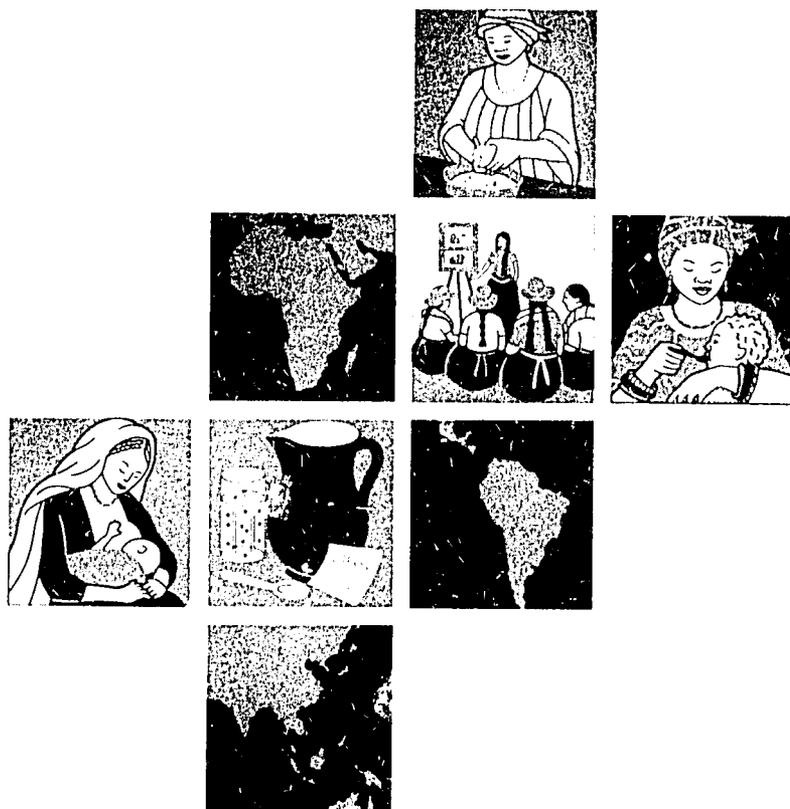


# PRITECH

*Technologies for Primary Health Care*

## Annual Report Project Year Four

October 1990 – September 1991



MANAGEMENT SCIENCES FOR HEALTH  
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TECHNOLOGIES FOR PRIMARY HEALTH CARE II  
(PRITECH II)

ANNUAL REPORT  
PROJECT YEAR FOUR  
October 1990 - September 1991

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# ACRONYMS

## APPEARING IN THIS ANNUAL REPORT

ADDR	- Applied Diarrheal Disease Research project (WHO)
ADM	- Anti-Diarrheal Medicine
AED	- Academy for Educational Development (subcontractor under PRITECH)
AFRICARE	- a U. S. voluntary agency with a focus on Africa
AHRTAG	- Appropriate Health Resources and Technologies Action Group
A.I.D.	- U. S. Agency for International Development in Washington.
ANE	- Asia and Near East Bureau of A.I.D.
ARI	- Acute Respiratory Infection
CAI	- Creative Associates International (PRITECH subcontractor)
CBORS	- Cereal-Based ORS
CCCD	- Combatting Childhood Communicable Diseases project
CCH	- Community and Child Health project (Bolivia)
CDD	- Control of Diarrheal Disease
CEDPA	- Centre for Development and Population Activities
CESA	- Central, Eastern and Southern Africa (PRITECH Regional Office)
CFA	- currency unit of Francophone West Africa
CICLOPE	- Mexican consulting group in health education
CMAZ	- Churches Medical Association of Zambia
CMT	- Case Management Training
CTO	- Cognizant Technical Officer (A.I.D. term for its project manager)
CY	- Calendar Year (as in CY1991)
DANIDA	- Danish International Development Agency
DD	- <u>Dialogue on Diarrhoea</u> , title of journal on diarrheal diseases
DFH	- Department of Family Health (Kenya)
DHS	- Demographic and Health Survey
DIPHAR	- a large private drug distributor in Mauritania
DMP	- Drug Management Program
DRF	- Drug Revolving Fund (in Gambia)
DTU	- Diarrheal Treatment Unit
EDP	- Essential Drug Program (a SIDA-financed activity in Zambia)
ENSP	- Ecole Nationale de Santé Publique (nursing school in Mauritania)
EPI	- Expanded Program of Immunization
FAO	- UN Food and Agricultural Organization
FMOH	- Federal Ministry of Health (Nigeria)
FPAK	- Family Planning Association of Kenya
FTE	- Full-Time Equivalent (method for accumulating person-months)
FVA	- Food for Peace and Voluntary Agencies Bureau of A.I.D.

GAFNA - Gambian Food and Nutrition Association  
 GNC - General Nursing Council (in Zambia)  
 GOK - Government of Kenya  
 GPL - General Pharmaceuticals Limited (parastatal drug company in Zambia)  
 HEALTHCOM - Communications for Child Survival project  
 HIV - Human Immunodeficiency (AIDS) Virus  
 HPN - Health, Population and Nutrition  
 HSS - Health Services Support (component of PRITECH project)

ICORT - International Conference on Oral Rehydration Therapy  
 IEC - Information, Education and Communications  
 INCAP - Instituto de Nutricion para CentroAmerica y Panama  
 INRUD - International Network for the Rational Use of Drugs  
 Interchem - a private pharmaceutical producer in Zambia  
 ISI - Institute for Scientific Information

JHU - Johns Hopkins University  
 KAP - Knowledge/Attitudes/Practices  
 LAC - Latin American and Caribbean (A.I.D. geographic bureau)  
 LDC - Lesser Developed Country  
 LMTC - Lactation Management Training Center (in Kenya)

MCH - Maternal and Child Health  
 Medipharm - a private pharmaceutical manufacturer in Uganda  
 MEDLINE - on line data base for health/medical information  
 MIS - Management Information System  
 MOH - Ministry of Health  
 MSH - Management Sciences for Health (prime contractor for PRITECH)  
 NCCK - National Christian Council of Kenya  
 NCIH - National Council for International Health  
 NCP - Nutrition Communication Project  
 NGO - Non-Governmental Organization  
 NPDP - New Project Description

ONAPHARM - national organization for distribution of pharmaceuticals in Cameroon  
 ONPPC - Office Nigerien de Produits Pharmaceutiques et Chimiques (in Niger)  
 OPG - Operational Program Grant (a method of A.I.D. financing for PVOs)  
 ORANA - Organisation de Recherche pour l'Alimentation et la Nutrition Africaines  
 ORS - Oral Rehydration Salts  
 ORSMAP - Oral Rehydration Salts Management Assessment Package  
 ORT - Oral Rehydration Therapy  
 ORU - Oral Rehydration Unit

PAHO	- Pan American Health Organization
PATH	- Program for Appropriate Technology in Health
PHC	- Primary Health Care
PIO/T	- Project Implementation Order/Technical (A.I.D. document)
PMI	- Protection Maternelle et Infantile (MCH center)
PNLMD	- Programme National de Lutte Contre les Maladies Diarrhéiques (CDD)
POPLINE	- on line data base for population related articles
PPM	- Pharmacies Populaires au Mali (parastatal drug distribution company)
PPSS	- Program Problem-Solving Study
PRDS	- Plans Regionaux de Developpement Sanitaire (in Senegal)
PRITECH	- Technologies for Primary Health Care project
PROCOSI	- PVO Consortium in Bolivia
PVO	- Private Voluntary Organization
PY	- Project Year (as in PY4 or PY5)
QAP	- Quality Assurance Project
RFP	- Request For Proposals (a step in A.I.D. contracting process)
ROCAP	- A.I.D. Regional Organization for Central America and Panama
RPHC	- Reorientation of Primary Health Care project in Cameroon
RXDD	- a software package for describing prescriptions for diarrhea
SANAS	- Service d'Alimentation et de Nutrition Appliquée de Senegal
SESA	- a USAID bi-lateral health project in Cameroon
SIDA	- Swedish International Development Agency
SPM	- Senior Program Manager (a PRITECH staff title)
SSS	- Sugar-Salt Solution
TLU	- Technical Literature Update (a PRITECH publication)
UMPP	- Union Malienne de Produits Pharmaceutiques (in Mali)
UNALOR	- company producing matches in Cameroon
UNDP	- United Nations Development Programme
UNICEF	- United Nation International Childrens Education Fund
USAID	- an A.I.D. field mission
UTH	- University Teaching Hospital (Zambia)
UTHI	- Uganda Traditional Healers' Initiative
VHW	- Village Health Worker
VITAL	- Vitamin A Field Support project
WASH	- Water and Sanitation for Health project (A.I.D. centrally financed)
WHO	- World Health Organization
WHO/CDR	- WHO's Division for Control of Diarrheal Diseases and Acute Respiratory Infections
WS&S	- Water Supply and Sanitation

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## **PREFACE**

**What is PRITECH?** PRITECH (Technologies for Primary Health Care project) represents A.I.D.'s world-wide effort and its principal project for expressing its long-standing and leading role in the reduction of infant and child mortality due to diarrheal disease. It also provides USAID missions with technical assistance in a variety of fields related to child survival. It has recently been designated A.I.D.'s lead agency with respect to cholera.

