rural areas—are often seen as social centers. It is not unusual for several children to be brought along. At the same time, neither present architecture nor that planned is conceived for such activities. Two solutions are possible: we can either try to change behavior we can change the way we build.

b) Difficulties with medical and professional staff and politicians: to this day, many of those who have to help politicians decide still think of the hospital as the center of health activities. This thinking leaves rural areas with the smallest slice of the cake in terms of financial, material, and human resources. Those who cling to these old ideas do so out of routine and sometimes out of profit. Fear of anything new, loss of privilege and possible conflict between individuals also play their role as individuals try to defend their citadels.

We sometimes overestimate the capacity of personnel to innovate and do things differently. This is true not only for administrators but also for technicians. Thus, with reforms of study programs and recycling personnel we often seek to change too much. One striking example is the way personnel deals with the public. Patients are rarely treated courteously. Medical complaints are taken in a cursory fashion, in public, in a loud voice and in an insolent manner. It is not surprising, then, that efficiency is low and health programs meet with little success.

What causes such behavior? Certainly one element is lack of basic training in psychology and sociology; but, above all, there is lack of motivation. Now, it is well known that attitudes are the most difficult things to change. It would be foolish to hope for a change in attitudes.
To make matters worse, supervisors regard training in remote areas as a disciplinary action for difficult or incompetent personnel. Thus, rural or remote facilities, which already obtain less financing and equipment, sometimes get the least desirable personnel.

c) Administrative difficulties: in spite of the regional directorates, reform of health organization is very slow in taking hold. Duties continue to overlap at the central level. Budgetary rules and procedures are cumbersome; in particular, information gathering and distribution information is insufficient. It is not forms in triplicate that are lacking. Rather, we have yet to define the kind of information to collect and the way to interpret and distribute it.

Organizing work on a hierarchical model is not suitable for group work; group work takes more supple human relations than that offered by a vertical organization.

d) Difficulties of the philosophical concept: by definition, systems of primary health care are conceived as an attempt to furnish the entire population with basic services. Most systems, including primary health care systems, do not offer the same level of care. So the same inequalities based on ability to pay, education and access are built into the system. This is a contradiction built into the concept and a segregation in the fundamental right to health care.

There are those who consider community medicine a second class system (the word "community" is the clue) for the disadvantaged; it is "rural" or "discount" medicine.

It is certainly legitimate to look for ways to meet the needs of the disadvantaged. It would be criminal to leave things as they are. At the same time, we must avoid creating one medicine for the poor and another for the rich or even to give the impression that is what is being done. The question is closely tied to the system of financing the health sector and the way medical care is delivered. It is not merely by fusing public and private systems that we will find the solution: such a nationalized system has its advantages, but it also has its disadvantages, not the least of which is eliminating the competition that allows public and private to coexist. The best solution might be to take what the public now approves of from both sectors.
2. Solutions

As we have mentioned, we will not offer ready-made solutions, but a methodology.

One basic rule is already well-known: primary health care management must be decentralized. It is, in fact, extremely cumbersome to manage a primary health care system at the national level. It is therefore important to decentralize not only the means but also the decision-making. The most successful primary health care projects have a limited geographical scope.

The second basic rule is harmony: harmony between the public and the health professionals and harmony within the health team. This type of harmony can only exist in small groups.

Let us come back to the first rule: decisions are to be made "on the periphery." The rest follows logically, solutions must be adapted to specific conditions and change as the conditions change. The dynamic of primary health care rests in its constant adaptation to changing realities.
COMMUNITY RESPONSIBILITY FOR HEALTH CARE, TRAINING OF COMMUNITY HEALTH WORKERS
Experimentation with the use of CHWs has been a major feature of the growing commitment around the world to find ways of bringing health care to the vast numbers who have no access to modern health care.

The use of auxiliary health manpower is of course not new. But the concept of a community worker does shift emphasis from classical health service delivery methods and underlines the philosophy that mobilization of community members as active participants is an essential ingredient to broader and more appropriate coverage.

A measure of the success of the Alma-Ata conference can be seen in the wider acceptance of this concept and the dozens of national health programs and hundreds of private and voluntary programs which use CHWs today. There is evidence indeed that trained community workers can bring a positive impact on public health. But, it is also becoming increasingly clear that this solid idea encounters numerous difficulties in implementation. We are becoming cognizant that more careful assessment of CHW functions is needed and better planning for their support is required if CHWs are to achieve their potential for health for all.

Despite the recognition of the advantages and the initiation of numerous programs with CHWs, little is known or reported about how CHWs are actually functioning, what they are able to do under what circumstances, or what is an appropriate span of responsibilities in a given context.

APHA has recently reviewed 50 AID-assisted PHC projects, and a spectrum of other projects using CHWs. Through review of documentation, a brief survey, and interviews we have attempted to assess some of the factors in CHW performance. Let me summarize some of the major findings and their implications for better planning for the use of CHWs. In reviewing projects, we looked particularly at the selection and training, support and supervision, assigned functions and actual performance.
Selection of health workers

The degree to which communities are involved with CHW program varies, but most of the projects studied set basic selection criteria, and then allow the communities to choose the CHWs. Residency and standing in the community are almost universal criteria. Literacy is often a requirement but has been associated with some problems. In Sine Saloum, Senegal, because of a literacy requirement, those selected tended to be young men waiting for better employment opportunities in urbanized areas, with virtually no intention of remaining in the community. Selection by village chiefs often was felt to be an advantage. Problems of nepotism are balanced by support of leaders. In Niger, for example, headmen usually choose a relative whom they are willing to support as a service to the community and a way of winning political points with the government.

More elaborate selection procedures have also been tried. In the Lampang, Thailand project, a sociometric method was used to analyze communication patterns between households to identify persons to whom others most frequently turned for advice.

In Tanzania, Hanang Project villagers nominated a number of candidates who were then tested and evaluated by the project staff with a standardized set of tests.

In a number of instances projects place increasing emphasis on recruiting female CHWs. National programs in Honduras and El Salvador have started replacing male workers who drop out with female workers. Women are more accessible during the day while men work in the fields. In Honduras, the program found that it was the wives of the guardians who often provided medical care when the husband was at work. Women are also somewhat more likely than men to stay with their job as non-salaried health providers. At times women also seem to have greater cultural acceptability and men are not acceptable for working with women. Male health workers may, on the other hand, be more effective in organizing to improve the environment, for example, building latrines or small water systems.

A few programs have dealt with this issue by training male-female teams (Guatemala, Tanzania/Hanang). This, of course, imposes additional support problems to the community. Expanding the role of traditional birth attendants has been a tactic used in some programs to ensure that the community would have a female health worker.
Few of the projects have attempted to bring traditional health practitioners other than midwives into their programs, although a few programs have made efforts to recruit traditional practitioners as CHWs. This is a community resource which needs to be looked at more carefully. Likewise, pharmacists, common sources of health care in many rural areas, have not usually been brought into PHC programs. There are exceptions to this rule. In Kenya/Kibwazi, for example, druggists were trained in simple diagnostic procedures. In Korea, a program undertook to upgrade standards of practice of druggists. The Thailand/ Lamphang project trained druggists to advise on the use of oral rehydration treatments and contraceptives.

**Training of CHWs**

Table I indicates the great range of length of training in the various projects—from two days to 10 months.

There is substantial variation in the length of training for workers—even those trained to perform similar functions—ranging from one week to nine months. In the Sine Saloum, Senegal project, for example, workers receive three months of training for curative functions, first aid, and simple record keeping, while in Afghanistan a comparable category of personnel received three weeks of initial training.

It is apparent, however, that community members with no prior health background can be trained to carry out basic health care. Few programs report problems with giving initial training to CHWs. This is encouraging, as training individuals with little formal education is a challenging task. Even those programs that train large numbers of illiterates have reported good retention of knowledge by trainees.

**Table I**

<table>
<thead>
<tr>
<th>Length of Initial Training Plus In-Service Training Per Year</th>
<th>CHWs and TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5 Days</td>
<td>7</td>
</tr>
<tr>
<td>5 Days</td>
<td>10</td>
</tr>
<tr>
<td>10 Days</td>
<td>12</td>
</tr>
<tr>
<td>2-4 Weeks</td>
<td>21</td>
</tr>
<tr>
<td>4-16 Weeks</td>
<td>5</td>
</tr>
<tr>
<td>More than 16 Weeks</td>
<td>11</td>
</tr>
<tr>
<td>No Info.</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
</tr>
</tbody>
</table>
Support and supervision

The degree to which programs can provide support and supervision is without doubt a major consideration in determining what community workers can do and how they function. Almost all programs reviewed reported problems in the area. Supplies and equipment are important features. Drugs most frequently supplied to workers include analgesics, vitamins, antimalarials, skin and eye ointments, cough mixtures, oral rehydration materials, anti-helminthics, cough medicines and contraceptives. Only rarely are they provided with tools to work in other development tasks.

Technical support is generally provided through the health system, but is most often reported as irregular and insufficient. Accessibility—distance, transport, quality of roads, and gasoline costs make adequate technical supervision difficult. It is apparent that attention must be given to these problems and new solutions found. A few trials with the use of radios for supervision, for example, show promise. While a system using CHWs theoretically depends on the availability of referral points for problems he cannot handle, such referral points are often not available or are inaccessible. This argues for the most extensive preparation for the most isolated workers who often must be self-sufficient. Our review finds, however, that the opposite is frequently the case.

Assigned Functions of CHWs

There is a wide variation in the types of responsibilities given to CHWs. Most of the programs look to one individual to perform a large variety of promotive, curative, and preventive functions. This reflects an attempt to cover the functional areas deemed important for PHC, namely:

- promotion of food supply and proper nutrition;
- promotion of safe water and basic sanitation;
- maternal and child health care including family planning;
- immunizations and control of endemic diseases;
- health education for the prevention and control of disease;
- appropriate treatment of injuries and common disease.

There is the paradoxical tendency that countries least able to support their CHWs give them the widest range of tasks.

