



**International Conference on
Oral Rehydration Therapy**
Washington, D.C.

An Inventory of A.I.D. Supported Oral Rehydration
Therapy and Diarrheal Disease Control Activities



Office of Health
Bureau for Science and Technology
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AN INVENTORY OF
A.T.D. SUPPORTED ORAL REHYDRATION THERAPY AND
DIARRHEAL DISEASE CONTROL ACTIVITIES

prepared for the
United States Agency for International Development
Office of Health
Bureau for Science and Technology

by

Christopher J. Drasbek
Technical Officer
Program for the Control of Diarrheal Diseases
Pan American Health Organization
World Health Organization
Washington, D.C.

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"The discovery that sodium transport and glucose transport are coupled in the small intestine so that glucose accelerates absorption of solute and water was potentially the most important medical advance this century" (Lancet, 1978, ii, 300).

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Cover Illustration: Oral rehydration therapy in
Egypt - the essential
treatment to counteract infant dehydration.
(Illustration design from WHO Photo)

PREFACE

The United States Agency for International Development (USAID) is one of the major sources of external support for programs and projects aimed at making basic health services available to the rural poor in developing countries. Currently, USAID provides support to over sixty primary health care (PHC) projects around the world. This second edition report highlights selective project-related information vis-a-vis USAID-supported oral rehydration therapy and diarrheal disease control activities through Fiscal Year 1983. The first edition was originally prepared by the author in October 1981 while employed with the United States Department of Health and Human Services, Office of International Health.

Increasingly, USAID has become involved with a myriad of international agencies, governments and private voluntary organizations to include project activities involving the control of diarrheal diseases. Formulated at the request of the Office of Health, Bureau for Science and Technology, USAID, the report will serve several purposes:

- o to provide USAID personnel and other interested organizations an overview of USAID supported oral rehydration therapy and diarrheal disease control activities;
- o to assist U.S. based health planners and host-country representatives in the overall development and coordination of newly emerging or expanding PHC programs utilizing oral rehydration therapy as a major health intervention;
- o to serve as a briefing document for USAID and other agency personnel and consultants working in countries where these projects are active;
- o to support an agency-wide intersectorial network of information dissemination; and
- o to provide a resource for researchers, students and other interested parties wishing to acquaint themselves in this area of PHC activities.

The report provides information on 90 projects and/or activities (completed, active or proposed) in 57 developing countries of the world. This involvement is mainly directed in the areas of education and training through integrated primary

health care delivery service programs and operational research projects. In addition, the report includes an introductory review of key aspects and issues in diarrheal disease control; a list of widely used definitions; a country index to facilitate geographical location of activities; and a list of recommended selected readings on the topic.

Though the inventory should not be interpreted as an definitive survey of USAID's worldwide involvement in this arena, it does represent a myriad of activities and programs indicative of their efforts in the control of diarrheal diseases.

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INTRODUCTION

One of the most important research advances in the field of diarrheal diseases has been the discovery that dehydration, in cases of acute diarrhea of any etiology and of all age groups, can be safely, effectively, and inexpensively treated using a single electrolyte and sugar solution. This treatment, commonly referred to as Oral Rehydration Therapy (ORT), can prevent dehydration and ameliorate many of the diarrhea-associated deaths prevalent in the developing world today.

It has been estimated that every child under five years of age in developing countries suffers, on the average, two to three episodes of diarrhea a year. The World Health Organization Diarrheal Disease Control Program has estimated that 744 to 1000 million cases of acute diarrhea occur every year in children less than five years of age (excluding the People's Republic of China); of these cases, approximately 4-5 million die annually of which 60-70% of the deaths are due to dehydration. Similarly, in many areas of the world, diarrhea cases account for 30% or more of the admissions to children's hospitals or wards where they usually receive unnecessarily expensive intravenous fluids, antibiotics, and drugs.

Such repeated attacks of diarrhea lead to malnutrition and growth retardation for reasons of associated anorexia, malabsorption and the widespread practice of withholding foods and fluids (including breastmilk) from the child. Thus a vicious cycle of diarrhea - malnutrition - diarrhea is established which can have long-lasting effects on the quality of life of the child. The eventual result of this cycle is that a child's body is no longer able to completely absorb food that is eaten, thereby leading to malnutrition. Eventually, this syndrome indirectly reduces the natural defense mechanisms against infection and contributes to the high number of deaths associated with diarrhea in childhood. Oral rehydration therapy has been shown to reduce the severity of dehydration and mortality from diarrhea, and promote improved appetite and maintain nutrition even during prolonged, copious episodes of diarrhea.

Diarrhea is defined as "abnormally frequent and liquid stools that weaken the body and leave it without the fluids and salts needed to survive." Although the ability of the intestines to absorb fluids and electrolytes is decreased, it has been shown that an optimal solution of sugar and electrolytes can sufficiently be absorbed to replace body losses. When dehydration occurs, the only effective treatment is rehydration - replacing either intravenously or orally, approximately the same volume of water and electrolytes lost. The pathogenesis

of the disease is related to a number of viral, bacterial, or parasitic organisms which cause damage to the intestinal lining resulting in abnormally high losses of fluids and electrolytes. These agents are frequently associated with poor personal hygiene, lack or inadequate use of safe water and sanitation facilities, unsatisfactory food hygiene, and a general unawareness of the problem in affected populations. The problem is further complicated by prevailing political conditions and cultural beliefs intrinsically present in developing countries.

Oral rehydration therapy is a technique used since the seventh world cholera pandemic which swept across South Asia in the late 1960's. It consists of administering frequent, small quantities of a sugar-salt solution taken by mouth to replace fluid losses. The treatment can be administered by trained village health workers and practiced in the home by mothers. In most cases, the solution can rehydrate a child within three to seven hours after the onset of therapy. Severely dehydrated persons (in shock or impending shock) may require initial intravenous (I.V.) rehydration, but the subsequent use of oral therapy to complete rehydration and to supply maintenance fluids and electrolytes has led to an overall 80% reduction in the need for I.V. fluids. With the breakthrough of oral rehydration therapy, expensive intravenous fluid administration previously provided in often inaccessible hospitals is now not required.

The formulation for the oral rehydration salt (ORS) solution now recommended by the World Health Organization (WHO) and the United National Children's Fund (UNICEF) contains the following ingredients.:

Sodium chloride	3.5 grams
Sodium bicarbonate	2.5 grams
Potassium chloride	1.5 grams
Glucose	20.0 grams

to be dissolved in one liter of potable water.

These ingredients, generally provided pre-packaged in a dry form to be reconstituted when required, are now distributed internationally by UNICEF, and domestically through a number of private, commercial firms and national governments throughout the world in packets labelled "Oral Rehydration Salts". Presently, the annual supply of ORS packets (approximately 40 million) is only sufficient to treat some 2% of all childhood

diarrheal episodes. There is an urgent need, therefore, to accelerate the production of ORS and disseminate more information about early case-management treatment of diarrhea in the home.

In some communities, oral rehydration salts can be prepared in packets ready to be dissolved in water and sold at the local pharmacy or market. In others, mothers and village health workers can be trained to prepare their own solutions using hand measurements or a "pinch and scoop" approach. Oral rehydration therapy thus represents an appropriate technology highly suited for the primary health care approach, and, when used in conjunction with appropriate advice on child feeding practices, ORT has been found to contribute to better weight gain, thereby reducing the ill effects of diarrhea on the child's nutritional status.