The project was initiated in 1983 as one of A.I.D.'s so-called "twin engines" for improving child survival in developing countries (the other "engine" being immunization). Building on the experience of PRITECH I (1983-1988), PRITECH II (ending in 1993, with its proposed extension) concentrates on the promotion of oral rehydration therapy (ORT) and related activities in clinics and homes for ensuring effective and comprehensive case management of diarrheal diseases. The emphasis is on ORT for acute watery diarrhea, but PRITECH is also concerned with dysentery, persistent diarrhea, and cholera.

PRITECH II is a project with a ceiling of \$35.9 million, of which approximately 60 percent is contributed by the Office of Health in the Bureau of Research and Development of A.I.D. and approximately 40 percent by USAID missions and other A.I.D. offices. The project does the following:

- Operates 18 country or regional programs in Africa, Asia, and Latin America. Typically, PRITECH appoints a resident country representative who works directly with the national team of CDD program managers. In Africa and Central America, Regional Senior Program Managers supervise country programs; PRITECH has Regional staff in Senegal, Cameroon and Honduras.
- Carries out research and development activities and experimental activities in a variety of related areas, e.g., commercialization and private sector initiatives, improved diarrheal case management, breast-feeding and nutrition, collaboration with traditional healers, drug management, persistent diarrhea and dysentery, cholera, and evaluation and problem-solving research.
- Provides short-term technical assistance to USAID mission and other A.I.D. offices in a variety of health fields, e.g., health sector analyses and evaluations, production and distribution of ORS and other inputs, development of health management information systems, care of orphans, prosthetics, and analyses of institutional issues related to health delivery.

- Serves as the center for an extensive information dissemination effort with the objective of raising the consciousness of agencies and institutions involved in child health in developing countries. The information effort focuses on issues related to diarrheal disease and other child survival interventions. The project produces a Technical Literature Update published ten times per year which reaches more than 10,000 readers; this is supplemented by PRITECH Occasional Papers on topics of concern and interest to managers of diarrheal disease programs.
- On behalf of A.I.D., collaborates closely with the WHO, UNICEF, and other major donors both through headquarters and through country programs in the implementation of diarrheal disease programs and other programs in child survival.
- Operates in or has carried out activities in some 53 countries through both short-term and long-term programs with an overseas and headquarters field staff. PRITECH provides approximately 72 person months of short-term consultancies per year to USAID mission and country institutions in the developing world.

Together these activities make PRITECH one of A.I.D.'s most complex world-wide contract efforts.

The PRITECH project is carried out under the leadership of Management Sciences for Health, in collaboration with the Academy for Educational Development, the Johns Hopkins University School of Public Health, Program for Applied Technology in Health (PATH), Creative Associates International (CAI), and the Centre for Development and Population Activities (CEDPA).

## **I. EXECUTIVE SUMMARY**

### **A. LESSONS LEARNED FROM PAST EXPERIENCE**

It is now approaching ten years since A.I.D. initiated its "twin engine" effort in immunization and diarrheal disease control (CDD) as part of a broader child survival program. Considerable progress has been made in CDD, particularly in the knowledge of oral rehydration therapy (ORT) by caretakers, the use of home fluids and oral rehydration salts (ORS), the availability of primary health care workers trained in ORT, and the establishment of diarrheal training units (DTUs) in many countries.

Nevertheless, even with this progress, diarrheal disease continues to be a major killer of children in the developing world, and serious obstacles remain. For example, awareness of ORT far exceeds the correct practice both in the home and in health facilities. Furthermore, oral solutions are necessary but not sufficient for effective case management; proper nutrition is particularly important. It has been difficult, however, to integrate feeding and nutritional knowledge and practices, especially breastfeeding, with national CDD programs. With some progress in efforts to combat acute watery diarrhea, the significance of the more problematic cases of persistent diarrhea and dysentery may now be growing. Some estimates attribute about 35 percent of deaths due to diarrheal disease to persistent diarrhea and dysentery. A few studies even suggest that persistent diarrhea and dysentery may account for as much as 50 to 70 percent of diarrheal deaths in some countries. The arrival of cholera in Latin America and the deadly presence of cholera in Africa also present new challenges to CDD programs. Achieving optimal case management requires continued attention if CDD programs are to cope adequately with the changing face of diarrheal disease risks.

Children in developing countries rarely suffer from diarrhea in isolation from other health risks, and the interrelationships among these risks have led to increasing pressure to integrate disease-specific interventions including CDD, acute respiratory infections (ARI), immunization, and nutrition. It is also increasingly clear that the private sector must play a larger role in the delivery of services within national CDD strategies if further serious reductions in mortality and morbidity are to be achieved. Experience thus shows that the nature of diarrheal disease has clearly evolved since the initiation of the PRITECH effort and that major progress has been made, but that the war is by no means over. Clearly, continued commitment from the major donors - A.I.D., UNICEF, and WHO - is necessary.

### **B. COUNTRY PROGRAMS**

Thus far in PRITECH II, there have been 19 sustained or intermittent country programs in Africa, Asia, and Latin America, of which 15 were active in PY4 (Project Year Four).

Specific activities throughout these country programs in PY4 were directed toward meeting the following objectives:

- Improving case management practices through new training programs, including a greater emphasis on pre-service training in medical/health training facilities, extension of training to private sector health providers, and evaluation of relationships between training and subsequent performance;
- Enhancing the frequency and quality of supervision through training and utilization of regional health teams, inspectorate staffs, and/or environmental health personnel in performing certain supervisory functions;
- Improving care of diarrhea cases by giving more attention to nutrition in the case management protocols that guide health workers;
- Moving toward further commercialization of ORS production and distribution where country regulations, laws, and policies permit;
- Increasing the focus and emphasis on non-governmental suppliers of health care services such as religious groups, large private sector employers, traditional healers, and physicians in private practice to improve case management practices among these groups and to reach a greater number of people;
- Promoting a more comprehensive approach to controlling diarrhea through preventive measures and treatment of the "sick child";
- Working more closely with water supply and environmental health personnel and projects to maximize benefits in hygiene and diarrhea prevention; and
- Helping achieve sustainability through such measures as cost recovery, rational drug policies, and generation of public demand for ORS materials and treatment.

#### C. DEVELOPMENTAL PROGRAMS

Under the Research and Development component in PY4, PRITECH continued to complement and support regular country programs by funding studies and exploratory and experimental activities. These included the following:

- Commercialization, including promotion of the private sector, commercial ORS production and distribution networks, training in marketing strategies, and collaboration with multinational firms in dissemination of preventive information through their marketing efforts;

- Breastfeeding, including lactation management training and infant feeding studies, several of which served as a basis for papers presented at the West African Infant Feeding Conference in Lome, September 1991;
- Case Management or Quality of Care, including clinical case management training and program manager training conducted jointly with WHO, use of health facilities survey results to improve the quality and relevance of training, and development of an evaluation methodology for assessing training programs and adequate performance;
- Drug Management, including development of drug prescription analysis software, field application of the RXDD software program (a computer software for describing prescriptions used for treatment of diarrheal diseases), and interventions to improve drug prescriber practices;
- Program Problem-solving and Evaluation, including operations research, collaboration with WHO on country program review protocols, development of a country profile evaluation instrument and guidelines, incorporation of sustainability indicators into country profile instruments, and evaluations of sustained country programs;
- Nutrition and Household Management of Diarrhea, including development of a nutrition checklist, operations research studies on feeding practices, trials to implement recommendations of feeding practices studies, development of policies for household management of diarrhea, and initial work on development of a nutrition field implementation aid;
- Persistent Diarrhea and Dysentery, including collection of information on prevalence and treatment, studies of the etiologic agents of dysentery, and preparation for testing of the WHO persistent diarrhea treatment algorithm; and
- Traditional Healers, including development of a strategy in Uganda for enlisting help of traditional healers in promoting appropriate diarrhea case management.