About 12 of the 53 AID-assisted projects, have created distinct categories of CHWs for different types of functions. The Sine Saloum project created three different specialists:
first aid workers to treat common illnesses, hygienists to promote environmental sanitation, and matronnes to provide pre- and post natal care and to assist deliveries. Other programs such as those in Honduras and Thailand essentially divide curative and promotive/preventive functions between two categories of personnel. However, these have posed support problems to the communities and in a number of instances non-curative categories have been eliminated (Senegal, Tanzania, Honduras and Thailand).

Almost everywhere CHWs are expected to assume educational activities. Some countries include special programs in community health education. For example, Jamaica and Botswana stress dental hygiene and Ethiopia a program to educate the community about harmful traditional beliefs.

Nutrition activities are also common. In Botswana, Jamaica and Sudan CHWs conduct nutrition demonstrations. In Botswana and Jamaica they help monitor nutritional status by weighing and charting. In Thailand workers help set up kitchen gardens and feeding stations.

In most countries CHWs are expected to play an important role in environmental health by promoting sanitation and safe drinking water. CHWs in Ethiopia and the Philippines organize campaigns to promote sanitation and provide adequate and safe water. In Bulgaria and Turkey, they are responsible for sanitary control. In Thailand they assist in constructing latrines. In Honduras, they dig wells and construct pumps.

Most programs include a wide range of MCH and family planning activities. In Iran, The Philippines, and Ethiopia, the CHWs play a major role in providing services to mothers and children. Many CHWs are expected to train mothers in oral rehydration and at times they are expected to work in school health programs. In many countries the CHW is expected to motivate people to accept contraception. In some instances they also distribute contraceptives. They are often looked upon to promote immunizations, to report communicable diseases and to assist in specific disease campaigns. Provision of first aid and treatment of minor ailments are always included in the CHWs tasks.

Data collection, such as obtaining information on births and deaths, is often expected of the CHWs. The types of records kept vary widely. CHWs are also often assigned additional community development activities.
There is no question that the lists of tasks and the range of activities possible for the CHWs are many. What is not clear, however, is how many of these activities workers can successfully implement and under what circumstances.

Compensation

Two thirds of the projects rely on volunteer (or minimally compensated) CHWs who depend on community support.

Table II

CHW COMPENSATION

<table>
<thead>
<tr>
<th>Government Salary</th>
<th>Volunteer</th>
<th>Other Minor Compensation</th>
<th>No Information</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>18</td>
<td>25</td>
<td>5</td>
<td>66</td>
</tr>
</tbody>
</table>

Where individuals traditionally are not expected to work without pay, however, volunteerism cannot be depended on. In Honduras, for example, an anthropological study in the project area found that the idea of voluntary service is totally foreign to the culture: "Everyone knows and accepts that no one at any level works without pay or some other form of compensation." Even in Tanzania, where the government has promoted Ujamaa, a moral/humanitarian spirit of cooperation, the government has concluded that a health system based on village volunteerism is laden with risk. On the other hand, the government of Indonesia has expressed a strong commitment to the idea of volunteerism and feels that payment would contradict the rural social tradition of reciprocal cooperation—gotong royong.

Many of the projects have reported that CHWs agreed to serve as volunteers with the expectation that a salary would be forthcoming. Several programs indicate expenses remain unreimbursed, i.e., transportation.

The scarce data available indicates that lack of incentives is a major reason for high CHW dropout rates. The Senegal program reported over 30% turnover within the first 9 months. Bolivia/Montero reports rates of 30%, and the Honduras program rates is 60%.
Actual performance of CHWs

Although assessment of the actual tasks CHWs perform and of the quality of their work is sorely lacking, our review does permit us to make some tentative conclusions. First, CHWs usually do not perform all of their assigned duties. Second, the duties they do perform are most often curative.

With few exceptions the programs have all experienced difficulty introducing preventive care and promotional services at the village and even health facility level. For example, evaluations of projects in Niger, Afghanistan, and Bolivia all noted that health workers who were supposed to spend substantial time in preventive work, spent virtually all of their time in curative activities. This is a reflection of a number of factors:

- popular demand is for curative care;
- traditionally, health care has been curative;
- health personnel and the medical community are curatively oriented;
- in many projects, CHWs have a financial motivation to deliver curative care since their income is tied to drug sales.

Obviously, training in preventive care is not sufficient to insure that the services will be delivered. Even when training was limited to preventive areas, curative tasks were assumed by CHWs and preventive services suffered. Several programs planned to disregard curative services but had to amend their plans to be more responsive to local demand (e.g. Honduras, El Salvador, southern Sudan).

Absence of incentives for preventive services is commonly reported. The community generally neither demands nor gives recognition or moral support for preventive efforts. Financial incentives—for example, a small profit from sale of drugs—do not exist for preventive work.

Our review indicates that programs which use paid CHWs are more likely to deliver preventive services than programs using volunteers. In Nepal, El Salvador, the Dominican Republic, the Philippines/Panay programs are underway which do provide preventive care. These programs share two common characteristics:

- they have a special category of health worker whose duties are exclusively or almost exclusively preventive or educative;
- the community level health worker is a government employee, who receives regular salary;
In Honduras several experiments to encourage preventive work are underway. While it is too early to judge their effectiveness, the results will be of great interest. In one case, parasite medication, which is in high demand, is distributed only to those who have and use latrines. (Bolivia/Chiquitos is using the same technique.) The other experiment involves setting a quota for well and latrine construction.

Availability of drugs appears to be closely linked to use of CHW services. Many projects report that demand for services virtually disappears once drug supplies run out. Although few of the projects provide quantitative information on this point, data from Honduras serve to illustrate the importance of drugs to the CHW.

Case loads are reported to drop from an average of 62 during months when drugs are available to an average of eight once supplies are depleted.

The range of drugs available to CHWs tends to affect both their credibility and the demand for their services.

A major gap of information exists regarding CHWs ability to use drugs correctly. A project in Afghanistan attempted to assess how appropriately the CHW dispensed the 16 drugs provided.

Programs with government salaried community level workers experience considerably lower rates of turnover. The Dominican Republic and El Salvador both report "low" dropout rates—about 10%. It is obvious that high turnover rates present technical problems and a financial burden to the community. Government salaried CHWs, however, are sometimes viewed as someone belonging to the "system" and no longer to the community.

Many programs have attempted to institute some method by which the communities can at least minimally compensate their health workers. The most common method is through sale of drugs. In India workers receive an honorarium from the government. In Thailand they receive free medical care; in the Philippines they receive gifts from the community. But the evidence thus far suggests that community financing does not usually provide a sufficient or a regular source of income for the CHWs. The compensation issue obviously plays a key role in determining what can be expected of a CHW.
Factors in CHW Performance

Almost no data is available to give quantitative guidance for the tasks CHWs can be expected to assume successfully. Obviously factors which must be considered are the size of the community, whether workers are full time or part time, the distance and difficulty of access to the nearest referral point, how often workers are visited by staff of the health center, the extent of their training, and the available drugs and transport.

Often CHWs are expected to perform a range of preventive, curative, promotive and rehabilitative services for populations of 1000-4000 people even though the communities do not perceive the need for preventive and promotive tasks. Thus, while CHWs often enjoy considerable support from villagers for treating illnesses and dispensing medicines, incentives are lacking for other activities. This is reflected in CHW performance. It is widely acknowledged that CHWs are typically assigned more tasks than they can effectively perform and that they often do not carry out their preventive tasks. Key to performance appears to be the interest and support they receive from the community as well as from the health care system.

Obviously, the better and longer the training at all levels, the more intensive the supervision, the better the performance; the better and longer the initial community diagnosis, the better the CHW acceptance; the better the drug supply network and referral system, the more can be expected of the CHW and the higher the impact on health.

What are some of the implications of these conclusions?

1. The concepts, aims and methods of PHC and the use of CHWs must be thoroughly explained to communities to better match their expectations with the capabilities of the health system. In particular communities must be motivated to appreciate the value of preventive services.

2. Assignment of CHW responsibilities must be made in relation to available support facilities. Starting with a very limited number of tasks with incremental addition as the infrastructure is strengthened is more effective than introducing a full range of responsibilities. Likewise phased implementation of programs in various parts of a country may be more judicious than countrywide initiation of a comprehensive program.

3. Providing support and supervision for CHWs must now receive greater attention since these factors even more than selection and training are absolutely critical to CHW performance.
4. Attention must be given to finding incentives for the CHW to carry out preventive measures.

5. Assigning clusters of responsibilities to a number of community workers is to be encouraged. A single worker can rarely assume the broad range of tasks required for PHC coverage.

6. There is a critical need for assessment of CHW performance. Few programs are carrying out such assessments. Here is a priority issue for health services research.

   Our findings confirm that we still know too little about what is a feasible range of activities for workers under different circumstances. Now that the concept of their potential role has been generally accepted by the health community, we must plan more realistic approach to that use. The CHW must be seen not as a panacea to achieving "Health for All," but as a link in the chain of PHC approaches.

   The obstacles are great, but so are the opportunities.
ORAL REHYDRATION
Mothers, trained by health workers, prepared and gave dehydrated children a plain water, sugar, and salt oral rehydration solution (ORS). This simple treatment reduced infant mortality by an average 50 percent. That is the dramatic finding of a recent study by the Rural Health Department of the Egyptian Ministry of Health. The study, carried out in 1980, involved more than 29,000 children between the ages of one month and five years.

The Ministry, with the help of the WHO and USAID, undertook the study to combat one of Egypt's worst infant killers—dehydration caused by diarrheal diseases. Although children are only 17 percent of the population, they account for 50 percent of all deaths. About 80 percent of the infants die from just two diseases: diarrhea and lower respiratory tract infection. Sixty percent of these deaths are caused by diarrhea.

Public health officials were already aware that ORS could prevent many of these deaths and ORS packets were distributed to health facilities. But problems with accessibility and distribution meant that relatively few children actually were given ORS. Only about 60 percent of children sick with diarrhea are ever taken to a health practitioner. ORS supplies were neither regular nor sufficient and could only be had by prescription.