Regardless of the preparation selected, ORS must now be made as widely available as possible to the 500 million mothers and young children in the developing world. To achieve this goal, a massive promotional and training effort integrating national and local level governments must be coordinated in order to make it possible to provide ORS packets to mothers a priori for early treatment in the home. In this way, severe infant dehydration with subsequent reduction in mortality can be prevented. Moreover, when linked with other essential primary health care components, ORT serves as an excellent entry point for health education activities to promote other preventive measures - not only those that are important for the prevention of diarrhea such as breastfeeding, appropriate weaning practices and personal hygiene - but also other critical health interventions such as immunizations, family planning, nutrition, and maternal and child health. Because of its visible and often dramatic impact, health planners have also sought to adopt this treatment into other programs requiring client acceptance.

Making this simple, inexpensive and effective therapy widely available and encouraging its proper use, is now a global public health challenge. In a concerted effort to establish national primary health care services which include ORT activities, WHO, USAID and UNICEF, as well as numerous other international, bilateral, and voluntary agencies are now collaborating with many developing countries to make this treatment available. In particular, WHO, PAHO and UNICEF have mounted efforts to promote ORT worldwide through research and demonstration clinics, by training clinicians and health workers in ORT case-management, by distributing ORS packets, and by encouraging local country program development. Similarly, USAID has provided support in the dissemination of data, testing of public radio messages, use of communication/health education media, and in its long-standing support of diarrhea disease research centers abroad.

Although acute diarrheal diseases continue to represent a major public health problem in the developing world, prospects for their control are steadily improving. New hopes and expectations have been raised in developing countries that deaths due to dehydration caused by diarrheal diseases can now be significantly diminished using a simple method called oral rehydration therapy. The technology is available and the cost is small; and only with a concerted international effort coupled with a strong national commitment with the active participation of the community, can we effectively reduce mortality due to diarrheal diseases.

DEFINITIONS

Diarrheal Disease:

A disease characterized by frequent passage of abnormally loose or watery stools that weaken the body and leave it without the necessary fluids and electrolytes to survive. As a guide, three or more loose or watery stools in a day can be considered as diarrhea. Diarrhea may be acute - lasting hours or days - or chronic - lasting weeks or months.

Oral Rehydration Therapy (ORT):

A simple, inexpensive and effective method of orally replacing the water and essential electrolytes lost by the body during an episode of diarrhea. ORT does not cure diarrhea but counteracts dehydration which is the direct cause of diarrheal deaths.

Oral Rehydration Salts (ORS):

Specifically, the standard WHO/UNICEF recommended formula, consisting of:

Sodium chloride	3.5 grams
Sodium bicarbonate	2.5 grams
Potassium chloride	1.5 grams
Glucose	20.0 grams

to be dissolved in one liter of potable water.

Dehydration:

The major cause of diarrheal disease mortality; results from the abnormal loss of fluid and electrolytes in diarrheal stools.

Rehydration:

The correction of dehydration.

National Diarrheal Disease Control/Oral Rehydration Therapy Programs

Diarrheal disease control programs based on ORT, should be an integral component of all national primary health care services in developing countries. Closely allied with other primary

health care strategies such as immunizations, maternal and child care, nutrition, and environmental and water sanitation activities, diarrheal disease control programs provide an excellent entry point to strengthen the overall primary health care infrastructure. A key to successful program implementation is developing a comprehensive national plan and logistic system to assure adequate supplies of ORS. Other vital elements are planning appropriate training, administration, evaluation and health education activities within the context of the customs, beliefs and practices of the population. Increased commitment from national governments is sine qua non in achieving effective coordination with this type of multi-level delivery service approach.

CRITERIA AND LIMITATIONS OF INVENTORY

CRITERIA

In an attempt to standardize the presentation of information vis-a-vis USAID-supported oral rehydration therapy (ORT) and diarrheal disease control (CDD) activities, the following criteria was established:

1. Document recent or ongoing USAID--supported activities in ORT/CDD through FY 1983.
2. Document activities that reflect a specific ORT/CDD component such as:
 - o Education
 - o Training
 - o Operations research
 - o Integrated basic health services
 - o Distribution of ORS packets
 - o Assistance in designing national ORT/CDD programs
 - o Evaluation
 - o Information dissemination
 - o Workshops/Seminars/Conferences
 - o Technical advisory services.
3. To facilitate project identification, information is delineated as follows:
 - o USAID Technical Office or Regional Bureau jurisdiction
 - o Project location
 - o Project name
 - o Project number
 - o Project time frame (1)
 - o Project description (2)
 - o Further information contact.
4. Information presented in this report has been officially approved and cleared for technical content by representatives of the corresponding USAID Technical Office and Regional Bureau.

-
- (1) This information was not always available nor should be interpreted as reliable.
 - (2) Detailed project information was sometimes limited in scope.

LIMITATIONS

1. For purposes of this report, information collection was limited to the following:
 - o Interviews with representatives of USAID Technical Offices and Regional Bureaus.
 - o Review of APHA Tracking Reports on USAID Sponsored Primary Health Care Projects.
 - o Review of USAID FY 1983 Annual Budget Submission (ABS) Reports.
 - o Review of USAID Project Papers and Project Development Papers.
 - o Review of assorted official cable traffic.
2. It should be noted that USAID Mission personnel, a valuable source of country-related initiatives and projects, were not officially consulted regarding mission-funded health projects. In this respect, the inventory should not be interpreted as an definitive survey of USAID worldwide involvement in ORT/CDD activities.
3. It was found that USAID project papers and other official documents did not, in many cases, supply detailed information required to ascertain the scope of the ORT/CDD health-care intervention.
4. A standardized survey instrument was not utilized for information collection.

BUREAU FOR SCIENCE AND TECHNOLOGY

OFFICE OF EDUCATION

HONDURAS AND THE GAMBIA

*Mass Media and Health Practices

Project Number: 931-1018

Project Duration: FY 1978-1984

The purpose of the project is to develop and demonstrate more effective methods for using mass media together with health worker instruction to improve health care practices in rural areas of two developing countries. Specifically, the project has developed a methodology to combine radio, graphic instructional material, and training to treat and prevent infant diarrhea. The project is presently operating in Honduras and the Gambia and is beginning work in Ecuador. Stanford University is currently evaluating the project impact in Honduras and the Gambia.

In Honduras, the Ministry has developed a local capacity to produce WHO/UNICEF formula ORS packets. The Gambia relies on homemade sugar-salt solution with packet back-up at the local health posts.

For further information contact S&T/ED, Dr. Anthony Meyer.

OFFICE OF HEALTH

WORLDWIDE

*International Center for Diarrheal Disease Research/

Bangladesh (ICDDR-B)

Project Number: 931-1012

Project Duration: FY 1979-1985

ICDDR/B was established in June 1979 on the institutional foundation of the Cholera Research Laboratory which had operated in Bangladesh for 18 years. The objectives of the Center are to undertake and promote research and disseminate new knowledge relating to diarrheal diseases with a view to develop improved methods of health care delivery. In addition, collaboration with national and international institutions in developing countries to strengthen capabilities in diarrhea disease control and treatment assistance in health care programs are actively underway.

For further information contact S&T/HEA, Dr. Clifford Pease.