#### D. HEALTH SYSTEMS SUPPORT (HSS)

The HSS component of PRITECH remains a flexible and popular activity with USAID missions, providing rapid response through short-term technical assistance for concerns in primary health care other than CDD. (Short-term assistance related directly to diarrheal disease control falls under the project component of ad hoc country programs). During PY4, USAID needs fell primarily into the areas listed below:

- Evaluation and health sector assessment

- Institution building
- Maternal and child health
- Prosthetics and rehabilitation
- Drug management and rational drug use
- Environmental health and urban health

PRITECH provided a total of 25 person-months of service under the HSS component in PY4. This represents a decline from PY3, largely attributable to the virtual cessation of travel during the four months of the Gulf crisis and associated uncertainties that made planning for travel difficult.

#### E. INFORMATION SUPPORT COMPONENT

One of PRITECH's most important and lasting contributions has been to raise the consciousness and increase the knowledge of CDD among people far beyond the confines of the country programs in which the project directly works. This impact is attributable primarily to the following initiatives: (1) special mailings to targeted groups of health professionals; (2) publishing the Technical Literature Update (TLU) which is distributed to more than 10,000 readers throughout the global health community; (3) publishing a Monthly Acquisitions List and responding to information requests from developing country program managers and others; and (4) documenting project experiences through publication of the PRITECH Occasional Papers.

During PY4, PRITECH's Information Center collected about 1,100 documents pertaining to technical CDD, program implementation, and behavioral science issues, including materials produced in developing countries. New documents continue to be supplied through the Institute for Scientific Information, the A.I.D. Research & Reference Service, the National Library of Medicine, and PRITECH field offices. The Center also expanded its collection in the areas of breastfeeding, private sector activities, ARI, and nutrition.

During PY4, the Information Center responded to 1,580 requests from developing country health professionals, health officers at USAID Missions and Bureaus, the field offices of private voluntary organizations (PVOs), CDD program managers, overseas information centers, and other R&D/Health Office contractors, grantees, and recipients. The proportion of requests from developing country nationals has increased over PY3, largely through word-of-mouth information. The total number of requests handled was 8 percent higher than last year's total, and continues to grow as the Center becomes better known, particularly in developing countries. The Center's largest user group is

now developing country nationals. Other users include PRITECH staff, A.I.D. contractors, grantees and recipients, A.I.D. staff, and PVOs.

The Center produced six issues of the Technical Literature Update (TLU) during PY4. Although fewer in number than in previous years, the six were longer and more comprehensive than usual. Two issues were particularly noteworthy: (1) a special WHO issue, in which the staff of WHO/CDR chose the most important CDD articles of the past decade, and (2) a special cholera issue, which has been reprinted to meet the extra demand. PRITECH currently distributes the TLU to more than 10,000 physicians, health professionals, and public health officials throughout the world. Readership in all three of the language (English, French, Spanish) editions increased significantly during PY4.

#### F. MANAGEMENT AND ADMINISTRATION

The PRITECH Project remains one of A.I.D.'s most complex activities, with 15 active sustained and intermittent country programs, served by a full-time professional field staff of 16 during PY4. The unique capability and complexity of the project relate to its field operations. There is widespread agreement that sustainable CDD programs resulting in permanent behavioral change can only take place with the kind of hands-on field operations which have been the hallmark of PRITECH.

Heavy administrative and financial management burdens result from the plethora of A.I.D. regulations governing every step of the process of assigning and maintaining a field staff and administering local programs. The administrative duties are of a totally different nature and magnitude from those related to simply providing consultant services to USAID country programs. Some of these are as follows:

- review of field accounts and voucher submissions
- orientation of overseas staff in A.I.D. procedures
- establishment and maintenance of local bank accounts
- arrangements for transfer and exchange of funds
- creation and implementation of procedures for tracking and reporting on Mission and/or geographic bureau PIO/Ts and buy-ins
- negotiation of housing and office leases
- procurement of field vehicles and equipment
- establishment and administration of overseas employee allowances and benefits, including shipment and storage of effects

- employment of local staff in conformity with local labor regulations and USAID and host country approvals
- negotiation of sub-contracts with WHO and other organizations pursuant to a difficult approval process
- establishment of reporting procedures related to field operations
- provision for audit and bookkeeping of local operations.

During PY4, PRITECH's performance of those administrative duties required

- 243 task orders prepared for approval by the CTO
- 118 travel authorizations prepared for approval by the CTO
- 125 assignment reports submitted to A.I.D.
- management of 23 active subcontracts
- negotiation of 20 new subcontracts.

#### G. FINANCIAL STATUS

At the end of PY4, PRITECH had accrued expenditures totalling \$18.5 million, of which \$11.9 million were from R&D Bureau funds. Unexpended R&D funds in the contract at the end of PY4 are \$3.5 million.

PRITECH has received \$11.0 million of "buy-in" funds from USAID Missions and Bureaus other than the R&D Bureau. Against this obligation, PRITECH has accrued expenditures of \$6.6 million. PRITECH is seeking \$3.0 million of additional buy-ins. In August and September of 1991, PRITECH submitted to the R&D Bureau proposals for \$2.1 million in buy-ins from the Africa Bureau for country and regional programs in Africa.

## **II. LESSONS LEARNED FROM EXPERIENCE TO DATE**

### **A. BACKGROUND**

Global diarrheal disease control (CDD) efforts were launched approximately ten years ago with oral rehydration therapy (ORT) as the centerpiece of these CDD efforts. A.I.D., as a major donor, launched the "twin engines" of the expanded program of immunization (EPI) and ORT to address major causes of mortality in childhood--the vaccine-preventable diseases and diarrhea. In the mid-80s, the U.S. Congress launched a more comprehensive program in child survival which added growth monitoring and nutrition to the EPI and CDD efforts. Missions were encouraged to develop bilateral projects focusing on one or more elements of child survival, and a number of centrally funded projects, particularly in EPI and CDD, were initiated to support these global efforts. UNICEF, WHO, and other donors joined with A.I.D. in supporting the child survival revolution. More recently, special initiatives have been developed with breast-feeding and acute respiratory infections, another leading cause of mortality in childhood. The PRITECH Project has been one of the key groups working on implementation of efforts in diarrheal disease control.

In step with the global CDD efforts, PRITECH since its inception has placed great emphasis on "appropriate case management" of diarrhea, which includes not only effective oral rehydration of children but also promotion of continued feeding, education of mothers regarding home management and prevention, and timely referral of severe cases.

Figure 1 represents a model of diarrhea case management which incorporates both household and health facilities. In this model, the focus is on the caretaker and his/her responses to a child with diarrhea. It acknowledges that treatment begins and ends in the home, and thus that the events surrounding care of the child at home are of critical significance for the outcome of the diarrheal episode. A child with diarrhea who does not have signs of dehydration is treated at home with ORS or appropriate home fluids and continued feeding. Critical to the successful home therapy of the child with diarrhea are the knowledge and skill of caretakers (i) in recognizing the signs of dehydration, (ii) in preparing ORS and/or recommended home fluids, and (iii) in continuing or augmenting the child's diet to offset the nutritional impact of the diarrheal episode. Also critical in home therapy is the caretaker's ability to recognize at what point he/she should seek care at a health facility for the child. Moreover, for the caretaker to provide adequate home care of the child with diarrhea, ORS and/or the ingredients for home fluids must be available. At the health facility, the outcome of the diarrheal episode depends both on the knowledge and skills of the health worker and on the availability of ORS.