Given these and other problems, health officials wanted to know whether mothers could learn to make ORS from ingredients available at home and then use the fluid properly. In 1980, the Ministry studied four different ways to educate the public to use ORS. Two "control cells" served to check the results.

In the first group of mothers studied, health facility nurses distributed Oralyte, a prepackaged product, as part of their regular home visits (every four to six weeks). The nurses instructed the mothers how to use the packages. The nurses automatically replenished the mothers' supply during home visits.
In the second group, a stock of Oralyte was distributed to all shops and pharmacies free of charge. The shopkeeper or pharmacist could sell the package at the nominal price of three plasters (about US 4¢). Instructions on the use of Oralyte were to be repeated to the mother when she purchased her package. Visiting nurses taught mothers how to use the packets in the village shop or pharmacy.

The third group of mothers were instructed to prepare ORS by mixing five to six level teaspoons of granulated sugar with half a level teaspoon of salt in one liter of water. Nurses counseled mothers to add the juice of half a lemon, if possible, to improve the taste of the fluid and to give the child either tomato juice, orange juice, mashed banana or tea to increase potassium intake.

In the fourth group, nurses delivered a prepackaged sugar and salt mixture to the homes and showed mothers how to mix the ingredients with water.

In all four groups, mothers learned that if the child did not improve, the child should be taken to a health facility. Health facilities were assured abundant and regular supplies of ORT packets.

Health education in mosques and other public places supplemented the health education mothers received at home. In addition, village men attended talks given by a sanitarian at the mosque at least three times per month after Friday prayer meetings.

In the first control cell, health facilities continued to provide services as usual. In the second control cell, all health personnel were made aware of the importance of oral rehydration as a treatment for diarrheal diseases and a plentiful and regular supply of Oralyte was made available.

The study results show that with rehydration fluid made from household salt and sugar packets and backup supplies at health centers, mothers reduced infant mortality by an average of 50 percent. The Oralyte home distribution group was also successful: the death rate was reduced by 40 percent. The group that used commercially purchased packages reduced infant deaths by 15 percent. By contrast, the control cells reduced deaths by an average of 12 percent.
WORKSHOP REPORTS
ORAL REHYDRATION THERAPY

Obstacles:

1. Reluctance to use on the part of the medical corps and paramedics who continue to prescribe antidiuretics and antibiotics and other medication

2. Lack of education and information for mothers on the causes of hygienic diarrhea, water, food

3. Salts not available to all, especially in remote, underserved areas

4. Technical obstacles, e.g. one litre recipients not always available

5. Reluctance of populations who may consider treatment as second-class; mothers often find taste unappealing

6. Medical education in United States and European universities (where many developing country doctors trained) and in several developing countries often omit subject of oral rehydration; advertising by pharmaceutical companies that produce diuretics

Recommendations:

1. Make available to doctors and students information on methods and results of rehydration by Oralyte mixture.

2. Teach mothers (especially those whose children suffer from diarrhea) not only the rehydration methods, but also prevention through food hygiene, breastfeeding, good nutrition and the need to introduce diverse foods from the age of nine months.

3. Continue research to improve oral rehydration salts (in particular, consider reducing the level of sodium).

4. Each country create its own size package of rehydration salts to suit the kinds of containers likely to be used.
Disagreements:

1. Make oral rehydration products available to the public by distributing outside health facilities OR restrict distribution through health professionals or their trained co-workers who would train mothers to use the salts.

2. Sell products at a modest price so as not to devalue the product in the public opinion OR distribute the product fee.
TRAINING FOR ORT PROGRAMME: Medical and paramedical personnel, families, communities

The group discussed the following three points:

1. Personnel that will need training for an ORT program

2. Responsibilities of health auxiliaries and the measures necessary to reduce risks and remove obstacles

3. Obstacles

1. Personnel

The most pressing question is which personnel needs training and what sort of training should be given. Several participants pointed out that differing national contexts make it necessary to tailor even the most general guidelines. However, certain principles must underlie any approach:

a) All levels of health personnel must be trained in PHC. For example, in Sudan, ORT training is included in the curriculum of several levels of health personnel.

b) Special training should be given to health workers who have the most contact with families and communities; stress should be on measures to encourage mothers to maintain treatment as mothers are the key to a successful ORT effort.

c) Health personnel, in their work with mothers, should emphasize ways to prevent diarrhea and malnutrition; this should be considered an essential aspect of the health workers' duties.

d) In areas where high level health personnel is lacking and where much of the population is found in remote areas, "practical guides" will be especially necessary. These guides, or manuals, should offer clear and definitive information on training for ORT; this information should take into account local conditions and resources.

2. Agents' Responsibilities

In certain circumstances, health workers in charge of ORT cannot monitor the children or care for a severe case. For these reasons the following should be considered:
a) Legislative measures to minimize risks and define tasks of a program;

b) Harmonization of training and instruction for different levels of health workers to better define their responsibilities.

3. Obstacles

Doctors: Many are too overworked or influenced by more sophisticated technology to be interested because ORT:

a) requires too many explanations and time with patients;

b) does not correspond to their training (especially their nutrition background);

c) does not impress them because it requires no special qualification to administer it.

Pharmacists: Although pharmacists do not refuse to take part in national campaigns, it is difficult to motivate them because profits are minimal on the sale of ORT packets. In addition, they cannot always count on regular supplies.

Paramedics: This category of health personnel usually has the most direct contact with mothers and is a key link if an ORT program is to succeed. However, these health workers usually make a profit on the sale of medicines used for treatment of diarrhea and, for this reason, may discourage ORT.
VISIT TO MEDJEZ EL BAB, PROGRAM FOR INTEGRATED MEDICINE
A TUNISIAN PROGRAMME OF COMPREHENSIVE MEDICINE

Health Team of Medjez El Bab

All of us are deeply concerned with improving the health of the community and winning its legitimate right to physical, social and mental welfare.

This is all the more urgent as the access to satisfactory health services is still the privilege of a tiny proportion of the population.

However, public health in these countries suffers from:

- irrational use of existing resources;
- bad distribution of material and human means;
- absence of reliable health information circuits;
- lack of operational study of health services;
- passive attitude of communities regarding their health problems.

To adapt the strategy proposed by WHO that recommends the "improvement of the basic health services," it is essential to solve these problems. Tunisia is among the countries that have signed the Declaration of Alma-Ata and that have already undertaken research for an appropriate model of organization of health services. The comprehensive Medicine Project of Medjez El Bab is only one example of our commitment.

Characteristics of the Area & Resources of the Programme

Started in 1975 as the "Project of Improvement of Basic Health Services in Beja," the project was limited to the health region of Medjez El Bab. The project first came under a WHO expert. It was transferred to the Directorate of Social and Preventive Medicine in July 1977. Since December 1977, it has been directed by a young Tunisian team.

The area covered by the project is the Northwest of Tunisia and is crossed by Medjerda river; it is mainly an agricultural region. Most of the approximately 115,000 inhabitants are rural: thus, only 35% live in communal areas and are supplied drinking water; about 100 springs and wells provide water for the rest of the population.
The early health facilities were developed to include:

- 3 small hospitals with about 100 beds (one bed for 1,000 inhabitants);
- 3 maternal and infant protection centers;
- 22 health centers or dispensaries;
- assembly points.

These facilities have:

- five official public health general practitioners and four free practitioners;
- one pediatrician;
- one chemist.

This means there is one physician for 10,000 inhabitants, fewer than the national average. The rest of the medical staff includes:

- about 10 midwives in three maternity hospitals;
- about 60 health auxiliaries.

Community participation has been rather modest in improving the infrastructure of the region.

**Definition of Comprehensive Medicine**

Comprehensive medicine was defined during a national seminar held at Tabarka in July 1979, less than a year after Alma-Ata conference on "Comprehensive Medicine and Primary Health Care." It is a dynamic concept of health services which implies global approach to cure, prevention and education. The concept aims to:

- answer the needs of the population;
- make the structures and the expenses profitable;
- make the best use of staff by forming complementary sanitary teams.

However, such an approach to medicine can come about only when supported by well-defined laws.

**WORK METHODOLOGY**

The sanitary team of Medjez El Bab had two aims:

- tackle public health problems seriously;
- make all the members of the health team feel responsible.
The team had four principles:

- plan and coordinate activities of the health council;
- program quantified objectives and precise timing;
- integrate curative, preventive and educational activities at different levels with a physician at the head of every sector;
- regularly evaluate results and correct objectives, i.e. bring health services close to the population and try to improve community health, make the most of available resources, decide priorities, improve care of high risk population and improve team work.

**Function and Activities**

The members of the team are complementary and must take complete care of the health needs of the population. The physician is responsible for infant and maternal care, health in schools, area hygiene, staff training, in addition to his curative activities in the hospital services and health centres. He is also responsible for supervising employees in his sector.

The rest of the medical staff supports this role. For example, when a child comes for care, the nurses check both his vaccination record and his height and weight chart, and take measurements if needed.

The health needs of mother and infants are looked after from conception to adolescence by a mobile team supervised by a midwife, a pediatric nurse and a nutrition nurse who pay regular visits to the health centers in the sector.

These activities are synchronized at different levels:

- hospitals
- centers of maternal and infant protection
- hygiene service
- statistics unit to collect epidemiological information and analyze data
- documentation unit with a scientific library
- coordination through the health council that groups representatives of physicians and other medical staff, the managers and, occasionally, community representatives.
Health centers see to basic and emergency care, medical consultation and orientation, weekly visits by the mobile teams and epidemiological supervision.

On the periphery there are regular visits by a public health employee (the meeting place can be a school, a shop, a club, etc.). The employee sees to preventive care of children under 6 (weight, vaccination, nutrition advice), collects demographic and epidemiological data and promotes health education.