*Primary Health Care-Operations Research

Project Number: 936-5920

Project Duration: FY 1981-1986

The purpose of the project is to develop and support operational research activities aimed at improving knowledge impeding host countries' efforts to design, implement and sustain primary health care programs. The project will support selected studies which address USAID identified policy and programmatic questions and investigate relevant health care delivery issues. Priority research questions will be identified and developed through studies mainly integrated with other ongoing primary health care programs in the field. It is expected that potential research in ORT and diarrheal disease control will be undertaken.

For further information contact S&T/HEA, Dr. Donald Ferguson.

*Water and Sanitation for Health (WASH)

Project Number: 931-1176

Project Duration: FY 1980-1988

The project provides the mechanism to tap large resources of technical knowledge and skills available in the U.S. private sector and international health community to

support safe water and sanitation initiatives in developing countries. ORT activities have included; 1) discussions on the effects of ORS solutions made with contaminated water and how provision of potable drinking water might improve health and have an effect on morbidity, mortality and fertility rates; and 2) review of literature on the use of water disinfection agents in the preparation of ORS solutions.

For further information contact S&T/HEA, Mr. Victor Wehman.

*Technology for Primary Health Care (in project development stage)

Project Number: 936-5927

Project Duration: FY 1983-1987

The project seeks to improve and expand primary health care services and management capabilities in developing countries through the transfer of selective, proven technologies in disease control (oral rehydration therapy and immunization). The provision of primary health care management support services to improve the design, implementation and evaluation of country-level programs will also be developed. Countries will benefit from assistance in the following ORT program areas.

- 1) Assistance in planning for integration of ORT into existing maternal and child health (MCH) programs or primary health care systems;
- 2) Provision of ORS packets on a start-up or demonstration basis;
- 3) Assistance in the development of local production capability for ORS packets; and
- 4) Adaptation of training materials for supervisors of primary health care workers responsible for providing ORT.

For further information contact S&T/HEA, Dr. Clifford Pease.

*Central Procurement of Oral Rehydration Salts

In view of off-shore procurement regulations and indications of increasing demands for ORS packets, USAID has contracted the services of a U.S. manufacturer for the production and distribution of ORS packets to developing countries which include major USAID assisted bilateral primary health care programs. This activity is an integral component of a broader health care strategy for developing

countries involved in procurement activities. The USAID packet is similar in design to the UNICEF model and contains the WHO/UNICEF recommended ORS formula ingredients. The provision of ORS through USAID is not designed to discourage local production of the commodity, but rather supplement inadequate availability while simultaneous efforts to develop local capability is undertaken where appropriate.

For further information contact S&T/HEA, Ms. Anne Tinker.

*International Conference on Oral Rehydration Therapy (ICORT)
June 7-10, 1983, Washington, D.C.

The purpose of the conference, sponsored by USAID with the cooperation of WHO, UNICEF, and the International Center for Diarrheal Disease Research/Bangladesh (ICDDR/B), was to increase professional and lay awareness of the value of Oral Rehydration Therapy (ORT).

Discussion topics included: diarrheal diseases--a world problem; country development and diarrheal disease; scientific and technical basis of oral rehydration therapy and its worldwide application; practical consideration in management of diarrheal disease in the home, health services, hospitals and health centers; program experiences with the ORT technique throughout the developing world; implementation of programs, policy planning, logistics, training, education, supervision and evaluation; and program achievements and constraints and directions for future research.

For further information contact S&T/HEA, Dr. Clifford Fease.

OFFICE OF NUTRITION

WORLDWIDE

*Health Systems/RSSA

Project Number: 931-1198

Project Duration: FY 1977-C

Nutrition Components for Integrated Health Delivery Systems

Carried out under a RSEA agreement with the United States

Department of Health and Human Services, Office of

International Health.

The purpose of the project is to provide integrated health nutrition service support to private voluntary organizations (PVOs), developing countries, and USAID Missions to complement ongoing and new primary health care programs in developing countries of the world. Services provided under the agreement include:

1. Information and training materials on ORT.
2. Resource handbooks on ORT.
3. Short-term technical assistance to USAID Missions and USAID regional programs in the procurement, storage, supply and maintenance of materials and equipment for ORT programs.
4. Operational research studies.
5. Workshops and seminars.

For further information contact S&T/N, Dr. Nicolaas Luykx.

*Nutrition: Education Field Support

Project Number: 931-1065

Project Duration: FY 1979-1985

The project will assist developing countries design and implement more effective nutrition education programs. The project provides the opportunity for participating countries to improve: 1) use of mass media techniques in nutrition education, 2) design of health education messages at the village level, and 3) curriculum planning for nutrition education programs. ORT message development is one target component of the project.

For further information contact S&T/N, Dr. Jean Audrey Wight.

*Improvement of Maternal and Infant Diet

Project Number: 931-1010

Project Number: FY 1979 - 1988

The project purpose is to provide financial and technical support to developing countries with the aim to improve infant feeding and maternal child care practices. As part of the ORT/CDD delivery component, the following services are provided:

1. Short-term technical consultants.
2. Information and training materials on ORT.
3. Workshops/seminars.
4. Operations research.

Three specific sub-project activities provided under the main project are summarized below:

For further information contact S&T/N, Dr. Tina Sanghvi.

HONDURAS

Mass-Media and Health Practices (MMHP) Project PROCOMSI II

Project Duration: FY 1982-1985

As part of the overall National CDD Program in Honduras, the project will assist in the development of health education/communication messages stressing the importance of breastfeeding. Project activities are closely allied and coordinated with the MMHP-PROCOMSI II Project, in conjunction with the Office of Education.

PERU

The First Maternal Care Workshop

October 1981

A two week workshop was held in conjunction with the Ministry of Health and International Nutrition Communication Service (INCS) to develop community-based materials and methodologies on ORT. The materials were designed to assist nutrition and community health workers in the development of ORT programs throughout the country.

TUNISIA

Nutrition Education

Project Duration: FY 1982-1985

The multidisciplinary purpose of this project is to establish a health education training center at the National Institute of Infant Health (INSE) in Tunis, Tunisia. Specialized training and audio-visual material development will focus primarily on nutrition, breast-feeding and other preventive diarrheal disease control components. The project is designed specifically for physicians, nurses and semi-literate audiences to extend their capabilities and knowledge in the delivery of these health care interventions.

OFFICE OF POPULATION

Since 1976, the Office of Population Operations Research Program has supported a number of projects that provide ORT as well as family planning and other health services. Most of these projects are based on either household - or community-based distribution of supplies and services. Virtually all of these projects include separate research components to measure the effectiveness and/or cost of the delivery system being tested. Many projects include a prospective comparison of different delivery system designs. The objective of the program is to improve the cost effectiveness of these services.

Several projects incorporating ORT have been completed, including analysis of results and in some cases, expansions of the delivery system. For a number of projects that are currently underway, some information, such as the results of baseline surveys, is available. The following summary focuses on ORT and may not list all the health services included in a given delivery system.

For further information contact S&T/POP, Dr. Steve Sinding or Dr. James Shelton.

Operations Research Projects: ORT Intervention

BANGLADESH

*Family Planning Social Marketing Project

See Regional Bureau for Asia, page 35.

EGYPT

*Organization: American University in Cairo
Project Status: June 1978 - June 1985

In the target population of 1.4 million inhabitants, trained canvassers distribute ORS to all households with children under 5 years of age residing in the Menoufia area. Initially, confusion between household distribution of contraceptives and ORS packets arose; however, this was alleviated by distributing contraceptives on a household basis and ORS packets through group meetings.