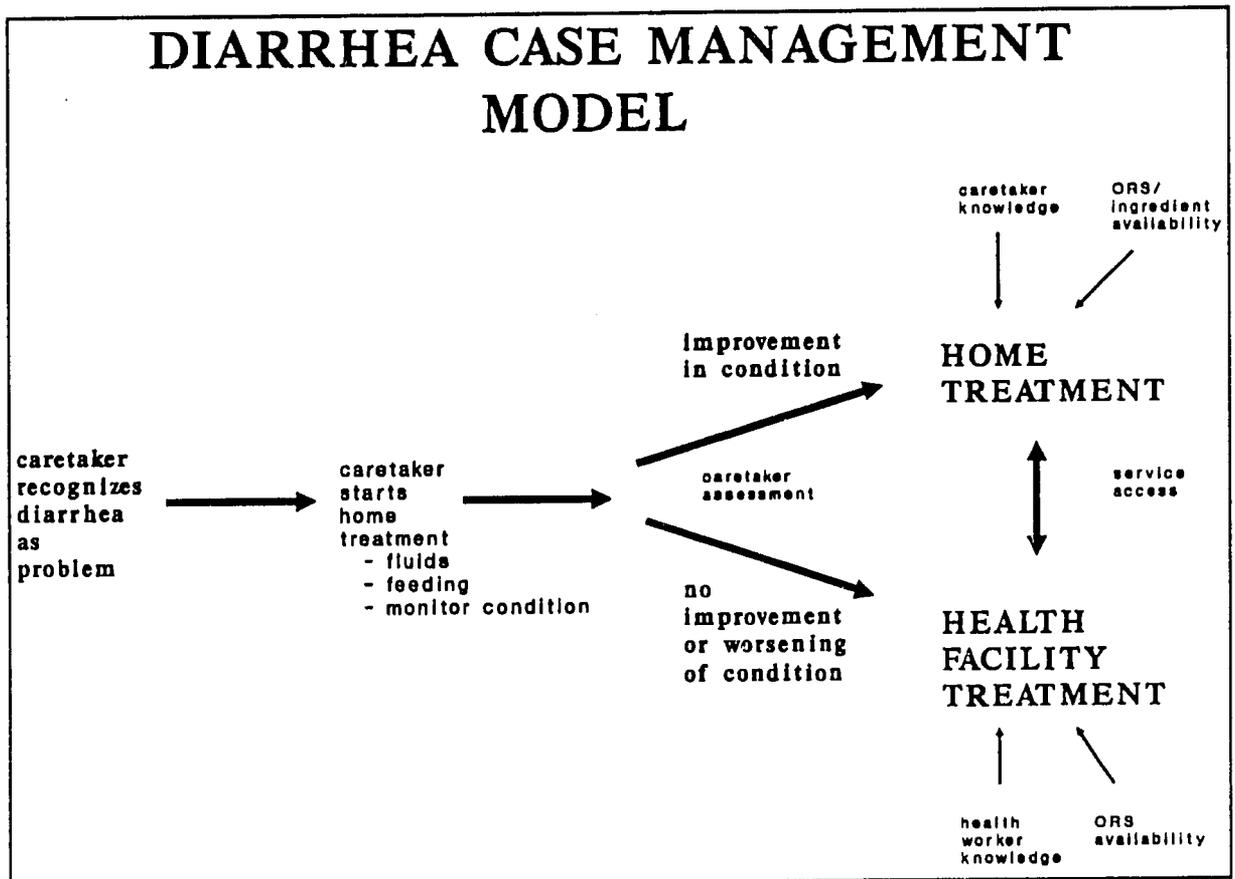


Figure 1

## B. PROGRESS IN CDD WORLDWIDE

Considerable progress has been made over the last decade in reducing the deaths caused by dehydration related to diarrhea. Likewise, great strides have been made in disseminating knowledge about the basic management of diarrhea. This has been particularly true in the education of mothers about diarrhea case management. Caretakers are increasingly knowledgeable and skillful in the home treatment of diarrhea. For instance, a 1988 survey in Mali showed that on exit from a health facility over 80 percent of mothers knew how to prepare and administer ORS. A recent household survey in Kenya revealed that 70-90 percent of mothers were using ORS or a recommended home fluid for children with diarrhea. Over 120 national diarrheal disease control programs have been established. Globally, oral rehydration therapy use rates have tripled in less than eight years, as have ORS access rates.

Health facilities have become increasingly capable of adequately treating children with diarrhea. WHO data reveal that, to date, over 230 Diarrhea Treatment and Training

Units are functioning in over 70 countries. Since 1987, the number of health providers trained in diarrhea case management has increased by 38 percent.

There have been many successes as well in the supply and distribution of oral rehydration salts. By the end of 1989, there were 460 manufacturers of ORS, with almost 80 percent of these located in developing countries. Since 1983, ORS production has tripled, reaching nearly 400 million sachets per year in 1991.

### C. OBSTACLES ENCOUNTERED AND THE CONTINUING CHALLENGE

Work in CDD programs over the past ten years has clearly demonstrated that diarrheal diseases are more difficult to combat than the simplicity of oral rehydration therapy originally suggested. Children successfully treated for a diarrheal episode on one occasion can again be stricken with life-threatening diarrhea. There is no build up of immunity. Motivating people to practice ORT at home with any regularity has proven to be quite difficult. Indeed, experience has shown that a diarrheal episode is as much of a human behavioral phenomenon as a health event.

Due in part to these characteristics, the control of diarrheal diseases will have to be a long-term, continuous effort. Questions arise, therefore, about how to best sustain CDD programs. Such questions are particularly important when newer health issues (including ARI, tuberculosis, urban health, and the other so called "emerging health" issues) attract the attention and resources of donors. It is important to articulate the continuing importance of the diarrheal disease problem in light of other competing health issues that also deserve attention.

CDD efforts will require appropriate attention in the health policies that are evolving to meet the changing needs of the 1990s and the arrival of the 21st century. The management of national health care programs must continue to address adequately the risk of diarrheal disease to children age five or younger.

Even with the progress achieved over the last nine years, diarrheal disease continues to be a major killer of children in the developing world. Despite rising levels of public awareness about ORT and ORS, regular use of ORS during diarrheal episodes in the home remains generally low. It is not uncommon for awareness to range between 75 percent and 85 percent in many developing countries, while reported actual use in the home lingers below 25 percent. Global ORS use rates seem to have leveled off at around 20 percent. Easy access to ORS products is also not as widespread as it should be. In short, the struggle to combat diarrheal disease effectively is far from over.

Another area of concern is the performance of trained health workers in diarrheal case management. Despite good training programs, both pre-service and in-service, graduates do not perform as well as would be hoped back in their home facility.

Furthermore, while recognizing the significant contribution of ORT in the treatment of diarrhea, one must also recognize its limitations. Exclusive focus on the use of ORT for treatment of the immediate diarrheal symptoms has serious limitations in terms of addressing the health needs of the child. Oral solutions are necessary but frequently not sufficient for treating diarrhea effectively; the sick child appearing at the health facility with diarrhea often suffers from a range of other health problems. Further, treating the current case of diarrhea does nothing to prevent the next diarrheal episode from occurring.

#### **D. LESSONS LEARNED AND THE RESPONSE**

For illustrative purposes, the complexities of diarrhea case management are greatly simplified in Figure 1 (p. 10). Lessons learned from facing the complexities during the past ten years loom as challenges to national CDD programs and donors alike. Reassessment of strategies and skillful development of effective and efficient ways of meeting these challenges are necessary next steps. Perhaps the greatest challenge stems from the recognition that diarrhea is rarely an isolated health problem. Diarrhea is only one, albeit an important one, of a constellation of debilitating childhood diseases. Furthermore, it is not a single, simple disease, but one that manifests itself in various and complex ways.

Over the course of the last nine years, several lessons have been learned about diarrheal disease and CDD programs. These lessons can be grouped into three major themes:

##### **1. Quality of Care/Case Management**

###### **a. Expansion and Refinement of CDD Activities**

In the past ORT was selected as the primary intervention strategy for diarrhea case management because it provided low cost, simple, and effective treatment to children who might otherwise die from simple dehydration. As ORT programs have gained acceptance, and greater numbers of children are being successfully rehydrated, aspects of diarrhea other than acute dehydration are becoming increasingly apparent.

Specific syndromes in which ORT is only a partial answer include persistent diarrhea, dysentery (especially due to shigellosis), and cholera. Persistent diarrhea, especially when combined with malnutrition, may be responsible for more than 10% of childhood deaths in some countries (e.g., Bangladesh) and often occurs without dehydration but frequently with electrolyte abnormalities. No specific microbiologic cause has been identified, and a variety of agents may contribute to this syndrome. Specific agents require antibiotics; however, increasing emphasis is being directed toward nutrition, micronutrients, and healing of the intestinal epithelium. PRITECH continues to consult with WHO on the possibilities for developing appropriate treatment algorithms.