SAMPLE RESULTS

I. IMPROVEMENT OF DATA COLLECTION

The collection of reliable data and its interpretation by the team make the evaluation of the work and the readaptation of the objectives possible. Among the means used:

- a demographic census of the population recorded on a card that allows the diagnosis of the family and sociological and sanitary characteristics (housing, drinking water evacuation system of excreta...). This work made it possible for all children under 6 to be vaccinated in 1978;

- monthly collection of civil status information: births and deaths to keep data current;

- an enquiry into the infant death rate;

- maps of the region: epidemiology, demography, wells, springs;

- wall chart listing: consultations, vaccinations, prenatal visits.
Some operational research work has been undertaken by the team to gather more thorough information:

- experimentation with a new type of index card system for adults, children under six and married fertile women. This system is based on the coding system of the main chronic cases (tuberculosis, mental illness, heredity, etc.) or preventive acts (vaccination, weight graph). The chart also has a bill-book for appointments;

- evaluation of the nutrition status of the community;

- enquiry into the screening of people affected by tuberculosis and the efficiency of the BCG vaccine in the sector of Teboursouk;

- study of the cost and means of financing of health equipment.

II. PROMOTION OF SANITARY STRUCTURES

- increase the average rate of occupied hospital beds at Medjez: from 30% in 1975 to 66.5% in 1980;

- add new hospital at Testour;

- double the capacity at Teboursouk hospital after its integration in the region;

- convert all the health rooms into dispensaries and open new centers in the areas concerned (The number of health centers has increased from 7 in 1977 to 25 in 1981.);

- create a network of 86 assembly points and form a "health belt";

- widen the activities of Medjez laboratory (bacilloscopia: not practiced in 1977; by 1980 1025 laminas examined with 42 positive);

- place laboratories in Testour and Teboursouk for checking those affected by diabetes and tuberculosis.
III. EXTENSION OF COVERAGE

- with the extension of the program to include the sector of Teboursouk, the population covered by this work has grown from 75,000 in 1978 to 115,000 in 1980

- immunization: 94% with BCG for newborns 1980, 70% for measles and 80% for diphtheria, pertussis; Tetanus for infants 0-5 years

- delivery rate by qualified midwives has grown from 20% in 1975 to 52% in 1980

- extension of prenatal consultations included 30% of pregnancies in 1980 with systematic antitetanus immunization and referral of risk cases

- popularization of family planning procedures

- medicine for immunization and systematic visits

IV. FOLLOW-UP OF HIGH RISK POPULATION

- For infants 0-6 years:
  a. regular control of health notebook to record immunization and nutrition
  b. health education mainly for hygiene and nutrition
  c. prevention of malnutrition and diarrhea through oral rehydration

- For pregnant women:
  a. introduction and systematic use of antitetanus immunization during the prenatal period
  b. reinforcement of prenatal and postnatal consultations for newborns
  c. integration of FP into the other activities of maternal and infant care

- For chronic diseases:
  a. tuberculosis: in 1980, 61% of diagnosed cases are Bacillus Koch (BK+); 37% were taken care of totally by public health, hospitalization included; 80% followed an intensive treatment, 27% of the cases stopped coming to Medjez and Testour; and 27% did not report for follow-up care
b. diabetes: evaluation

c. hypertension: study; hypertension and diabetes card-
index is being elaborated

V. BETTER SUPERVISION OF INFECTIOUS DISEASES

- compulsory notification of cases
- regular epidemiological enquiries and special programs to stop the infection
- health education with the help of the local authorities
- reinforcement of food control

VI. IMPROVEMENT OF TEAM WORK

- work coordination, i.e. periodic meetings in the health council
- participation of technicians in a collegiate hospital administration
- use of the special skills of the team members
- close collaboration between specialists and general practitioners
- creation of commissions for study and elaboration of specific programs: hospital hygiene, diabetes and on

VII. CONTINUING EDUCATION

- presentations and demonstrations for staff
- first aid practice for ambulance personnel working in urgency departments (region has large number of road accidents)
- seminars and study visits
- the preventive and social medicine directorate and the faculty of medicine have chosen the region as a training field and allowed about 50 resident medical students to be introduced to public health activities
- non-professionals working with the team have included teachers, social assistants and omdas (local authorities) but lack of resources has limited such an approach
PRIMARY HEALTH CARE PROGRAMS: Problems, results and lessons learned

T. Nacef, B. Zouari, H. Omar

It was relatively easy to obtain consensus on the Alma Ata declaration and its goals; reaching these goals is proving to be much more difficult. Each country will encounter specific problems regarding the content of its PHC and the model to choose to put its program into action. However, we all face some of the same problems. For this reason, it is most interesting to exchange experiences and benefit from the lessons learned elsewhere.

We intend to outline some of the problems we have encountered in Tunisia. We will also retrace the steps taken to solve these problems rather than propose ready-made solutions for others.

1. Difficulties and potential difficulties

Rather than offer a list, we have grouped problems in loose categories; keep in mind that problems and their causes overlap.

a) Rapport with the public: it is generally admitted that the desires of the community must be given priority; the success of the programs depends on whether the population agrees with the goals and is satisfied with the results.

It is undeniable that the average Tunisian considers it natural to consult a physician when he is sick; experience using "community health agents" or "medex" personnel would therefore be risky and politicians are well aware of this. Thus we have made great efforts to improve and expand medical training. This has not made it any easier to make distribution of doctors in rural and underserved areas more equitable; distribution obeys the law of supply and demand and socially and economically less advanced rural areas remain underserved.

A second difficulty concerns the role of the community. Existing organizations are called on too often and too easily to perform any number of tasks. Local organizations often depend on voluntary help and do not have time to do all that is asked of them. It might be more efficient to seek the help of "informal" representatives of the community, for example, elders, heads of communities, etc.
Unfortunately, identifying these representatives, outlining their duties and how these duties will be "integrated" with existing services are very difficult tasks.

In addition, it is unusual for the public to be involved in decisions on where to set up projects. Past policy usually favored construction of gigantic hospitals. These projects met with uneven success and delays caused by lack of planning or incompetent entrepreneurs. Public participation, when it was offered, usually consisted of building an outlying building. This help usually embarrassed health authorities who, not notified in advance, had not arranged equipment, budget or personnel to carry out the work. Wells installed in rural areas and then left abandoned are examples of such planning gaps.

And finally, health centers--especially those in rural areas--are often seen as social centers. It is not unusual for several children to be brought along. At the same time, neither present architecture nor that planned is conceived for such activities. Two solutions are possible: we can either try to change behavior we can change the way we build.

b) Difficulties with medical and professional staff and politicians: to this day, many of those who have to help politicians decide still think of the hospital as the center of health activities. This thinking leaves rural areas with the smallest slice of the cake in terms of financial, material, and human resources. Those who cling to these old ideas do so out of routine and sometimes out of profit. Fear of anything new, loss of privilege and possible conflict between individuals also play their role as individuals try to defend their citadels.

We sometimes overestimate the capacity of personnel to innovate and do things differently. This is true not only for administrators but also for technicians. Thus, with reforms of study programs and recycling personnel we often seek to change too much. One striking example is the way personnel deals with the public. Patients are rarely treated courteously. Medical complaints are taken in a cursory fashion, in public, in a loud voice and in an insolent manner. It is not surprising, then, that efficiency is low and health programs meet with little success.

What causes such behavior? Certainly one element is lack of basic training in psychology and sociology; but, above all, there is lack of motivation. Now, it is well known that attitudes are the most difficult things to change. It would be foolish to hope for a change in attitudes.
COMMUNITY ORGANIZATION TO ENSURE RESPONSIBILITY FOR PRIMARY HEALTH CARE AND THE ROLE OF THE COMMUNITY HEALTH WORKER

The workshop began by attempting to agree on definitions of a health worker and the term "community." One principle to define the terms was agreed upon and based on the experience of several Maghreb and Middle Eastern countries: a community cannot be defined by administrative or territorial boundaries; there is no definition that applies all the time and in all places; rather, "community" as a notion is supple and constantly evolving.

A community can only be loosely defined as a group of individuals who live in the same environment, has developed common interests and needs certain care to protect and promote its health.

As for the community health worker, it was pointed out that there is a stereotype of an illiterate individual who is handed a series of tasks meant to improve health. Most members of the commission said this was not the case in their countries, though at times such individuals were chosen for community health work. Others saw the community health workers as more an agent for social change. For others, he or she is an educator.

Given that no one definition fit all circumstances, the group preferred to define the health worker's tasks and how these tasks fit into the primary health care program. The level of these tasks depends on the level of the community's economic, social and cultural development.

The agent's education and level of technical training varies according to the level of the community and its resources. A community may have an agent with either rudimentary notions or it may have a doctor or medical-sanitary team. One element is invariable, however: the community health agent must motivate the community and have it participate in improving its own health. To do that, the agent himself must be motivated. Through direct contact and dialogue with the community, he or she must identify the needs of the community and respond to these needs whenever and however possible.
Three workshop members opened the session with reports on nutrition programs in a community medicine setting in Haiti, The Sudan, and Tunisia.

Haiti: This western third of the Island of Hispaniola has a population of 5,000,000. Approximately 80% of the population still lives in rural areas. In a rural health project which served a population of about 100,000, a community health team identified neo-natal tetanus, malnutrition and tuberculosis as major health problems contributing to morbidity and mortality.

The community health professionals set about educating the community through itinerant teams. These teams developed and trained community liaison workers. They set up quarterly health fairs at key localities where the liaison workers could bring all mothers and children they had registered through nutrition monitoring and counseling. The mothers became sensitized to the importance of good nutrition and utilizing locally available food. The health rallies or fairs also served to complete immunizations, begin pre-natal care, and family planning. Nutrition education and demonstrations were carried out in villages by itinerant teachers who lived and worked in temporary "Mothercraft Centers" set up by community councils. The importance of appropriate preparation of locally available weaning foods, fed more often to young children, was emphasized.

The Haiti experience sought to underline that such work can be carried out effectively by members of the community and that doctors are needed only as a point of reference.