Over a two-year experimental period, effective knowledge of ORS among currently married women with children under age five in experimental villages increased from 18.4% to 42.8% while use rates increased from 17.3% to 21.7%.

*Organization: American University in Cairo
Project Status: March 1982 - February 1985

This comprehensive community-based program includes the distribution and resupply of ORS to all rural areas of the Beni-Suef, Governorate in Egypt, a population of 1.2 million. Services will be implemented in 3 phases.

No results to date.

GUATEMALA

*Organization: Ministry of Health, Guatemala Rural Health Promotor Training Research Project - (PRINAPS)
Project Status: September 1979 - June 1983

The project established a delivery system for family planning and health services based on training of volunteer Rural Health Promoters (RHPs). Of 356 total agents in the program, the RHPs provide first aid, health education, and, in addition to other pharmaceutical drugs, sold ORS which they obtained through a network of municipal pharmacies.

PRINAPS is the model upon which a major MOH program in primary health care has been based. Extension of the project is under consideration for the purpose of further analyzing the service delivery project.

To date, a baseline survey has been carried out by the project staff with technical assistance from outside consultants. In addition, an anthropologist has carried out interviews in selected communities to collect qualitative impressions of project effectiveness. The baseline survey indicates that 40 percent of young children reportedly experienced a substantial case of diarrhea in the 15 days preceding the interview, but less than one percent were treated with ORT.

HAITI

*Organization: Haitian Department of Public Health and Population

Project Status: October 1981 - September 1984

This project builds upon a demonstration household distribution project in conjunction with community development activities. Operational research will be conducted to improve the provision of low-cost family planning and maternal and child health (MCH) services by community volunteers and health agents working in rural areas of Haiti. ORT is among the services to be provided by these agents.

No results to date.

MOROCCO

*Organization: Ministry of Public Health

Project Status: November 1981 - present

In three provinces of Morocco encompassing an estimated population of 2.5 million inhabitants, Ministry of Public Health field workers will make a series of systematic household visits offering contraceptives and oral rehydration salts and other health services.

A baseline contraceptive prevalence/health survey will be conducted in addition to a sample survey which will test acceptance and impact of these interventions. The project will soon expand to include seven additional provinces.

Published results not yet available.

NIGERIA

*Organization:University of Ibadan

Project Status: March 1980 - September 1984

This project has trained approximately 168 predominantly illiterate village health volunteers to provide family planning and selected health services. Serving a total population of 85,000 in 826 hamlets, these agents provide contraceptives, oral rehydration salts, and other health services. First level supervision is provided by professional government midwives based in seven maternity centers in the project area. The project staff also provides direct supervision.

Logistic figures for the last half of 1981 show an average monthly distribution of 307 ORS packets, far short of estimated needs.

*Organization:University of Ibadan

Project Status: March 1980 - September 1984

The delivery system project is based on the original University of Ibadan project (see above). In 1982, the project was expanded to three additional areas in the State. Baseline and evaluation surveys will be carried out in each new project area. Service delivery will be directed by a Ministry of Health (MOH) Field Director in each area and overall coordination will also be provided by the MOH. In addition to transferring responsibility of service delivery to MOH personnel, the expanded project will compare four different arrangements for supervision and incentive payments of rural health agents.

No results to date.

SUDAN

*Organization:University of Khartoum

Project Status: October 1979 - August 1983

The project seeks to test the feasibility of a health care delivery system based on rural government midwives of whom there are several thousand in the Sudan.

To date, the project has trained 103 midwives to provide: 1) family planning information and oral contraceptives, 2) oral rehydration supplies and advice, 3) selected nutrition advice, and 4) facilitation of MOH vaccination campaigns. The provision of these services was supported by a series of three rounds of household canvassing. Following the canvass phase, midwives respond to community demand for

services. In addition to service statistics, the project will be evaluated through large baseline and evaluation surveys which will measure contraceptive use, diarrhea management, child morbidity and mortality, and feeding practices.

Preliminary results indicate that the proportion of women who reportedly used oral rehydration solutions for diarrhea increased from 0% to 75%. Furthermore, small evaluation surveys have indicated that approximately 90% of the women received an explanation of ORT from a project midwife.

The project staff has prepared a preliminary proposal for extending the delivery system to an additional 50 villages in the Nile Province.

*Organization:University of Khartoum
Project Status: May 1983 - May 1985

The project delivery system is based on the original project in the Khartoum Province (see above). The same services will be extended to 50 villages north of the original area, but with the University of Khartoum staff playing a role limited to design, evaluation, research and training of higher level MOH personnel. Training, supervision, resupply, and recordkeeping will be the responsibility of regular MOH personnel presently working in the Nile Province. The use of incentive payments will be minimized and further examined through a formal research design.

No results to date.

ZAIRE

*Organization:Baptist University of West Zaire
Project Status: October 1980 - December 1984

The project is designed to test the relative impact and cost-effectiveness of two alternative strategies for improving the health of young children and women of reproductive age. More specifically, outreach workers will participate in two distinct experimental groups: 1) provide each household an initial free supply of contraceptives and sell basic drugs for young children with resupplies available at local dispensaries and village depots; and 2) stock local dispensaries and village depots with contraceptives and drugs but with no outreach activities. The delivery system includes household distribution of various contraceptive devices and selected drugs for young children such as ORS.

No results to date.

BUREAU FOR PRIVATE AND DEVELOPMENT COOPERATION

OFFICE OF PRIVATE AND VOLUNTARY COOPERATION

Matching grant contributions from USAID are providing financial and technical support for ORT/CDD activities to the following organizations:

MATCHING GRANTS

*Foster Parents' Plan of the U.S. (PLAN)

Project Dates: September 1980 - September 1983

This organization supports a series of activities in training health auxiliary workers as part of an overall MCH program in ORT techniques.

Countries: Indonesia, Haiti, Bolivia, Colombia, and Ecuador.

For further information contact FVA/PVC, Ms. Carole Millikan.

*Meals for Millions/Freedom from Hunger Foundation (MFM/FFH)

Project Dates: January 1982 - January 1985

MFM conducts integrated food and nutrition programs. All participating countries have access to potable water and nutrition education components including ORT training. In addition, MFM provides nutrition education, designs potable water projects and provides medications to the Thai Government health units for diarrheal disease control activities.

Countries: Honduras, Ecuador, Antigua, Sierra Leone, Kenya, and Thailand.

For further information contact FVA/PVC, Mr. Ron Ullrich.

*Program for the Introduction and Adaptation of Contraceptive Technology (PIACT)

Project Dates: April 1983 - April 1986

PIACT develops instructional audio-visual materials on a variety of health related topics (e.g., oral rehydration therapy) that are aimed at illiterate and semi-illiterate adults. Moreover, the capacity to develop such materials in the local setting is encouraged through institutional strengthening activities.

Countries: Gambia, Pakistan, plus two Latin American countries, and one additional country to be selected from Africa and Asia.

For further information contact FVA/PVC, Mr. George Beloz.

*Salvation Army World Service Office (SAWSO)

Project Dates: December 1980 - December 1983

SAWSO provides community health projects, nutrition education and medications relating to ORT. It also establishes water supply projects through village health communities as part of diarrheal disease control activities.

Countries: India, Kenya, Pakistan, Zambia and Zimbabwe.

For further information contact FVA/PVC, Ms. Carla Maged.

*Seventh-Day Adventist World Service (SAWS)

Project Dates: September 1981 - September 1984

SAWS conducts programs to improve family health and nutrition through extension/education activities (including use of ORT) and building of latrines based on existing centers.