Shigellosis may be dehydrating, but severe complications are more directly related to bacterial infection of colonic tissue with associated colitis, loss of blood and protein, and other systemic complications. Shigellosis may also overlap with persistent diarrhea and, in some countries, can be a common cause of this syndrome. Antibiotics, nutrition, and other supportive care are needed, but antibiotic-resistant strains often complicate treatment strategies. Thus, effective treatment of shigellosis needs algorithms which can best detect patients with shigellosis, can differentiate those who require antibiotics, and can provide follow-up management.

In the last year, cholera--the prototype dehydrating disease--has assumed much greater importance with major epidemics in Latin America and Africa while continuing to be endemic in Asia. ORS can be effective in cholera treatment; however, the tremendous purging associated with cholera may stretch ORS beyond effective limits; hence, appropriate use of intravenous (IV) fluids must supplement ORS in some cases. Supply of ORS may also be a problem, given the numbers of patients created by cholera epidemics. Effective control of cholera requires a multifaceted approach to (i) limit the spread of the disease and (ii) provide effective case management.

Last year, WHO reported 303,504 cases of cholera with 6,174 deaths. This upsurge in cholera is placing increased demands on already overburdened, under-supported and under-staffed national CDD programs. Many countries, in fact, have developed parallel efforts to address cholera. In any case, national CDD programs must find ways to develop effective interventions and to manage limited resources effectively, if they are to implement and sustain the activities generated by these new demands.

#### b. Training and Follow-Up

Training of health workers in the correct assessment and treatment of children with diarrhea has been a priority for PRITECH as well as WHO. The proportions of health workers who have received training in case management have increased dramatically. By 1989, over 70 countries worldwide had established over 200 Diarrhea Training Units (DTUs). Between 1987 and 1989, the total number of health workers trained in clinical case management increased by 38 percent. However, health facility surveys in a number of well-functioning national CDD programs have shown that application of correct case management occurs less frequently than expected given the relatively high level of information (see Figure 2). Apparently, training is a necessary--but not a sufficient--intervention for assuring adoption of correct case management in these health facilities.

PRITECH has begun collaborative efforts with WHO, the Quality Assurance Project and the HEALTHCOM Project to assess the quality of the training process and to identify other factors which may contribute to adoption of correct case management practices.

## DIARRHEA CASE MANAGEMENT IN HEALTH FACILITIES

### Results from Three Health Facility Surveys

	Tanzania	Egypt	Bangladesh
Correct assessment	7%	9.6%	3%
Correct rehydration	10%	34%	4%
Correct advice	6%	2%	1%
Correct dysentery Rx	29%	...	46%

Figure 2

## 2. Comprehensive Care and the Coordination of Services

### a. The Sick Child

Children frequently suffer from diarrhea in conjunction with other health risks rather than as a single health event in isolation. It is particularly true that children rarely die of diarrhea alone. More often, a child may have a complex of diseases including respiratory, nutritional, and systemic diseases such as malaria. National CDD efforts have been established and managed primarily as disease-specific programs that focus on case management utilizing ORT and appropriate feeding regimens. Given the complexities, both technical and operational, confronting CDD programs, it is essential not only that linkages be established with other child survival programs but also that an appropriate degree of association be established with the broader primary health care structure. The challenges will be to define the mechanism for effectively coordinating the multiple disease-specific programs which have been developed over the last ten years and to absorb new intervention programs such as ARI.

One key factor contributing to the sustainability of child survival programs will be establishing these programs as a regular part of the larger health care delivery system. A coordinated combination of services is necessary not only for the comprehensive care of the child but also for the health of the specific intervention programs. Translating this concept into effective and efficient service delivery remains a challenge.

### b. Comprehensive Care and Integration

Increasingly, the public health literature comments on the complexities of childhood disease causation and the interrelationships between various health risks contributing to high child mortality rates in the developing world. Ministries of health around the world must also contend with the pressures to integrate "disease-specific" intervention programs for child survival within their existing health care facilities and with limited staff. These mounting issues suggest to some that disease-specific programs for CDD, ARI,

immunization, etc., should be re-examined for their practicality, both administratively and epidemiologically.

Certainly, health professionals agree that a child rescued from death due to a severe diarrheal disease episode could still die in the future from ARI, from another diarrheal disease, or from some other cause. Therefore, the conceptual integration of possible causes of child mortality is almost beyond debate. The programmatic implications of these conceptual relationships of the causes of child mortality, however, are more complex and open to very different interpretations.

National CDD programs must also contend with the issue of integration and the presence of other disease-specific health programs which theoretically compete for the attention of Ministry of Health and donor resources. In examining this issue, however, it is important to note how these various programs are actually implemented at the sub-national or local level. Administratively, these disease-specific programs are often carried out by a single or, at best, a limited number of primary health care workers within a single, local clinic. Hence, these local health care workers frequently are charged with providing all forms of maternal and child health care services. The prospective patient, walking through the door of that clinic with a specific set of symptoms, actually determines whether the multi-purpose health care worker works in ARI, diarrheal disease, or some other area during that clinic visit.

At the local level in many developing countries, then, integration of primary health care services is already a fact of life. The question is whether the national health program plans adequately reflect the practical programmatic integration taking place at the individual clinic level. Another issue is whether the protocols for treating the patient are too disease-specific, so that a child coming in for treatment must be classified as having only one "disease" or another.

### c. Home Treatment and Prevention

Diarrhea is an environmental disease which can be prevented by adequate hygiene, nutrition (especially breastfeeding and adequate weaning practices), and water use behaviors. Yet national CDD programs have made only limited efforts to change these behaviors. The challenge to national programs is to develop effective behavior change interventions that are cost effective to implement and sustain.

Moreover, as mentioned above (pp. 10-11), despite the improved accessibility of ORS in the developing world, caretakers have been slow to adopt its use. A recent summary of Demographic and Health Surveys (DHS) showed that 50-80 percent of children receive no oral rehydration therapy, while over 50 percent receive inappropriate and expensive drugs such as antidiarrheals. The challenge is to improve the prescribing practices of health providers as well as the health care practices of those most involved with the child, the caretakers in the household.

### 3. Alternative Channels for Service Delivery

A common constraint facing most CDD programs implemented within the public sector are limitations to broad-based distribution of ORS. By and large, public sector institutions have failed in their efforts to establish distribution systems which could assure that ORS supplies were available on a regular basis to health clinics or were readily accessible to households.

In addition, in many developing countries, there is growing recognition that public sector health care systems actually serve only a small portion of the total population. More and more frequently, survey data show that the general populace select from a variety of alternative health care providers, the majority of which operate outside of the public sector. The private sector, consequently, is a major provider of health care.

National CDD programs have been historically based in the public sector. This orientation has largely failed to address the very significant health care delivery systems available in the private sector. Recent efforts to work with the commercial sector both to popularize ORS and to make ORS more widely available through commercial distribution channels show great promise for significantly complementing CDD efforts undertaken by the public sector. PRITECH's experience in Pakistan, for example, demonstrated that commercial firms could be motivated to promote and distribute ORS products more widely throughout the country--to the extent that the private sector quickly surpassed the size and scope of the public sector's national ORS distribution system.

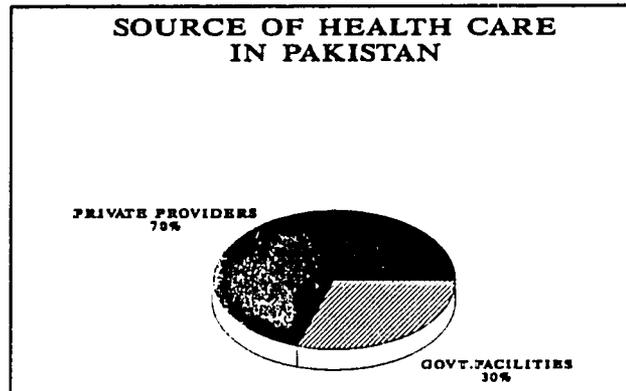


Figure 3: from Lucia Ferraz-Tabor, Forging New Partnerships: PRITECH's Pakistan Experience, 1991

The extent to which the private sector can play a meaningful role in national CDD efforts is still being explored. However, it is very likely that the limits of that role have not yet been reached and can expand beyond ORS production and distribution. There may well be opportunities for firms to participate in measures to prevent diarrhea (such as through

the promotion of personal hygiene and personal hygiene soap products) or in the training of private sector health care providers in diarrhea case management.