Sudan: The health team began by identifying the most urgent deficiencies:

- protein deficiency (50% of infant population) at different stages: Grade I - 40%, Grade II - 9%, Grade III - 1%
- iodine deficiency: goiters (frequent)
- avitaminosis A
- anaemia

The actions taken emphasized the following:

- the need to promote breastfeeding
- control changes in weight and height by regularly measuring infants
- advice to mothers on their children's diet; recommendations included locally available foods and instructions on how to prepare them
- the community health agent was trained to recognize the most common signs and most
easily recognizable signs of malnutrition, i.e. avitaminosis A (night blindness). The health worker also learned about food rich in vitamin A and proteins that are available in the community. As for anaemia, the health agent learned the elementary signs (pinkeye) and about the availability of iron-rich foods of the region.

**Tunisia:** The most important nutrition problems are:

- malnutrition affects 40% of the infant population: 30%, grade one (Gomez); 8%, grade two; 2%, grade three;
- anaemia;
- rickets;
- diarrhea and related complications.

Health teams track down cases of malnutrition in basic health centers by monitoring the nutritional status of children. Certain preventive measures are underway; in particular, health education is widely used and stresses proper weaning methods, early use of supplementary foods, health posters in health centers, setting up nutrition centers that serve as counseling centers for the basic health center and for hospital cases. And finally, the most important activity of non-medical health workers is to visit homes and basic health care centers to teach and demonstrate proper nutrition.

Thanks to these activities, the health team has noted a clear drop in the number of cases of malnutrition.

Having heard reports on the above projects, the commission agreed on the importance of community participation in nutrition programs and outlined the following tasks a health worker should be able to perform to improve nutrition:

1. Take charge of weaning; give advice on alternative foods taking into account the economic, geographic and cultural setting of each community; discourage use of commercially prepared foods (infant formula, etc.).
2. Identify target groups:
- infants from birth to age 6;
- pregnant women, especially in their first three months of pregnancy, in order to avoid anaemia, spontaneous abortions;
- nursing mothers, with special attention to their need for protein and liquids.

3. Integrate nutrition programs into all health and community activities of the region.

4. Promote breastfeeding and work against the unwarranted use of artificial milk substitutes, bottles and nipples.

5. Recommend that mothers follow WHO recommendations regarding newborn infants:
- unite child with its mother as soon as it is born;
- put child to the breast 30 to 60 minutes after birth;
- suction should stimulate lactation from the first day;
- avoid giving newborns any sugar water or sugar drink as this may hinder nursing.

6. The campaign against diarrhea and infectious diseases can help combat malnutrition. The health worker or community workers can take on this task. The great number of deaths due to diarrhea makes it imperative to stress oral rehydration and better nutrition.

7. Harmonize the efforts of institutions in different countries with a view to creating coherent programs to fight malnutrition. This effort is the special task of the ministries of public health, agriculture, social affairs, and public education.

CONCLUSION:

Given the wide range of tasks it will take to improve nutrition and the reluctance of the public, carrying out the tasks should be the responsibility of a community health team and not that of one health worker.

This team should have responsibility for full coverage of public health and work with members of the community.
DEVELOPING HUMAN RESOURCES

The following factors must be kept in mind in building PHC personnel:

- The choice of personnel depends on the kinds of services and the cost of these services.

- There will be several kinds of qualifications necessary and these will depend largely on the needs of the community.

- The doctor who heads the team will be a good leader if he has had the proper training, knows how to delegate, is properly motivated and can respond to the needs of the community.

- In certain cases the personnel will have to spend long periods in remote areas to better understand the services they have to provide.

- Health auxiliaries and community workers must be accepted by the community.

- The administrator must be an individual who can call upon resources from many sectors of community health.

- All personnel will carry out several tasks.

- Structures must remain flexible and change according to changing needs.

- The community agent is a link with the basic health services and has limited tasks; basic health services could include a midwife, teacher, agricultural field workers, population workers, administrators, etc.

- The principal role of the health worker may vary from community to community; but in all cases his or her goal should be to inform, motivate, be on the alert for urgent or serious cases.
FAMILY PLANNING AND PHC
INTRODUCTION

It has become a principle of all primary health care programs that the community assume responsibility for assessing its own needs, designing programs to meet those needs and even providing part of the manpower to carry out those plans. The community member selected by his peers, trained, and then working in his own environment has become the key person in almost all program designs. Although adults in general may be reluctant to become involved in their health care, they can often be convinced to do so. However, when one is concerned with reproduction and the whole subject of human sexuality, there are constraints which defy resolution. We must keep this sensitivity in mind as we consider various aspects of the use of community health workers in family planning programs.

Cultural Considerations

Unfortunately, the use of a community health worker often demonstrates that old axiom: "A prophet is not without honor save in his own country." Some of the reasons for that may be valid.

When an outside group, such as a ministry of health, comes into a community and designates someone as an intermediary between that organization and the community, regardless of how carefully it is done, the power structure is tampered with. This puts all three parties at risk--the ministry, the health worker, and the community, and may lead to severe problems or at least to less than the desired activity. It's left to the health team to make peace between the groups.

The creation of a new kind of health representative at the village level may also disturb the well-established traditional health and religious systems, and lead to a sense of competition and suspicion; traditional healers are often part of the community power structure, and therefore may be threatened on two fronts.

Many community health workers feel handicapped because the qualifications to enter the program are not necessarily those which the community will respect, for example, age, sex or family background. These obvious obstacles, coupled with those much more powerful, but more subtle controls
placed by traditional taboos, beliefs and practices may actually paralyze the most promising of community health workers.

As soon as one begins talking about family planning, one broaches the subject of human sexuality, which is absolutely taboo in many settings. We may be asking the community health worker to take significant personal risks.

There are also other practical considerations which may influence the success of the village worker. His peers may recognize that his training is minimal and perhaps inadequate to the task he is being asked to do. Or, they may say that he is actually doing more than he should---playing doctor or nurse, so to speak, and they may lose respect for him on that basis. And I think we have all seen cases of a community health worker who has found the economic pressures so great that he has distorted his public image by unwise behavior. We, as persons responsible for community health programs, need to be reminded from time to time that knowledge, particularly inadequate knowledge, can be very dangerous, and that awareness is a useless burden that becomes very heavy if there is no way to act upon it.

Legal Considerations

The use of community health workers as the basic unit in health programs is made even more difficult by the lack in most countries of an established legal precedent. There is no legal coverage of either the health worker or his client; or, at best, what laws there are are ambiguous. Most countries have laws which control medical practice itself, the distribution and sale of medications, and the use of certain specific treatments or devices. It is evident that these laws are necessary both to validate the health worker and to protect a trusting public. Existing laws differentiate between those medical acts whereby judgment is exercised for either diagnosis or therapy based on one's own responsible initiative, and those acts which are simply the following of another person's instructions, even though they may involve very technical procedures requiring a very high level of competence. Most of these laws could be reasonable within certain contexts---perhaps within the capital cities of countries. However, outside the industrialized nations, 75% of the population lives in a context where these laws are completely inappropriate, since they recognize neither the lack of health personnel nor the acute demand for services.
Any attempt at resolution of this basic paradox always raises the question as to whether we can be honest if we suggest that there are different standards of medical care and practice for different groups of people. Is it ethical, for example to imply by law that citizens of a developing country or of a rural region do not have the same right to legal protection with regard to health practitioners as those living in a developed nation, or in an urban center with sophisticated medical standards? How can we play God and make those kinds of decisions? I am troubled, for example that the United States Food and Drug Administration categorically refuses to approve Depo-Provera as a contraceptive for American women due to the risks involved, while at the same time recommends that it be made available in other countries where women do not have so many alternative choices of method. Is that stance defendable? Is it ethical? I don't know.

Professional Considerations

One of the major obstacles to the use of community health workers that I have encountered has been the resistance of professional health personnel. Our medical hierarchies are so rigid and so closed that they refuse to admit persons whose credentials are not impeccable. In many situations there is a historical prejudice against the use of non-professional workers. They may also find themselves in an unclear relationship with other kinds of auxiliaries used within the health structure. Since their roles are not always clearly definable, this may lead to overlapping of responsibility, confusion and competition. It has often been difficult for the established medical community to accord to the village health worker the respect and support that he needs in order to do his work well.

Program Considerations

There are certain basic questions in the realm of family planning which cloud the use of community health workers. These questions involve the ethical appropriateness of having someone without a formal medical training helping a couple assume the responsibility for choosing and using a contraceptive method. Certain portions of family planning practice have traditionally required the presence of a trained clinician. Can non-professionals help clients choose wisely? Will they be able to rule out contraindications to a particular method? Do they need to know how to do a physical assessment? How much of one? Will they be able to recognize a subtle pill problem, or the insidious onset of a pelvic infection? The success of any program using nonprofessional workers depends upon the answers to these questions.
Program directors also have to deal with the sticky problem of payment, whether in cash or in kind, or by any other local method. And then there is the constant problem of the upward brain-drain. Just as a community health worker is becoming productive in his position and trusted by his community, an opportunity for self-improvement presents itself which he cannot resist. We should, of course, encourage this sort of career development, but from a program point of view, one must start all over again at the community level.

Although we all talk about supervision for broad primary health care programs, including family planning, the issue of supervision has never been adequately dealt with. The realities of distance, modes of transportation and the cost of petroleum products limit most supervision schemes to talk.

CONCLUSION

What should we conclude from all these seemingly negative considerations? Should we stop using community health workers in family planning? Absolutely not! The properly selected member of the community, who already belongs, who knows and is known, is the only person around whom an effective program can be built. There is no other way. It just means that we as the directors of health programs must rise to the challenge of their proper selection, preparation, and use.
Our pilot family planning program lasted from 1977 to 1980 and was financed by the Moroccan Government and USAID. Public health nurses made home visits to motivate the public to use family planning and to distribute contraceptives in the province of Marrakech (population 1,200,000).

Twice in a three or four month period, the nurses visited women aged 15 to 44 and, each time, filled out questionnaires to gather the following information on each woman:

- identity
- fertility
- previous gynecological history
- birth control habits
- counterindications
- results of the enquiry
- reasons for refusal or acceptance

The work was carried out by existing staff. Then the questionnaires were sent on to the International Fertility Research Program in North Carolina (USA). The results are now being analyzed.