Countries: Dominica, Philippines, Rwanda, St. Lucia, Sri Lanka, Tanzania, and Jamaica.

For further information contact FVA/PVC, Mr. George Beloz.

*Project Concern International

Project Dates: January 1983 - December 1985

This organization supports low-cost, community-based health services systems through training of community health workers (including instruction in ORT) and assists local organizations to design and initiate health care programs.

Countries: Mexico, Guatemala, Belize, Bolivia, the Gambia, and Vanuatu.

For further information contact FVA/PVC, Mr. Ron Ullrich.

OTHER GRANTS FROM PVC

*Coordination in Development (CODEL)

Project Dates: July 1980 - June 1985

CODEL, a PVO consortia of 40 member organizations, supports projects in a number of sectors including health. Selected primary health care projects include training in ORT.

Countries: Liberia, Kenya.

For further information contact FVA/PVC, Mr. Paul Bisek.

*National Council for International Health (NCIH)
Project Dates: May 1982 - May 1985

NCIH disseminates information concerning low-cost health delivery techniques to approximately 400 organizational members. Workshop activities and materials developed to date have focused on ORT, diarrheal disease control activities, and other primary health care technologies.

For further information contact FVA/PVC, Ms. Carla Maged.

REGIONAL BUREAU FOR AFRICA

In the Region for Africa, USAID is engaged in four basic types of support to ORT programs: A radio based strategy for teaching mothers ORT; integrating ORT with other selected communicable disease interventions (CCCD project); ORT components of Primary Health Care Projects; and creation of ORT units in Sahelian countries. All USAID assisted bilateral primary health care projects in Africa are designed to include ORT as an integral health care component. Training of Community Health Workers (CHWs) in using either salt packets or homemade solutions according to host government policies, and training mothers in ORT case-management techniques are two examples of ORT interventions provided.

In this section, regional information will be presented in the following format: 1) Project description of selective ORT/CDD activities of special interest; and 2) Country-wide listing of other primary health care projects designed to include ORT.

REGIONWIDE

*Combating Childhood Communicable Diseases (CCCD)

Project Number 698-0421

Project Duration: FY 1982-1985

The CCCD project and supporting health education programs are training health workers to expand the use of oral rehydration therapy (ORT) in Africa. ORT will be introduced first in the major national medical centers and then progressively from the central institutions to the most peripheral health centers. A second phase of the project will be the introduction of ORT into the community level. Besides the utilization of ORT, diarrheal disease control efforts in the project will promote practices which reduce the incidence of the disease (such as prolongation of breast feeding and improved personal hygiene in the home) and practices which reduce the nutritional damage caused by diarrhea (such as maintenance of feeding during illness and the use of extra meals for children recovering from diarrhea).

Part of the commodity support provided in the CCCD project to countries with bilateral agreements will be either ORS packets or the machinery and raw materials required to produce ORS packets within the country. The choice will be made based on feasibility studies in each country. The possibility of regional production of ORS packets through the private sector in Africa is also being explored.

The overall objective of the project with respect to ORT, is to implement the technique in 50% of the health facilities and communities containing 20% of the population

of sub-Saharan Africa by 1988. This level of coverage is expected to reduce diarrheal disease mortality by 25% among the infant and less than five year old child population. The project will be divided into regional and country-specific training courses.

Additional training and program emphasis are as follows:

- 1) Management training for expanded immunization programs.
- 2) Management training for diarrheal disease control programs.
- 3) Operations research.
- 4) Health education activities including material and methodology development.
- 5) Disease surveillance.
- 6) Cold-chain activities.

Country Projects

Liberia - in negotiation
Togo - active
Zaire - active

Others countries being considered include: Sierra Leone, Burundi, Guinea, Lesotho, Swaziland, Rwanda, Malawi, Somalia, Congo and Central African Republic.

For further information contact AFR/TR, Dr. Joe Davis.

THE GAMBIA

*Mass Media and Health Practices

Project Number: 931-1018
Project Duration: FY 1978-1984

Managed by S&T/Education and implemented in The Gambia with the Medical and Health Department, this project incorporates radio, graphics, and the training of health workers to teach mothers how to treat and prevent diarrheal dehydration. Concurrent with an innovative mass media based educational strategy, changes in knowledge, attitudes and practices among target audiences are being carefully evaluated as well as improvement in the health status.

For further information contact S&T/ED, Dr. Anthony Meyer or AFR/TR, Dr. Joe Stockard.

LIBERIA

*Liberia Primary Health Care (in project development stage)

Project Number: 669-0165

Project Duration:

The purpose of the project is to create the physical and institutional infrastructure to achieve government long-term health care goals and to increase the percentage of the target population with access to primary health care. The project will include MCH, family planning and nutrition interventions where oral fluid therapy is advocated in the treatment of diarrhea episodes in children age 0-5. In addition, mothers will be trained in ORT treatment techniques.

For further information contact AFR/TR, Ms. Gilda DeLuca.

MALI

*Oral Rehydration Unit

Bamako, Mali

In 1981, an ORT Unit was established at the pediatric ward of the Gabriel Joure National Hospital in Bamako, Mali, to test the feasibility and cost effectiveness of ORT units in health facilities, especially hospitals. With the support of USAID/Bamako, detailed line-item budgeting, managerial aspects and epidemiological results generated from this original unit has been documented. Based on the Malian experience, and using capital investment and recurrent cost data, there is currently a proposal to develop sixteen additional ORT units in other Sahelian countries.

For further information contact AFR/TR, Ms. Mellen Duffy.

*Rural Health Services Development

Project Number: 688-0208

Project Duration: FY 1979 - 1983

This project operated two demonstration studies which utilized volunteer village health workers to bring basic curative health services to the village level emphasizing promotive and preventive health measures. Ministry of Health staff were trained to support these projects which served as the foundation for a national rural health system. ORT activities were included in the project development scheme.

For further information contact AFR/TR, Ms. Mellen Duffy.

SUDAN

*Rural Health Support

Project Number: 650-0030

Project Duration: FY 1980 - 1984

The purpose of the project is to improve the capability of the Ministry of Health to deliver primary health care services to the rural population of Sudan with special emphasis on MCH and family planning. Training in ORT will be included in the MCH program.

For further information contact AFR/TR, Ms. Gilda DeLuca.

*Southern Primary Health Care Project

Project Number: 650-0019

Project Duration: FY 1979 - 1983

The purpose of this operational program grant project is to provide the country's rural population with comprehensive health services that rely on community participation. This will be accomplished by training community health workers to provide basic preventive/promotive and curative medical services. ORT activities are included in the services component.

For further information contact AFR/TR, Ms. Gilda DeLuca.

SWAZILAND

USAID/Swaziland is initiating several interventions in the health sector which are designed to strengthen the country's primary health care system and intensify community health education activities. Widespread ORT introduction, training in the use of oral fluid therapy, personal hygiene and sanitation activities, and promotion of home preparation of ORS fluid by community health workers, are currently under consideration.

For further information contact AFR/TR, Mr. Arjuna Abayomicole.

TOGO

*Primary Health Care Seminar for Health/Nutrition and Population Officers

Lome, Togo

November 15-20, 1981

This course provided the opportunity for USAID African Health Officers to update their knowledge on recent primary

health care developments. Course topics included seminars on ORT case-management techniques.

For further information contact AFR/TR, Dr. Joe Stockard.