The role of the private sector--both for-profit and non-profit--in national CDD efforts will be important in expanding diarrhea case management services to reach the large portion of children not covered by the public sector. To do so will require substantial efforts in operations research and increased application of current knowledge of how to collaborate with segments of the private sector. Such activities will include improving the case management practices of private providers (e.g., traditional healers, pharmacists, NGOs, and church-linked providers of care) and creating and extending commercial markets for oral rehydration salts (ORS).

#### E. SUSTAINABILITY

As with other child survival programs, the issue of sustainability, including financial viability, is becoming an increasingly important issue for CDD in these times of fiscal belt-tightening. An eight-country sustainability study in Latin America and Africa, supported by A.I.D., found widely varying institutional and budgetary capacities to maintain levels of child survival program services without A.I.D. financial support. Africa was particularly weak in those project characteristics which the study identified as especially important for sustainability. Though CDD programs were not included among the health programs which were studied, it is reasonable to assume that they have similar determinants of sustainability.

One task facing CDD programs in the future will be to identify those factors which contribute to program sustainability and to strengthen their institutionalization. The A.I.D. study mentioned above noted that one important sustainability consideration is the integration of programs within a larger primary health care structure. Another consideration meriting attention is the potential for an active role for the private sector in the delivery of CDD services. Where feasible, an active and expanded role for the private sector should be an integral part of national CDD plans. Delineation of an appropriate private sector role would then allow the public sector to concentrate its efforts on segments of the population at most risk and less likely to use private sector-based services.

#### F. CDD AND THE DONOR COMMUNITY

Ministries of health and the donor community must also contend with the evolving nature of the CDD problem. Although ORT is accepted as the appropriate intervention strategy for diarrheal disease, the complex behavioral issues impeding the expanded use of ORT have proven more difficult for national CDD programs to handle than anticipated. Furthermore, the moderate success of global CDD efforts, in spite of these problems, has encouraged a shift of attention to other important health issues (e.g., ARI, tuberculosis). The combination--growing difficulty of expanding ORT usage and of the

demands for attention to other health issues--appears to be generating a complacency among both donors and ministries of health about CDD efforts at a point when programs are still well short of achieving their potential.

PRITECH recognizes that diarrhea remains a leading killer of children in the developing world. As the technology for treating acute dehydrating, persistent, and dysenteric diarrheas improves, and as better methods for implementing and sustaining technological advances are developed, the opportunity exists to reduce the risk of diarrheal morbidity and mortality even further. PRITECH, along with others concerned with diarrheal diseases must work to keep the importance of diarrheal disease in the consciousness of the donors, health community, and health planners.

Among the significant barriers confronting PRITECH's efforts to provide continuing support for national diarrheal disease control efforts are the competing priorities and constraints within the A.I.D. system. USAID missions, particularly in Africa, appear to have somewhat less interest in health programs than previously, probably due to staffing pressures which have reduced the numbers of field health officers. These constraints on capacity to act in the health area may require significant rethinking of strategies for child survival, including CDD, programs. PRITECH remains convinced that in spite of these difficulties a comprehensive strategy for mother-child health--including oral rehydration therapy for diarrhea--can be developed and advocated as an efficient and effective means of improving child health within the limitations of the A.I.D. framework.

### III. COUNTRY PROGRAMS

Country programs remain the core of the PRITECH effort, absorbing more than 50 percent of the PRITECH budget in PY4 for the first time. Significant and/or continuing country programs fall into two primary categories: **sustained** or **intermittent**. Sustained programs involve a resident PRITECH representative and commitments, approved by PRITECH's A.I.D. Project Officer, to provide substantial and specific levels and categories of assistance throughout a two- to four-year period with the possibility of follow-up assistance during a phase-out period. Intermittent programs represent less comprehensive interventions in a country's CDD program; in these countries, PRITECH agrees to undertake a limited range of tasks over a period of time on an "as needed," intermittent basis.

Under PRITECH II, there have been a total of 19 approved sustained or intermittent programs. Thirteen of these were active at the beginning of PY4, and two new sustained programs were added during PY4. In Uganda, after several years of ad hoc assistance, PRITECH initiated a new sustained program in the public sector and appointed a resident PRITECH representative. In Indonesia, where PRITECH had completed a public sector program, PRITECH initiated a new sustained program focussed on the private-sector production, marketing, and distribution of ORS.

Experience, research, and studies during PY4 contributed to PRITECH's growing understanding and knowledge of the obstacles to successful implementation of comprehensive and effective CDD programs. Among the lessons learned, the key ones are the understanding and recognition that (1) the mere provision of information through training, while necessary, does not appear sufficient to alter case management practices in either clinics or homes; (2) in many--maybe most--developing countries, the public sector health services and facilities reach only 25 to 50 percent of the population; (3) a range of environmental, health, and nutrition factors affect the efficacy of the ORS-based treatment regimen; and (4) the resources--either financial or human--required to sustain more than minimal, multi-purpose health services are beyond the means of most developing countries. During the course of the year, PRITECH began to modify country program strategies and activities to address these obstacles.

#### A. SUSTAINED

Sustained programs (see definition above) of assistance are underway, or in two cases have essentially been completed, in a total of 12 cases worldwide. During PY4, there were active programs in 7 countries in A.I.D.'s Africa region, 1 in the Latin American/Caribbean region, and 2 in the Asia region.

PRITECH has essentially completed planned programs for the public sector in three Asian countries--the **Philippines** and **Indonesia** during prior years and **Pakistan** during PY4. However, the Pakistan program may continue with a private-sector focus and

PRITECH has initiated a new program in Indonesia with an exclusively private sector emphasis.

Summaries of progress and accomplishments achieved during PY4 are reported on a program by program basis below:

1. **Burkina Faso**

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	3,800	400,000	403,800
2. Obligated Funds	3,800	420,000	423,800
3. Expenditures Project Year 4	13,105	99,294	112,400
4. Cumulative Expenditures	13,105	298,341	311,447
5. % Expended of Budget	345 %	75 %	77 %

After a two-year hiatus, the Ministry of Health (MOH) appointed a new national CDD program coordinator. The new coordinator attended the joint WHO/PRITECH CDD Program Managers' Course which proved useful in clarifying the need for a clear definition of issues and articulation of policy. The Ministry of Health is trying to restructure the CDD Program on the national level and to extend coverage of the program to all 30 provinces.

PRITECH contributes to the Burkina Faso program through a full-time resident advisor and Sahel Regional Office consultants. In addition to providing assistance in organization and management, training, supervision/follow-up, and educational materials development, PRITECH has also helped the Mission to develop the CDD component of its five-year bilateral project. Specific accomplishments during PY4 include the following:

a. **PLANNING/MANAGEMENT/POLICY/COORDINATION/FINANCE**

Objectives for PY4:

- Assist CDD Coordinator in
  - defining national policy issues (e.g., liter measure, ORS use norms);
  - establishing a coherent national IEC strategy; and
  - assuring the availability of USAID funds for local costs.

### Accomplishments and Status:

- The new CDD Coordinator has become increasingly aware of the need to clarify CDD program policy and update the CDD national plan. Political instability over this period has made it difficult to move ahead on these issues, but a review/planning exercise is scheduled for late 1991.
- The PRITECH representative has worked with the new CDD Coordinator to encourage the pursuit of common strategies among the donors in their CDD activities.
- The CDD program manager has made a concerted effort to find funding for all 30 provinces in Burkina, but there is still some uncertainty that activities in six or seven provinces can be covered this year, owing to difficulties with World Bank funding.
- Four new provinces, in addition to the original four, have been incorporated into the PRITECH/USAID project this year, and a planning workshop was carried out for representatives of the eight provinces now covered by the USAID/PRITECH effort.
- The PRITECH representative has assisted the program coordinator in facilitating communications between the MOH planning office and the provinces to ensure timely release of funds.