Objectives

The object is to obtain data on demography and fertility and on the practices and attitudes concerning contraception.

Evaluation will analyze the program's cost effectiveness and the difficulties encountered with an eye to extending the program to other provinces of the country.

Findings to date

Most women who use birth control use the pill. There are marked differences between urban and rural practices:

- In cities, 44% practice birth control; in rural areas, the figure is 14%.

- Generally, male health agents were more successful in gathering information than their female counterparts.

- The average costs of interviewing each woman was U.S. $2.00.
ROLE OF THE TBA IN PRIMARY HEALTH CARE

Mrs. Imtiaz Kamal (IPPF)

INTRODUCTION

In early 1973 the Executive Committee of the World Health Organization (WHO) reported that the world's public health services have grown worse both in quality and quantity. That health is of low priority is attested by the fact that in most countries the health budget barely reaches 2% of the national budget. The training of the health personnel prepares them for secondary and tertiary care, whereas the need is for primary care for the millions living in poverty and for those who are living in remote and isolated areas. The health needs of such people are usually forgotten at the policy making level.

In recent years, however, there has been a radical change in the thinking of health planners and in the approach to health development. This approach is referred to as "Primary Health Care" or "Basic Health Care." A WHO document lists seven fundamental principles of primary health care.

1. Primary health care should be shaped around the life patterns of the population it is to serve and should meet the needs of the community.

2. Primary health care should be an integral part of the national health system, and other echelons of service should be designed in support of the needs of the peripheral level, especially with regard to technical supply, supervisory and referral support.

3. Primary health care activities should be fully integrated with the activities of the other sectors involved in community development (agriculture, education, public works, housing and communications).

4. The local population should be actively involved in formulating and implementing health care activities, so that health care can be brought into line with local needs and priorities. Decisions as to the community's needs should be based on a continuing dialogue between the people and those who provide services.

5. Health care offered should place maximum reliance on available community resources, especially those that have hitherto remained untapped, and should remain within the strictest cost limitations.
6. Primary Health care should use an integrated approach of preventive, promotive, curative and rehabilitative services for the individual, family, and community. The balance between these services should vary according to community needs and may well change in the course of time.

7. The majority of health interventions should be undertaken at the most peripheral level possible of the health services by those workers most suitably trained to perform these activities.

To plan and provide primary health care, health manpower is needed. Those of us from the developing countries know the problems of providing health personnel for the rural health centers, that is, if centers exist at all. Health personnel trained in the city is by and large not willing to go to the remote underserved or unserved areas. Some governments have made rural service compulsory for one or two years. The average sophisticated health workers accepts it like rigorous imprisonment, counts the days and heaves a sigh of relief when it is over.

The aim of PHC is the goal of "Health for All by the Year 2,000." For the world to reach this goal, it needs to utilize to the maximum the available resources of manpower and keep the cost levels down. The traditional birth attendant (TBA) is undoubtedly the richest available human resource.

The TBA

TBAs have always existed and continue to exist. Shortage of trained health personnel and their reluctance to work in rural areas leaves mothers with no choice except to call the TBA to assist them during childbirth. Even where trained health personnel is available, economic and other factors limit use of their services. That is why the TBAs exist both in rural and urban areas in a vast majority of the countries of the third world. Their midwifery practices are neither all bad nor all good. They are a combination of both. Their practices are based on experience and traditional beliefs. Some of these practices however are definitely harmful. Many countries are now trying to train TBAs with the main objective of making childbirth as safe as possible under the circumstances.
Realizing that a TBA has a special position and status in the community in which she practices, health planners are now exploring ways to mobilize and use this human resource to the best possible advantage.

Categories of TBAs common in Asia and the Arab World

In the Middle East and Asia there are two categories of TBAs: the "untrained midwife", who practices midwifery for a living and the birth attendant who is usually an elderly relative or neighbor. The latter does not make a living from midwifery; she usually gets "gifts."

The urban TBA falls in the first category. She sometimes sets minimum rates per delivery. Depending on the financial position of the parents, sex of the child and how "precious" the new born happens to be, the TBA gets some extras over and above her "fees."

The rural TBAs are a mixture of both categories. Those known as "midwives" can be called upon by anyone. They expect to be paid. The payment can be in cash or kind or a bit of both. The rural "birth attendant" does not deliver just anyone. The delivering mother has to be a relative, or the daughter or daughter-in-law of a neighbor, or a close friend. She assists in childbirth as a "favor" or as a "good deed." She does not expect to be paid. She does, however, receive a gift as a token of appreciation.

The number of TBAs in the world is not known because very few countries have made serious efforts to collect this information. The Philippines and Thailand have collected data. What is known is that two thirds of the babies in the world are delivered by the TBAs. This means that between now and the year 2,000, out of the expected three billion babies to be born, 2 billion will be delivered by the TBAs. What can also be projected is that out of these two billion, 250 million will die before completing the first year of life.
Clean hands and clean instruments used at the time of delivery can avert a considerable number of infant deaths. Immunization, clean environment, breastfeeding, and proper nutrition can avert some more deaths. So can teaching the mothers how to prepare and use rehydration fluid. Spacing of pregnancies can make a contribution.

This is where the TBA can play a very important role provided she is trained to do so. For about a quarter of a century a great deal of interest has been shown in this available human resource. Even though many countries of the world are training and using TBAs, by and large the emphasis has been on training them to provide safe care during the maternity cycle. Some countries are using them as case finders, motivators, and referral agents for family planning. There is tremendous scope for an extended role of the TBA. In addition to her role of a practicing midwife the TBA can easily perform the following functions:

**The TBA as a bridge**

The availability of health services is no guarantee of their maximum use. There are many factors that influence the behavior of rural communities. The TBA can be trained and used as a bridge between the community and the available primary health care services. She is a respected and trusted member of the community. It is easy for her to enter any home and talk to any mother and father. They listen to her and her advice is taken seriously. She knows her community and its culture and values. This gives her a head start.

**The TBA as a health educator and referral agent**

The TBA can easily convey the message of healthy living, i.e., the importance of personal and environmental sanitation, proper nutrition through locally available foods, prevention of disease through immunization, and prevention of unwanted pregnancies. By working closely with the PHC units, she can refer the community members for medical help or advice to the health unit. The above-mentioned roles will be or should be acceptable to almost any health worker as well as to the government.

**Further expansion of the TBA's role**

This will depend on individual situations. But she can easily give first aid. She can also teach the mothers how to prepare and use rehydration fluid.
Training

Carefully planned training will determine the successful use of the TBAs, for which suitable and trained trainers will be needed. It would be worth a serious consideration to train the more competent and trained TBAs as trainers.

A major problem for the TBA to be trained and used is the resistance of the professional health workers including medical and paramedical workers. This will have to be overcome.

Another important factor will be the supervision of the TBA after she is trained and starts work. Some resistance to supervision by the TBA has been experienced in the past but a tactful supervisor can easily manage that. Follow-up of the TBAs is an area which has posed some problems in the past. The planners must ensure that in the plans due attention is paid to this factor.

Evaluation of the TBA performance

Just like supervision and follow-up there has to be a built-in mechanism for evaluating the outcome of involving TBAs in the PHC. One approach which has shown successful results is to provide the TBA with printed referral cards. The TBAs can either be taught to sign their name or, when they are given the referral cards, the health worker can write the name of the TBA on them. The cards are collected at the primary health care unit. From the analysis of these cards it is easy to find out how many and what sort of cases were referred by the TBA. The cards will also point out which TBAs are working with interest.

Further analysis would be needed to watch the morbidity and mortality trends of the community and of the use of the health services, and their relationship to the TBAs.

SUMMARY

TBAs exist and will continue to exist in countries where communities are underserved or unserved by health systems. They are a rich human resource. By training and using them there is every possibility of raising the health standards of the communities and of bringing down the morbidity and mortality rates. Proper training, supervision and follow-up will determine the successful use of the TBAs and evaluation of their performance will determine the degree of the success.
CONCLUSION

Each country, based on its own laws and the strength of its health care system, will have to decide whether to allow TBAs to practice legally.
THE ROLE OF THE TRADITIONAL MIDWIFE IN PHC

The commission sought to answer two questions:

- Do traditional healers in general have a role in PHC and, if so, what is that role?

- How can traditional healers be integrated into PHC? What training will be necessary? How will they be paid?

The topic sparked a highly animated discussion. On the role of traditional birth attendants (TBAs), opinions varied widely. Virtually each country has TBAs and these women perform different duties in different places. All take part in deliveries and cutting the umbilical cord. But, according to the country, they may also perform any of the following:

- help celebrate the seventh day after birth
- advise on the care of the newborn
- advise girls who are about to be married
- clean the bodies of deceased women
- perform abortions
- advise on weaning

According to some participants, TBAs practice medicine illegally. In other countries, Haiti for example, TBAs are sanctioned by law.

From an ethical point of view, it is inadmissible that there be one kind of medicine for the rich that uses highly trained personnel, and another for the poor that uses workers with little training.

Technically, delivering a child is not an easy act to perform, especially in cases where complications may arise. In addition, certain accidents and complications can come as a result of delivery by TBAs, such as umbilical tetanus, infections, obstetrical complications. TBAs exist, but legalizing them might create a bad precedent; on the other hand, we should encourage midwives with diplomas (by offering them lodging and other perks) to work in rural areas.
What should be done? The fact is that 60-65% of all infants are delivered by TBAs. It must also be noted that TBAs are well accepted in rural communities, and sometimes better thought of than the staff of health facilities.

The group also discussed the possibility of training TBAs and thus attempting to reduce the number of complications, especially umbilical tetanus. Given the TBAs level of education (often they are illiterate), and their age (they are often elderly) training is not always simple. Nonetheless, the damage must be limited by carrying out health education efforts and antitetanus campaigns for all pregnant women. In addition, TBAs must be taught basic hygiene.