Other Primary Health Care Projects Designed to Include ORT

AFRICA REGIONAL

*Primary Health Care Development

Project Number: 698-0446

For further information contact AFR/TR, Dr. Joe Davis.

BOTSWANA

*Health Services Development

Project Number: 633-0078

For further information contact AFR/TR, Mr. Arjuna Abayomicole.

GHANA

*Community Health Team Support

Project Number: 641-0088

For further information contact AFR/TR, Dr. Joe Stockard.

KENYA

*Kitui Rural Health

Project Number: 615-0206

For further information contact AFR/TR, Ms. Gilda DeLuca.

LESOTHO

*Rural Health Development

Project Number: 632-0058

For further information contact AFR/TR, Mr. Arjuna Abayomicole.

MAURITANA

*Rural Medical Assistance

Project Number: 682-0202

*Primary Health Care

Project Number: 682-0230

For further information contact AFR/TR, Ms. Mellen Duffy.

NIGER

*Rural Health Improvement
Project Number: 683-0208

For further information contact AFR/TR, Ms. Mellen Duffy.

SENEGAL

*Rural Health Services Development
Project Number: 685-0210

*Family Health Services
Project Number: 685-0217

*Rural Health Services II
Project Number: 685-0242

*Family Health Phase II
Project Number: 685-0248

For further information contact AFR/TR, Dr. Joe Stockard.

SOMALIA

*Rural Health Delivery
Project Number: 649-0102

For further information contact AFR/TR, Mr. Arjuna Abayomicole.

SUDAN

*Northern Primary Health Care
Project Number: 650-0011

For further information contact AFR/TR Ms. Gilda DeLuca.

TANZANIA

*Manpower Training Programs for MCH Aides
Project Number: 621-0121

For further information contact AFR/TR, Mr. Arjuna Abayomicole.

ZAIRE

*Health Systems Development
Project Number: 660-0057

*Basic Rural Health

Project Number: 660-0086

For further information contact AFR/TR, Ms. Mellen Duffy.

REGIONAL BUREAU FOR ASIA

BANGLADESH

*Family Planning Social Marketing Project

This project, which commenced operations in 1975, is putting forth a proposal for 1983 to incorporate a test market experimental design component for the introduction of ORS under the auspices of social marketing theories. The project, funded by USAID/Bangladesh, is a joint collaborative effort between the Office of Population and the Regional Bureau for Asia.

For further information contact ASIA/TR/PHHR, Mr. William Goldman.

BURMA

*Primary Health Care

Project Number: 482-0002

Project Duration: FY 1980-1983

The purpose of the project is to expand the coverage and improve the quality of Burma's primary health care system in 147 of 283 rural townships. The project will specifically increase the number of trained primary health care workers supplied with necessary drugs and equipment and maintain a constant supply of ORS packets in basic drug kits which are provided to all community health workers (CHW) and auxiliary workers (AMW).

For further information contact ASIA/TR/PHHR, Mr. William Goldman.

INDONESIA

*Village Family Planning/Mother-Child Welfare

Project Number: 497-0305

Project Duration: FY 1980-1984

Employing mechanisms tested in a series of demonstration projects, the purpose of the project is to delivery MCH services to villagers through an established family planning delivery system network. The project will initiate a village nutrition service program for mothers, pregnant and lactating women, and children under five years of age. One service component is to control and treat diarrheal diseases with referral to health clinics when deemed necessary. ORS packets for children under five years of age are provided by UNICEF.

For further information contact ASIA/TR/PHHR, Mr. William Goldman.

PAKISTAN

*Primary Health Care

Project Number: 391-0475

Project Duration: FY 1982-1985

The purpose of the project is to expand and improve the three-tiered basic health service delivery system of the Government of Pakistan-Integrated Rural Health Complexes (IRHCs). More specifically, project funds will be used to improve program management through the provision of technical assistance and additional training for new and existing staff; for research and evaluation; for logistics support and equipment for village health workers; and to support the Government's Accelerated Expanded Program of Immunization (EPI). Funds will be provided to purchase raw materials for the preparation of oral rehydration salts which will be delivered to rural areas by sub-clinic workers of the IRHCs.

For further information contact ASIA/TR/PHHR, Mr. William Goldman.

REGIONAL BUREAU FOR LATIN AMERICA/CARIBBEAN

BOLIVIA

*Rural Health Delivery Services Project

Project Number: 511-0453

Project Duration: FY 1975-1981

The purpose of the project was to implement a demonstration rural health services delivery system emphasizing basic health services at the family and small community level and to develop a rural public health planning, technical administrative capability within the Bolivian Ministry of Social Welfare and Public Health (MSWPH). The provision of ORT was provided through the distribution of CRS packets at district and local levels.

For further information contact LAC/DR, Ms. Linda Morse.

*Self-Financing Primary Health Care Project (in project development stage)

Project Number: 511-0569

Project Duration: FY 1983 -

The project will establish a self-financing system model in targeted populations served by rural cooperatives in Bolivia. It is expected that ORS will be financed exclusively and distributed through a private-sector delivery system network.

For further information contact LAC/DR, Ms. Linda Morse.

DOMINICAN REPUBLIC

*Health Sector Loan I and II

Project Number: 517-0107 -- 517-0120

Project Duration: FY 1975-1980

An important part of this loan was to create and support a Basic Health Services scheme to bring primary health care services to a large number of underserved citizens. The project used indigenous auxiliary health workers to deliver biweekly health, nutrition and family planning services to individual community homes. ORT techniques was one of the major educational interventions provided. Health Sector Loan III, currently under project development, will also include an ORT component.

For further information contact LAC/DR, Ms. Linda Morse.

ECUADOR

*Integrated Rural Health Delivery System (IRHDS)

Project Number: 518-0015 (loan)
518-0027 (grant)

Project Duration: FY 1981-1984

The purpose of the project is to develop a low cost health care delivery system in three Integrated Rural Development (IRD) areas of the country which can be replicated nationwide. The project anticipates supporting ORT as part of a national effort to control diarrheal diseases within the National Diarrheal Disease Control Program. The project will ensure that local level MOH staff in the IRD areas are adequately trained for participating in this nationwide program. Additionally, the project is currently analyzing the feasibility of including a communication/health education component, similar to the Honduras Mass-Media and Health Practices model.

For further information contact LAC/DR, Ms. Linda Morse.

EL SALVADOR

*Rural Health Aides (RHA)

Project Number: 519-0179

Project Duration: FY 1978-1981

The project purpose was to extend, improve and integrate health, nutrition and family planning services to the rural poor by developing, expanding and improving the community-based Rural Health Aides (RHA) system. Major outputs included training, deployment and support of 412 new RHAs and 99 supervisors/evaluators in health promotion, basic curative care and administration. In this case, curative care included treatment of diarrhea, referral for serious diarrhea diseases complications, and the distribution of UNICEF ORS packets. The RHA program represents the Ministry of Health's first use of paraprofessional health workers.

For further information contact LAC/DR, Ms. Linda Morse.

*Health Systems Vitalization Project (in project development stage)

Project Number: 519-0291

Project Duration: FY 1983-1985

The project is designed to assist the Government of El Salvador to increase existing levels of primary health care services by meeting short-term needs of the Ministry of

Health for essential goods and support sources. These goals will be met by reinforcing the institutional capacity of the MOH health supply division, improve maintenance networks, and establish a management information system. ORT is planned as one of the major health care interventions.

For further information contact LAC/DR, Ms. Linda Morse.