### b. TRAINING/EDUCATION/SUPERVISION

#### Objectives for PY4:

- Organize a planning workshop for all eight provinces covered by USAID/PRITECH CDD activities;
- Conduct training-of-trainers (TOT) courses for both the four "old" provinces and the four "new" provinces;
- Organize training of 100 health workers in each of the "new" provinces and follow up on village health worker (VHW) training in the "old" provinces;
- Follow up on use of CDD teaching modules in the three nursing schools and the medical school;
- Carry out central-level supervision visits to all eight provinces and facilitate supervisory visits by provincial health teams;

- Provide equipment for establishing 50 oral rehydration units (ORUs) in the new provinces and follow up on the organization of ORUs in all provinces;
- Assist the ORU in Bobo Dioulasso to organize quality training programs and make the PRITECH training manual available to other provinces/donors; and
- Provide case management forms for all health facilities in the program.

Accomplishments and Status:

- PRITECH held two training-of-trainers (TOT) courses, utilizing the PRITECH training manual with an emphasis on case management and education; however, as of July, only two of the "new" provinces had to run CDD training courses for 71 health workers due to delays in the release of funds for local activities.
- Provincial reports indicate that 51 ORUs have been set up in the four initial provinces and that materials are being purchased for a further 80 ORUs to be set up mostly in the four "new" provinces.
- Staff visited sixty-six health facilities during the Health Facility Survey. These visits provided an opportunity for supervision and problem solving with health center staffs as well as for data collection.
- The MOH modified the case management and supervision forms based on the consensus reached during the planning meeting; the forms were subsequently reprinted and distributed. (NOTE: It was also reported during the planning workshop that a total of 2,203 VHW and over 400 health workers had been trained in the four initial USAID/PRITECH provinces.)

c. ORS PRODUCTION, DISTRIBUTION, AND AVAILABILITY

Objectives for PY4:

- Follow up on recommendations to improve ORS distribution and use.

Accomplishments and Status:

- The planning workshop discussed ORS recommendations from studies by PRITECH; however, policy issues remain ill-defined and await resolution during the process of development of the national CDD plan. The national essential drug list included ORS.

d. INFORMATION/EDUCATION/COMMUNICATION

Objectives for PY4:

- Follow up on distribution and use of animation guide; test guide in new provinces; translate and modify as necessary; and
- Assess community education efforts in project areas and identify other educational material needs.

Accomplishments and Status

- PRITECH arranged for translation and reprinting of animation guide into three new languages for use by other language groups in the new provinces; other agencies (e.g., AFRICARE and UNICEF) have also requested the guide.
- The PRITECH staff was unable to assess the community education efforts given preoccupation with training and lack of local-level supervision.

e. EVALUATION/RESEARCH/INFORMATION SYSTEMS/DISSEMINATION

Objectives for PY4:

- Carry out Health Facility Survey to identify training problems;
- Ensure inclusion of CDD-related questions by Nutrition Social Marketing and Field Support Project (NCP) in their quantitative knowledge, attitude, and practices (KAP) survey; and
- Complete etiology-of-dysentery study and incorporate findings into national strategy.

Accomplishments and Status:

- PRITECH carried out Health Facility Survey as scheduled, using new WHO protocol.
- NCP included diarrhea-related in its study; however, the results are not yet available.
- The etiology-of-dysentery study is still underway, due to difficulties in finding appropriate controls.

f. **OTHER ACTIVITIES**

Accomplishments and Status:

- WHO/PRITECH sponsored a regional clinical management course in Bobo Dioulasso in June with 12 participants representing 5 countries.
- The clinical management course and training-of-trainers efforts have served to engage leading pediatricians on ORT issues. This should have some long-term effects on teaching in the medical schools.

2. **Cameroon**

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	5,000	1,147,000	1,152,000
2. Obligated Funds	5,000	867,000	872,000
3. Expenditures Project Year 4	6,049	230,687	236,737
4. Cumulative Expenditures	6,049	637,326	643,375
5. % Expended of Budget	121 %	56%	56%

PY4 was a highly successful year for PRITECH in Cameroon with achievement of objectives in each major program area and an effective transition to a new PRITECH Country Representative. The major emphasis during PY4 continued to be clinical in-service training. Specific accomplishments in each program area include the following activities:

a. **PLANNING/MANAGEMENT/POLICY/COORDINATION/FINANCE**

Objectives for PY4:

- Establish one- and two-year activity plans for the National CDD Program; and
- Hold weekly meetings of MOH CDD team and PRITECH representative.

Accomplishments and Status

- PRITECH Country Representative worked closely with the MOH CDD team, including two newly appointed, full-time staff members as well as the CDD Manager and Technical Director, both of whom work with CDD on a part-time

basis. Regular weekly meetings for tracking on-going activities and ensuring follow-up took place.

- With input from the PRITECH Representative, both a one- and two-year plan of activities were prepared. The CDD Program accomplished nearly all activities included in the one-year plan, though with some delay. Analysis of the budget of the two-year plan indicates a funding shortfall of approximately \$495,000 over the 1991-92 program period.
- The feared funding shortfalls led the staff to prepare a detailed funding proposal for UNICEF assistance to CDD activities over the 1991-95 time period. The staff also prepared a separate proposal for A.I.D. for funding of health worker communications training, a traditional healer initiative, and an urban sector initiative.
- The Minister of Health signed the policy statement of the National CDD Program with guidelines for good case management both at health centers and at home and PRITECH printed it in poster form in both French and English and distributed in all ten provinces for display in health centers. The statement underlines the Ministry's ban on the use of antidiarrheal drugs for treatment of diarrhea in the health centers.
- Two operations research studies financed by PRITECH concerning breastfeeding practices and attitudes in Cameroon have encouraged substantial cooperation between the CDD Program and the Directorate of Family and Mental Health and, especially, its Nutrition Division. This collaboration, and an increased emphasis placed by the CDD Program on nutrition and breastfeeding issues, will open opportunities in PY5 for the creation of coordinated national breastfeeding and infant feeding policies.
- PRITECH and the MOH CDD Program have worked closely with the different organizations at the provincial level in Cameroon to assist the MOH in implementing the Reorientation of Primary Health Care (RPHC) program, a decentralized model for health care delivery emphasizing community outreach at the health center level and cost recovery for essential drugs. Specific areas of cooperation have been the development of CDD training materials that will be used to train both health district and health center level personnel in this new approach and assurance of the availability of ORS within the provincial cost recovery systems at a standard price.

b. **TRAINING/EDUCATION/SUPERVISION**

Objectives for PY4:

- Provide clinical and organizational training in CDD for 150 health personnel, including physicians and nursing personnel;
- Complete production of Cameroon-specific training modules;
- Support efforts to integrate CDD into nursing school curriculum; and
- Conduct a supervisory visit within four months following each clinical training course, visiting health centers and hospitals with trained personnel to evaluate progress and provide support.

Accomplishments and Status:

- In-service CDD training continued to be the primary activity of the National CDD Program and PRITECH during PY4. During this time period, 135 health workers--including 43 physicians--received intensive clinical training in courses which took place in the Center, East, West, and Northwest provinces and at the National DTU in Yaounde. Each of these health workers was given basic ORT materials to assist in the start-up of an ORT corner, and each health worker was charged with training his/her colleagues.
- During PY4, the National CDD Program--with PRITECH encouragement--placed increased emphasis on including health workers from Catholic and Protestant Mission hospitals and health centers in the training programs; these private facilities account for a significant portion of the health services in Cameroon.
- Three to four months after each training course a supervisory visit has taken place, generally consisting of representatives of the National CDD team and of the provincial health delegation. During PY4 a simplified supervisory evaluation form was developed which has enabled the collection of quantitative data for measuring the impact of the training and the establishment of ORT corners. Preliminary feedback from these data indicate a high level of retention of the training content.
- In March 1991 the CDD Program and the advanced nursing school in Yaounde jointly sponsored a clinical CDD course. Consisting of seven half-days, the course includes practical work sessions at the National DTU. The nursing school praised the course as a model for a similar course on an annual basis.

- The National DTU hosted Cameroon's first international CDD training course in December 1990, sponsored by WHO and facilitated by a team of Cameroonians with participants from ten Francophone countries. WHO now proposes annual international training courses at the DTU with the language of instruction alternating between French and English.
- PRITECH has developed a CDD training curriculum designed for use within the Reorientation of Primary Health Care (RPHC) program, described on the preceding page, currently being implemented in Cameroon. This curriculum consists of two parts:
  - (i) A three-day curriculum for district health teams (typically a doctor and a primary health care coordinator) based upon a revised version of the five-day clinical course developed in Cameroon; and
  - (ii) A separate three-day curriculum aimed at workers from health centers and designed to be taught by the district health teams.