All training for TBAs must be simple. It must be noted that in some countries TBAs carry out important tasks: they are the link between health structures and the community, and they have been trained to use sterilized instruments.
DEFINITION AND COMPONENTS OF AN EFFECTIVE FAMILY PLANNING PROGRAM

An effective family planning program makes information and services available and accessible to all those who want them. It should provide a choice of method, be it family spacing, limitation or infertility services such as vasectomy, tubal ligation, etc. The decision to use the services and in what way rests with each family, couple or individual, and should in no way be subject to outside pressures.

A family planning program will be most effective if it is part of a national program of socio-economic development and other health services. A national policy that encourages family planning services and contributes to improving conditions for women also helps in make FP programs effective.

Finally, an effective program must be designed to meet and measure short- and long-term goals. In the short run, measuring coverage and services provided may be a more reliable indicator than statistics concerning birth rates, mortality and morbidity.

Essential elements of an effective program

- training of those involved in the program to make them aware of the problem
- case-finding of members of the community who need and want services
- motivation and education of the population to allow them to choose methods and services that fit in with values, socio-economic circumstances
- referral to sources where services may be obtained
- provision of services by qualified personnel and in conformity with laws of country
- follow-up by appropriate personnel
- administrative functions such as record-keeping
The role of the community health worker

The community health worker can take responsibility for many of the above tasks. A health worker with minimal training can be made aware of the problem, can do case-finding, motivate and educate the public, and refer cases for follow-up. The extent of the involvement depends on factors such as the national legislation regarding para-professionals, the availability of trained manpower at the community level, whether the community accepts the health worker and the health infrastructure. Thus a standardized or uniform description cannot be put forward even within one country.

Commission members suggested that specific tasks and requirements for training be outlined. This would ensure that all components of a program are covered and that the personnel responsible are adequately trained. Family planning responsibilities at different levels and other primary health care tasks belong to every member of the health team.
WATER AND SANITATION IN PRIMARY HEALTH CARE

The workshop sought to answer two questions: why should sanitation be part of PHC and how can sanitation be integrated into PHC.

Why?

In both urban and rural settings, there are two types of population: those who have access to potable water and those who do not. The latter are by far in the majority. For example, in certain regions, well water is bad 95% of the time.

Not only is quality a problem: in many cases where water is accessible, its quantity is severely limited and this affects its quality.

Everyone knows the consequences: water-borne diseases are rampant and cannot be controlled unless there is a sufficient supply of good water and proper disposal of waste water.

How?

Public health bodies and other ministries and groups not directly responsible for water and sanitation must work together with water and sanitation authorities to help improve conditions. This joint work should cover:

- proper disposal of waste water;
- a search for new sources of good quality water in sufficient quantity (desalinisation, re-use of waste water, etc.).

The public health worker, if given proper training, could perform the following duties:

- educate the public to solve problems, both as a community and as individuals;
- take part in fight against wasting water;
- seek and identify sources of water;
- check quality of water so that an alarm can be sounded in time and damage be kept to a minimum when quality drops below acceptable levels.
CLOSING SUMMARY

Prof. Bechir Hamza

Here we are at the end of the workshop entitled "Primary Health Care: Interventions for Widespread Coverage," which brought together participants from the Middle East region.

In these few days we have reviewed some of the principal problems posed by extending health care and providing primary health care. We have heard pertinent talks on the experience in different countries of trying to cover basic health needs in these countries.

We are all part of the community of developing countries with limited resources and it is perfectly legitimate for us to seek simple and economical methods to meet the needs of our people without creating a system of social discrimination.

During the workshop we often heard that in order to obtain satisfactory and efficient health care we will have to call on the human resources and the auxiliary personnel in our health system.

Dr. Kessler reported different examples of how health care auxiliaries are being trained in different countries. Her report spurs us to reflect on the role of the auxiliary worker. An auxiliary worker cannot be trained to do everything; but auxiliary workers can perform certain specific tasks and this training will be dictated by the conditions specific to each socio-cultural setting.

As Dr. Kessler underlined, the impact of the community health worker is still an unknown. We must proceed carefully; we must not go off the deep end. We must develop a realistic approach, an approach that best uses this valuable manpower so that these health workers are not seen as mere promoters of health for all, but a link in the chain of primary health care services.

At the same time that we reflect on these tasks, the responsibilities of the community health workers and the legal implications of their work, we must also develop programs for our doctors and paramedics and review these programs in light of their impact on primary health care and preventive medicine. We must also consider giving more responsibility to midwives in the care of mothers and infants.
As the Minister of Health stressed in his opening remarks, public health is not just a matter for doctors, but implies a multi-disciplinary approach. Decent living wages, housing, and education, and adequate purchasing power will help solve some of the worst public health problems.

Before closing, I would like to thank the Tunisian Ministry of Public Health, the American Public Health Association, and the United States Agency for International Development for giving us this opportunity to exchange our experiences. I trust it has been profitable for the participants personally and a forum for the exchange of ideas. I hope this meeting will serve us in evaluating our work and in adopting better methods for bringing health to all by the year 2,000.
Appendix 1

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Miss Faouzia Hamrouni
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Appendix 2

Documentations

"Breast Feeding - Aid to Infant Health and Fertility Control."
Population Reports, Series J, No. 4, 1975: 49-68 (French and English)

Available from: The Johns Hopkins University, Population Information Program, Hampton House, 624 North Broadway, Baltimore, Maryland 21205.


Available from: AHRTAG, 85 Marylebone High Street, London W1M 3DE, United Kingdom.


Available from: AHTAG
See: Documentation No. 2 above.


Available from: AHRTAG
See: Documentation No. 2 above.


Available from: Oxford University Press
See: Documentation above.


Available from: The Johns Hopkins University.

See: Documentation No. 1.


Available from: The Johns Hopkins University.

See: Documentation No. 1.

"Traditional Midwives and Family Planning." *Population Reports,* Series J, No. 22, 1980: 439-481. (French and English)

Available from: The Johns Hopkins University.

See: Documentation No. 1.


Available from: The Johns Hopkins University.

See: Documentation No. 1.

World Health Organization. *Health and Status of Women.* 1980. (FHE/80.1). (French and English)

Available from: The Division of Family Health, World Health Organization, 1211 Geneva 27, Switzerland.


Available from: World Health Organization.

See: Documentation above.
programme

Lundi 31 Août 1981 :
9:00 - 10:30 : Soins de Santé Primaires : La voie pour la santé communautaire.

Président :
Pr. Tewfik Reesef, Professeur de Médecine Prévventive et Sociale à l'Académie de Médecine de Tunis, Directeur du Centre de Recherche et de Formation Pédagogique.

- Allocution de bienvenue
- Allocutions des représentants de :
  - APHA - Dr. Susi Kessler
  - UNICEF - Ms. Dale Gibb
  - USAID-Tunis - Ms. Dale Gibb

10:30 - 11:00 : Pause café

11:00 - 11:15 : Présentation du Séminaire

A. BRASFIELD : Responsable des Conférences, Association Américaine de Santé Publique - U.S.A.

O.R.S. Summary Paper Read by Dr. T. Nacef

11:15 - 11:45 : Aperçu sur les résultats de la mise en œuvre des Soins de Santé Primaires dans la région.

11:45 - 12:15 : Protection Maternelle et infantile : le rôle des institutions existantes dans le promotion de la santé maternelle et infantile dans les soins de santé primaires.

Pr. BECHIR HAMZA, Professeur de Pédiatrie, Directeur de l'Institut National de Santé de l'Enfance - Tunis.

12:15 - 12:45 : Réhydratation orale : contexte général et organisation scientifique.

Dr. MELVYN C. THORNE, U.S.A.
13:00 - 14:30 : Déjeuner

14:30 - 15:00 : Séance plénière

Président :
Dr. Priscilla Joseph-Koch, Directeur du MCH, Sudan
Organisation des programmes de Réhydratation Orale

Dr. MELVYN C. THORNE, Pr. Assistant, Département International de la Santé, Université Johns Hopkins, USA.

15:00 - 16:30 : Travaux en commission

- sur la Réhydratation Orale.
- sur la Protection Incivique.

Thèmes pour les travaux des commissions :

Commission 1 : Obstacles au succès des programmes de Réhydratation Orale

Avantages de la réhydratation orale par rapport à la réhydratation intraveineuse.

Commission 2 : Mise en œuvre d'un programme de Réhydratation Orale

- dans une institution
- dans la communauté

Commission 3 : Formation des programmes de Réhydratation Orale : cadres médicaux, paramédicaux, famille et communauté

- Préparation de solutions de Réhydratation Orale dans les institutions et à domicile.

16:30 - 16:45 : Pause café

16:45 - 17:30 : Séance plénière

Président :
Dr. Ahmed I. Gomaa (Egypte)
Soutien des Commissions

Mardi, 1er Septembre 1981

7:00 : Départ pour Medjez El Bab (Programme de Médecine Intégrée en turquie)

Président :
Dr. Mohamed Mahamad, Directeur de la Médecine Prévventive - Ministère de la Santé - Liban.

10:00 - 10:45 : Séance plénière

Programme de Soins de Santé Primaires : Etude de cas

Dr. SABRI BELGACEEM, Directeur Régional de la Santé à Jendouba, Tunisie

10:45 - 12:45 : Tourne à Medjez El Bab

13:00 - 14:30 : Déjeuner

14:30 - 15:00 : Mise en œuvre des programmes de Soins de Santé Primaires, problèmes, résultats et leçons apprises.

Pr. T. NACEF, Tunisie.

15:00 - 15:30 : Discussions

15:30 - 16:00 : Retour à Sousse

Mercredi 2 Septembre 1981

9:00 - 10:30 : Séance plénière

Responsabilité communautaire pour les Soins de Santé Primaires.

Formation et supervision du personnel.

Président :
Dr. Abdelhay Mechbal, Haroc.

9:00 : Aperçu général sur la formation, la supervision et la délégation des tâches aux agents de Santé.