*Health and Nutrition

Project Number: 519-0253

Project Duration: FY 1981-1983

This program is a demonstration project designed to develop a collaborative approach between the Ministry of Health and Public Assistance (MSPAS) and 150 marginal urban communities to make primary health care available to low-income Salvadorans in urban slums throughout the country.

The MSPAS's Three Year Urban Health Strategy (1981-83) is designed to extend health services to 260 marginal urban areas. The entire program will be undertaken in three phases as follows: 75 communities in the first year of the project; 75 communities in the second year, and an additional 110 communities to be served subsequently by the Ministry of Health.

A second component of the project finances the establishment of Rural Nutrition Centers (RNCs) whose purpose is to provide nutrition education and supplementary feeding targeted to the most vulnerable population - children less than 5 years of age. Twenty-three RNCs were operating in December, 1982; however, seven have been subsequently closed as a result of civil disturbance. ORT components are included in project activities.

For further information contact LAC/DR, Ms. Linda Morse.

GUATEMALA

*Altiplano Promotera Project

See Bureau for Science and Technology, Office of Population, Guatemala, Ministry of Health, Rural Health Promoter Training Research Project (PRINAPS), please see page 18 and related information under this country heading.

For further information contact LAC/DR, Ms. Linda Morse.

*Community-Based Integrated Health and Nutrition Loan

Project Number: 520-0251

Project Duration: FY 1980-1983

The purpose of the project is to develop the institutional capacity of the Ministry of Health to increase the coverage and effectiveness of a fully integrated rural health care delivery system. The project has utilized the training, supervisory service, information and logistic systems components developed in the following centrally-funded USAID projects:

1. Integrated System of Nutrition and Primary Health Care (SINAPS)

In 1979, USAID/Washington agreed to provide funds to the Nutrition Institute of Central America and Panama (INCAP) for a multidisciplinary research and service delivery demonstration project. To date, the project has delivered primary health care services in an ambulatory fashion to some 70,000 (expanding to 130,000) inhabitants through a system of 400 promoters and 17 rural health technicians. The provision of ORT, using a locally made ORS formulation in 250 ml-size doses, and health education classes are key functions of the project.

2. MOH Rural Health Promoter Training Research Project (PRINAPS)

This centrally funded USAID/Population project provides funds to the Ministry of Health, Division of Human Resources, to train health promoters. The project delivers primary health care services to approximately 120,000 people in five health areas through a system of 400 promoters supervised by some 25 rural health technicians. Each promoter is responsible for 50-60 families. Among their responsibilities is the delivery of ORT and the preparation of training materials.

For further information contact LAC/DR, Ms. Linda Morse.

*Knowledge, Attitude and Practice (KAP)

Study on Oral Rehydration Therapy

Project Start (Fall 1981)

The study was designed to examine the degree of attitudinal and behavioral responses regarding the availability, preparation and use of ORT in two health areas of Baja Verapaz and El Progreso. The project examined three projects (SINAPS, PRINAPS and UNICEF/Baja Verapaz) and studied the results of widespread introduction of ORT practices.

For further information contact LAC/DR, Ms. Linda Morse.

GUYANA

*Rural Health System Project

Project Number: 504-0066 (grant)
504-0016 (loan)

Project Duration: FY 1979-1983

The project is designed to assist the Government of Guyana to expand and improve primary health care services with an emphasis placed on training mid-level and primary health care workers. Planning and management assistance, utilizing the MEDEX model of a three-tiered basic health service delivery system, developed by the Health Manpower Development Staff of the University of Hawaii, is an integral component of the project. To date, approximately 134 MEDEX workers have been trained and deployed to underserved areas of Guyana. ORT is included in training activities.

For further information contact LAC/DR, Ms. Linda Morse.

HAITI

*Introduction and Promotion of Oral Rehydration Fluids in Haiti

Grant Number: A.I.D. 521-C-141

Nutritional Status of Infants with Gastroenteritis

Grant Number: A.I.D. 521-000-3-0047

Project Duration: September 1980 - February 1981

The primary objectives of the projects was to introduce, promote and train Haitian physicians in ORT techniques and to gather information on the nutritional status of infants with gastroenteritis. Demonstration studies comparing ORT with the standard parenteral therapy at the Hospital de L'Universite d' Etat d' Haiti (HUEH) were established to study the efficacy of ORS. Other studies in the role of antibiotics and "antidiarrheal drugs" were also conducted to show the cost-effectiveness and efficacy of these types of drugs compared to a control group receiving only oral rehydration treatment. In addition, the project collated statistical data on the epidemiology, nutritional status, management and hospital course of patients admitted with a diagnosis of infectious gastroenteritis. Promotion of ORT was accomplished by training interns, residents, nurses and other paramedical personnel and providing demonstration clinics to various medical facilities outside the HUEH.

For further information contact LAC/DR, Ms. Linda Morse.

*Maternal Child Health/Family Planning II

Project Number: 521-0087
Project Duration: FY 1978-1981

This project included training of health agents in the proper use and preparation of the ORS solution. The project utilized ORT packets provided by UNICEF to reduce infant and child mortality.

For further information contact LAC/DR, Ms. Linda Morse.

*Rural Health Delivery System

Project Number: 521-0091
Project Duration: FY 1979-1984

The purpose of the project is to implement an integrated and affordable regionalized health care system to deliver basic preventive and curative health services to all rural Haitians by 1984. Current project plans are to provide ORS as one health intervention and to collect baseline data on the incidence of diarrhea in infants and children under six years of age.

For further information contact LAC/DR, Ms. Linda Morse.

HONDURAS

*Health Sector I

Project Number: 522-0153
Project Duration: FY 1980-1984

The project consists of providing financial support to host-country participants, training, workshops, major and basic equipment, mass communication extension services, and improved administration services for health sector activities in Honduras. These services are provided to the Ministry of Health to improve and expand the use of health and personal medical care technology among the country's rural and urban poor. Improved health technologies will be introduced both in programs which deal with the environment and in several programs which require individual attention to patients. One specific subproject activity is the training of 120 regional and area supervisors in infant diarrhea disease control management.

For further information contact LAC/DR, Ms. Linda Morse.

*Mass Media and Health Practices

Project Number: 931-1018
Project Duration: FY 1978-1984

See Bureau for Science and Technology, Office of Education, Page 10.

JAMAICA

*Health Management Improvement Project

Project Number: 532-0064 (Loan and Grant)

Project Duration: FY 1981-1985

The project purpose is to strengthen the ability of the Ministry of Health to plan, implement and evaluate health care delivery and nutrition programs. The project will: 1) restore health and nutrition resources to a viable operational level; 2) provide for effective administration of available resources; 3) establish improved systems for identifying health and nutrition problems; and 4) maintain and distribute health and nutrition inputs to address these problems. The project will attempt to increase primary health care services delivery for children under three years of age from 65% in 1979 to 86% by 1985. A 20% increase in patients receiving treatment in health centers rather than hospitals, as well as a decrease in the incidence of gastroenteritis in children by 10% is also envisioned by 1985.

For further information contact LAC/DR, Ms. Linda Morse.

*Health Management Improvement for Young Children

Project Number: 532-0040

Project Duration: FY 1976-1980

The project provided ORT training to auxiliary health workers.

For further information contact LAC/DR, Ms. Linda Morse.