Dr. ABASSI
9:45 - 10:45 : Sélection et formation des agents de Soins de Santé Primaires.

Dr. SUSI KESSLER, Directeur du Programme International de la Santé à l'Association Américaine de la Santé Publique - USA.

11.00 - 12.30 : Séance plénière

Président :
Dr. B. Bouchraou, Directeur des Soins de Santé de Base, Tunisie

11.00 - 11.30 : Protection de la Santé de la Communauté par des mesures préventives, vaccinations, assainissement et éducation sanitaire.

Dr. GEORGE WALTER, Division Internationale de la Santé, Université de Californie, Santa Cruz, USA.

11.30 - 12.00 : Les agents des soins de santé primaires et le Planning Familial.

Dr. Madi Debbab, Médécin Directeur de l'ONFPP, Tunisie

12.30 - 13.00 : Discussion

13.00 - 14.30 : Déjeuner

14.30 - 16.00 : Travaux en commission

Thèmes pour les travaux des commissions :

Commission 1 : Organisation communautaire pour assurer la responsabilité des Soins de Santé Primaires.

Rôle de l'agent de santé communautaire dans :
- la motivation de la communauté individuellement et dans l'ensemble.
- L'organisation de la communauté.

Commission 2 : Comment organiser une communauté

- Identifier les actions nécessaires.

Commission 3 : Que peut faire l'agent de santé communautaire pour aider la communauté à mettre en œuvre un programme efficace de Planning Familial ?
Qu'est ce qu'un programme efficace de Planning Familial ?
- Définition
- Composantes
2. Aperçu général sur les différentes étapes de la mise en œuvre.

Qu'est-ce que l'agent de Santé Communautaire ?
Commission 3 : L'agent de santé communautaire et la nutrition.
1. L'état nutritionnel de la communauté communautaire.
2. Les carences nutritionnelles de la communauté (obstacles à un état nutritionnel adapté).
- Ressources alimentaires
- Approvisionnement, distribution, conservation, préparation et commercialisation des denrées alimentaires.
- Traditions et usages
- Manque d'information, éducation
- Ressources de la communauté

16.00 - 16.30 : Pause café
16.30 - 18.00 : Rapports des commissions

Président
Dr. Othmane El Fase Ilene, Ministère de la Santé - Jordanie.

Jeudi 3 Septembre 1981

8.30 - 11.00 : Séance plénière

Ressources communautaires pour les soins de santé primaires.

Président
Dr. Ben Ali Tabili, Directeur Régional de la Santé - Algérie.
8.30 - 9.30 : Discussion des nouveaux aspects
9.00 - 9.30 : Qui paye les Soins de Santé Primaires et Comment ?

9.30 - 10.00 : Utilisation des sages-femmes traditionnelles pour les soins de santé primaires.
Dr. IMTAMAZ KAMAL, IPPF-MENA - Tunis.

Le développement des ressources humaines pour les soins de santé primaire.
Dr. ABDEL JALIL MECHBAL, Chef de la Division de l'Infrastructures - Ministère de la Santé - Maroc.
10.30 - 11.00 : Discussion
11.00 - 11.30 : Pause café

11.30 - 13.00 : Travaux en commission

Commission 3 : Water and Sanitation in Primary Health Care

Commission 3 : Rôle des sages-femmes traditionnelles dans les soins de santé primaires.
- Les guérisseurs traditionnels ont-ils un rôle dans les soins de Santé Primaire ? Si oui, lequel ?
- Comment peuvent-ils être intégrés au système de prestations des soins de santé primaires ? Quelle formation faut-il leur donner ? Quelle rémunération ?

Commission 3 : Développement des ressources humaines
- Identifier au sein de la communauté les personnes ayant un impact potentiel sur les soins de santé primaires.
- au sein de la structure sanitaire.
- Définir le rôle des agents de santé communautaire

13.00 - 14.30 : Déjeuner
15.00 : Séance plénière

Président
Dr. B. Edma, Directeur de l'Institut National de Santé de l'Enfance - Tunis.

Rapports des commissions
15.00 - 15.30 : Evaluation du séminaire
15.30 - 16.30 : Commentaires des participants
16.00 - 18.30 : Allocation de la parole

Sous le Patronage de Monsieur
Le Ministre de la Santé Publique
De la République Tunisienne

Séminaire sur les Soins de Santé Primaires.

« Intervention pour l'Extension de la COUVERTURE SANITAIRE »

31 Août - 3 Septembre 1981

Sousse

Organisateurs :
Ministére de la Santé Publique
Et
American Public Health Association
Evaluation of Conference


The following is an evaluation of the conference based on participants' comments on daily evaluation forms and a conference evaluation questionnaire for the entire 4-day event.

Evaluation of Conference

Generally, participants found extremely helpful the contact with colleagues from other countries. A few--some of the Moroccans and Sudanese, for example--had never traveled abroad for such a conference and found the experience particularly stimulating. Several also found the presence of so many officials from Tunisia very valuable as the Tunisians have worked extensively on topics of great interest, such as oral rehydration therapy (ORT) and increased responsibility for midwives.

Many participants far preferred the more concrete topics to the discussions of principle. In this same vein, many found the workshops more valuable than the plenary sessions, although there were two notable exceptions to this--the plenary presentation of the ORT experience in Egypt and the discussion of delegating responsibility to midwives in Tunisia.

As for practicalities, many participants found financial arrangements confusing, i.e. it was not clear what was covered in their per diem and what was not. This, in part, was due to a last-minute change in policy by the hotel to provide lunch in the price of the room. (In the future, such confusion could easily be taken care of by posting a daily information sheet or by distributing such a sheet to each participant.)

Translation also proved a problem. Although the official languages of the conference were English and French, a few of the participants did not have command of either language and could follow only if colleagues translated into Arabic for them.

The following comments give more detailed information on each day's activities.

Day One: Oral Rehydration

Participants were enthusiastic about the exchange of information in this relatively new field. Several mentioned that it was the first opportunity they had had to discuss personnel, logistical and other problems involved in administering treatment. Particularly useful was a report on work by the Tunisians of the salt content of the ORT solution recommended by the World Health Organization. Also of great interest was the discussion of the Egyptian study on pilot tests for distributing ORT packets by health workers and pharmacists vs. teaching mothers to make the solution at home.
Participants also found comforting the knowledge that other countries and colleagues were struggling with the logistics of distributing the solution.

Day Two: Field visit to Medjez El Bab

Participants found the trip to a primary health care clinic helpful, although many felt there was not enough time to talk to staff. In this regard, they would have preferred fewer lectures (which were sometimes long and difficult to hear in the large meeting room used). The lunch, served in a schoolhouse, helped make up for the lack of contact: clinic staff sat with participants and the latter greatly appreciated the frank discussion of problems in serving a widely scattered public.

Day Three and Day Four: Training and supervision of personnel

There was great interest in a Tunisian study on delegating greater responsibility to midwives. The presentation was copiously illustrated with slides of charts, graphs and other materials. (Participants welcomed such illustrations, partly because the material made it easier to assimilate the information.) Discussion groups concerning delegation of tasks were especially well-attended and lively.

By the third day, participants were tired of the morning plenary sessions. They would have liked a strict time limit on each intervention. This, they felt, would force speakers to more concise and leave more time for group discussion. They would have liked more time to discuss how personnel is picked and trained. Several participants suggested including non-medical personnel and administrators in primary health care in future meetings of this kind.
--- DAILY EVALUATION FORM ---

Please respond to the following questions

**DATE:** 3.1.-3.8.

What part of today's program will be the most helpful to you in your work? The Oral Rehabilitation.

Why? Because so many babies and children die of diarrhoeal diseases in my country.

What part was the least useful to you? All the parts are useful and interesting. Helpful ideas.

Why? If you were going to repeat today's program in your own country, how would you change it to make it better? Involving teaching methods during the Blantyre clinic so that they have an idea of dealing with this idea whenever it happens.

Thank you
Appendix 6

-- CONFERENCE EVALUATION FORM --

PLEASE ANSWER THE FOLLOWING QUESTIONS:

1. WHAT PARTS OF THIS CONFERENCE HAVE BEEN THE MOST HELPFUL TO YOU?
   
   FIRST: All the parts... this...
   SECOND: Conference itself has been
   THIRD: Very useful for me... Because what has been discussed is all the problems

2. WHAT PARTS OF THIS CONFERENCE HAVE BEEN THE LEAST HELPFUL TO YOU?
   
   FIRST: .................................................................
   SECOND: .................................................................
   THIRD: .................................................................

In my Country
Sudan
3. **PLACE A CHECK IN THE SQUARE THAT INDICATES YOUR EVALUATION OF THE TIME SPENT IN EACH ACTIVITIES**

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<thead>
<tr>
<th>Activity</th>
<th>to much time</th>
<th>Just enough time</th>
<th>little time</th>
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For each activity, place a check in the square that indicates your evaluation of the time spent in each activity.
WORKSHOP ON PRIMARY HEALTH CARE: INTERVENTIONS FOR WIDESPREAD COVERAGE
August 31 - September 3, 1981
Sousse, Tunisia

REGISTRATION FORM
(Please Print or Type Information)

Participant's Name

Title

Organization

Mailing Address

Telephone Number

Languages(s) -- Please check the appropriate box

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Occupation:

- Nurse
- Nurse/Midwife
- Physician
- Speciality
- Program Manager
- Consultant/Advisor

- Health Administrator
- Health Planner
- Policy Maker
- Professor/Teacher
- Other
SEMINAIRE SUR LES SOINS DE SANTE PRIMAIRE: INTERVENTIONS POUR L'EXTENSION DES SERVICES DE BASE
31 août - 3 septembre
Sousse, Tunisie

FORMULAIRE D'INSCRIPTION

(Ecrire en majuscules ou en caractères d'imprimerie)

Nom du participant ___________________________________________

Titre _________________________________________________________

Organisation _________________________________________________

Adresse _____________________________________________________

Numéro de téléphone __________________________________________

Langue(s) -- Veuillez cocher la case correspondante

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Profession:

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