PERU

*Extension of Integrated Primary Health

Project Number: 527-0219

Project Duration: FY 1979-1982

The project assisted the Ministry of Health in their efforts to develop a primary health care system and implement a five-year national health plan. The purpose of the project was to strengthen and extend basic health services to rural and marginal urban population with emphasis on community participation including environmental sanitation and community education. Major emphasis was placed upon preventive health actions such as ORT in the form of training, supervision and continuing education of new and existing health personnel. Management and administrative skills to maximize program success were also included.

For further information contact LAC/DR, Ms. Linda Morse.

*Integrated Family Planning/Health

Project Number: 527-0230

Project Duration: FY 1981-1985

The goal of the project is to assist the Government of Peru to improve the health and well-being of the Peruvian rural poor. The purpose of the project is two-fold: 1) to strengthen basic primary health services in marginal urban areas and reinforce the service delivery capability of the Ministry of Health health centers; and 2) to expand and integrate family planning services in the public and private health sector and reinforce national population policy formulation and research analysis. Particular attention will be given to the distribution and use of ORS. Training in ORT will also be included.

For further information contact LAC/DR, Ms. Linda Morse.

Note: Both projects (527-0219 and 527-0230) are currently classified as one integrated project.

REGIONAL BUREAU FOR NEAR EAST

EGYPT

*Control of Diarrheal Diseases

Project Number: 263-0137

Project Duration: FY 1981-1986

The project goal is to reduce child mortality from diarrheal disease within five years by making oral rehydration services and materials widely available and used in the context of a national ORT program.

The project strategy is to build and expand upon an existing infrastructure of private and public facilities and networks delivering health services (formal and informal). This strategy includes the Ministry of Health, universities, medical and pharmacy syndicates, Chemical Industries Development (CID), pharmacies, and local communities themselves with the aim to create an increased awareness of and support for oral rehydration programs. Oral rehydration is currently an integral part of the MCH services in Egypt. In addition, the project will explore, develop and refine alternative methodologies for broadening access to services, including the development of commercial networks.

The project will incorporate the following program components:

- 1) Administration.
- 2) Production and Distribution.
- 3) Training.
- 4) Information, Education and Communication.
- 5) Evaluation.

For further information contact NE/TECH, Ms. Holly Wise.

*Strengthening Rural Health Services Delivery Project (SRHD)

Project Number: 263-0015

Project Duration: FY 1978-1983

In 1976 the Egyptian Ministry of Health and USAID entered into an agreement to strengthen the Egyptian Rural Health Services. The SRHD project was initiated in April 1978 with the underlying goal to improve the health status of Egypt's rural population. The project will attempt to accomplish this goal through a series of demonstration tests designed to determine optimal configurations of various health services delivery systems in ten districts in four separate governorates of Egypt.

Subsequently, a program aimed at the control of child deaths from diarrhea became a high priority focus of the SRHD project. To complement the program, an applied diarrheal disease research study was initiated with the following objectives:

- 1) To compare the effectiveness of different methods of ORT.
- 2) To determine the effect of unhindered and ready access to different types of ORT.
- 3) To determine the utilization and effectiveness of ORT when made available through alternate sources.

This study was carried out in 29 villages in three districts of the Dalcahlea Governorate, covering approximately 23,800 children below the age of five years. The objective was to determine cost-effective means of reducing preschool child mortality by testing different methods of ORS distribution as well as investigating all child deaths in the area to determine causes and circumstances.

For further information contact NE/TECH, Ms. Barbara Turner.

*Urban Health Delivery System Project (UHDSP)

Project Number: 263-0065

Project Duration: FY 1979-1985

The purpose of the project is to make the existing urban health care delivery system more accessible and effective so that it better supports efforts at health improvement in the project area. The goal of the diarrheal disease component is to reduce the rates of infant mortality and morbidity associated with diarrhea and dehydration through the following interventions:

- 1) To train all physician and nursing personnel in the project area in ORT;
- 2) To teach at least one family member in each family, which presents a child with diarrhea and dehydration, to recognize the need for ORT and to administer the solution correctly; and
- 3) To establish a reliable inventory and distribution system for ORT visual aids in UHDSP facilities.

For further information contact NE/TECH, Ms. Kris Loken.

JORDAN

*Health Education

Project Number: 278-0245

Project Duration: FY 1980-1985

The five-year project will contribute to an overall improvement in the health status of the population of Jordan through the introduction of health education into

the Ministry of Health's (MOH) preventive and curative health services delivery system. The purpose of the project is to increase knowledge which will influence attitudes and foster adoption of appropriate preventive and curative health behaviors of the public through organized health education efforts. One priority, established by the MOH which requires reinforcement by health education, is reducing infant mortality through ORT programs. Moreover, ORT training for providers is a primary mission of the Division of Health Education in Jordan.

For further information contact NE/TECH, Ms. Kris Loken.

*Health Management and Services Development

Project Number: 278-0208

Project Duration: FY 1977-1985

A special study on ORS usage in Jordan is contemplated by 1984 as part of this project.

For further information contact NE/TECH, Ms. Kris Loken.

*Short-term Technical Assistance

With financial support from USAID, a cadre of short-term consultants have been provided to the University of Jordan as part of an ongoing effort to establish a diarrheal disease control center based at the University. This support includes an ORT training component and procurement distribution of UNICEF ORS packets.

For further information contact NE/TECH, Ms. Kris Loken.

MOROCCO

*Family Planning Support II

Project Number: 608-0155

Project Duration: FY 1978-1983

The Household Distribution component of the project, currently distributing oral contraceptives through a house-to-house distribution scheme, will expand activities to include distribution of ORS packets. In addition, educational components, including ORT information dissemination will be included.

For further information contact NE/TECH, Ms. Juliana Weissman.

TUNISIA

*Rural Community Health

Project Number: 664-0296

Project Duration: FY 1978-1985

The project goal and purpose is to improve the quality and coverage of primary care in the predominantly rural provinces of central Tunisia. This will be achieved through assistance aimed at restructuring the non-physician component of primary health care and operationalizing a new system of primary health care delivery in an expanded network of health facilities. Project activities include training a cadre of primary health care workers in oral rehydration therapy techniques.

For further information contact NE/TECH, Ms. Juliana Weissman.

*Nutrition Education

Project Number: 931-1010

Project Duration: FY 1982-1985

See Bureau for Science and Technology, Office of Nutrition, page 16.

WEST BANK

*Health Education Project (Nutrition, Child Development and First Aid)

Grant Number: A.I.D./Near East-G-1652

Project Duration: September 1979 - September 1982

In September 1979, USAID provided financial assistance to the Catholic Relief Services-United States Catholic Conference (CRS) to support a program of educational activities in the areas of nutrition, child development and home first aid.

To date, CRS has undertaken a number of training activities to meet the expressed needs of the West Bank. One such activity is the prevention and control of diarrhea and the preparation of ORS for children suffering from diarrheal diseases. Accordingly, a course in the child development curriculum was designed to teach mothers and staff members on the West Bank to recognize, prevent and treat signs of dehydration.

For further information contact NE/TECH, Ms. Juliana Weissman.

YEMEN

*Tihama Primary Health Care

Project Number: 279-0065

Project Duration: FY 1980-1986

The goal of the project is to improve the quality of life for rural families of the Tihamas by training Yemeni health care providers serving in community sites within the project area. To achieve this goal, primary health care units will provide clinical experience and theoretical/administrative community-based health care courses to community health providers. ORT is included in the training curriculum.

For further information contact NE/TECH, Ms. Juliana Weissman.

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