The first training program will be with the USAID-funded SESA Project in the South and Adamaoua provinces. This training, originally scheduled for September 1991, has been postponed to November 1991.

c. **ORS PRODUCTION, DISTRIBUTION AND AVAILABILITY**

Objectives for PY4:

- Strengthen both private-sector and public-sector ORS distribution; and
- Assist the MOH in the development of an effective cost-recovery system.

Accomplishments and Status:

- Despite logistical constraints, ONAPHARM (the national organization with nominal responsibility for the distribution of drugs) continues to operate, and the National CDD team has assured delivery from central level to each of the provinces; however, feedback from the provincial level concerning distribution within the province is inconsistent. In at least some parts of the country, there are sporadic reports that ORS packet supply in rural health posts may not be regular.
- A data collection system has been devised to address this lack of distribution information. This system, which will become operative in October 1991, will be based on a simple data collection form which will be submitted from the

peripheral level together with EPI data. The CDD Program hopes to benefit from EPI's well-developed data collection network to obtain more comprehensive data.

- Over the course of PY4, the national distribution system distributed 820,000 UNICEF-provided sachets. An additional 700,000 sachets, also provided by UNICEF, remain in the ONAPHARM warehouse in Yaounde.
- The MOH, as part of its RPHC program, has implemented cost recovery systems for essential drugs in most of the country's provinces. A donor organization supports each of these systems, and each has a resupply system for ORS (and other drugs) independent of the central MOH system. PRITECH and the National CDD Program have worked within the MOH and with the different donor organizations to ensure that ORS is available in each of the cost recovery systems and is sold at a consistent price. This price is currently 50 CFA (\$0.17) nationwide.
- PRITECH has carried out limited activities in the commercial sector in Cameroon to date. No ORS is produced locally, and the quantity of ORS imported by the private sector and religious-based health care providers is unknown. PRITECH plans to explore this area for possible support during PY5.
- The USAID Mission supports a proposal by Population Services International (PSI) to market ORS in Cameroon. Together, PSI and PRITECH are investigating possibilities for collaborative market research on the potential sales of ORS through "informal" channels such as food stores, and on the impact of such sales on the public's perception of ORS as an effective medication.

d. INFORMATION/EDUCATION/COMMUNICATION

Objectives for PY4:

- Conduct CDD information/education/communications (IEC) efforts at both national and provincial levels, including an intensive educational campaign and ongoing education of mothers through health facilities;
- Complete production and distribution of mothers' leaflets;
- Revise evaluation and treatment posters for health center personnel; and
- Conduct refresher training in IEC techniques for health workers.

Accomplishments and Status:

- For the second consecutive year, the CDD Program conducted IEC activities at a high level of intensity throughout Cameroon, at both the national and provincial levels. A strong emphasis has been placed on going beyond the public health system to teach mothers good home treatment practices. Specific activities included the following IEC programs:
  - A phased system of radio messages on national and provincial stations;
  - Development, printing, and distribution of two flyers describing proper preparation of an ORS sachet and good home treatment for diarrhea;
  - Training of health workers in communications techniques with specific messages for diarrhea case management;
  - Contacts with the country's largest producer of matches--UNALOR--for the printing of the CDD logo on match boxes, the first of which should appear in November 1991; and
  - Technical and financial assistance for the production of primary health care calendars and supporting materials.
- A three poster series ("Evaluation," "Treatment," and "Advice to Give"), designed for health workers, has been revised in accordance with new (1990) WHO evaluation and treatment guidelines.
- Refresher training for health workers in IEC techniques was postponed due to lack of funding. Funds have been solicited for covering the cost of this training in PY5.

e. EVALUATION/RESEARCH/INFORMATION SYSTEMS/DISSEMINATION

Objectives for PY4:

- Assess the impact of training and IEC activities on the knowledge, attitudes and practices of health workers and mothers.

Accomplishments and Status:

- A Health Facilities Survey conducted in Cameroon in May and June 1991 in the South and Littoral provinces provided feedback on several aspects of the activities of the CDD Program. The survey, led by a PRITECH consultant, examined case management of diarrhea cases in health centers. The study included information

on the health education component of case management, the establishment of ORT corners in health centers, and the availability of ORS and ORT materials.

- The survey indicated that in 57% of cases observed, the health worker correctly diagnosed the problem and, in 93% of cases, determined the plan of rehydration correctly; 63% of cases received correct rehydration. Of health workers interviewed, 63% showed good knowledge of diagnostic evaluation criteria. Thirty-nine percent of health centers had an ORT corner and 64% had sufficient stocks of ORS on hand.
- The results showed that, while those health workers who had received CDD-specific training performed better than those who had not, untrained personnel also had a good knowledge of ORT, indicating a good spread effect.
- Upcoming evaluation activities for the Program, in coordination with WHO, include two household surveys and a WHO-sponsored comprehensive evaluation of the national CDD Program scheduled for March 1992.
- PRITECH has established a documentation center at the PRITECH office in the Ministry of Health with a large collection of documents, most of which have been provided by the PRITECH/Washington Information Center. Students and Ministry personnel working on specific research projects are the most frequent users of this documentation center. Additionally, PRITECH continues to distribute 115 copies of the Technical Literature Update, in both English and French, to MOH personnel at the central and provincial levels, and to medical and nursing schools.

f. RESEARCH AND DEVELOPMENT ACTIVITIES

Objectives for PY4:

- Conduct at least two studies, including a study of the impact of mothers' leaflets on mothers' behavior and a breastfeeding study.

Accomplishments and Status:

- PRITECH sponsored two operations research studies related to breastfeeding which were completed during PY4: a study on water supplementation in the hot and dry climate of northern Cameroon and a national study on the knowledge, attitudes and practices of health workers on breastfeeding issues. The latter study will be used as input for the establishment of a national breastfeeding policy. Both studies were presented at the PRITECH/NCP-sponsored West African Infant Feeding Conference in Lome in September 1991.

- With assistance from a PRITECH consultant, editing was completed on the focus group interviews conducted in Cameroon in 1988-89 on indigenous attitudes and practices regarding diarrhea. The final document is designed for the use of MOH decision-makers and health educators.
- In September 1990 PRITECH conducted a study on the organization and the diarrhea treatment practices of traditional healers in Cameroon. This study is the basis for the proposal and planning for a traditional healers' initiative.
- The Health Facilities Survey provided feedback on the distribution of the ORS preparation flyer but not specifically on the impact of the flyer on mothers' behavior. The upcoming household surveys will more thoroughly examine the latter question.

g. OTHER ACTIVITIES

Accomplishments and Status:

- With PRITECH assistance, the CDD Program has distributed materials provided by UNICEF for ORT corners in all ten provinces and used WHO-provided materials to equip the national DTU in preparation for using this facility as an international training center.
- PRITECH has assisted the CDD Program in coordinating sales and distribution of growth monitoring cards on a national basis. The CDD Program sells these cards, recently revised with PRITECH's support, to donor organizations, which in turn coordinate sales in the provinces.

3. Indonesia

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	1,037,000	0	1,037,000
2. Obligated Funds((prev. unallocated)	1,037,000	0	1,037,000
3. Expenditures Project Year 4	0	0	0
4. Cumulative Expenditures	0	0	0
5. % Expended of Budget	0%	0%	0%

At the end of PY4, PRITECH obtained approval to initiate a new program in Indonesia with an exclusive focus on private sector production and distribution of ORS. PRITECH selected and fielded a country representative--the same individual who has successfully implemented a similar program in Pakistan--as the PY closed. Hence, no significant implementation actions occurred during PY4.

#### 4. Kenya

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	344,000	571,000	915,000
2. Obligated Funds	344,000	523,570	867,570
3. Expenditures Project Year 4	94,611	205,441	300,052
4. Cumulative Expenditures	366,046	319,232	685,278
5. % Expended of Budget	106 %	56 %	75 %

Working relationships between PRITECH and Kenya CDD management remain difficult. Nevertheless, PRITECH positively contributed to the national program through support of two communications workshops, one major Training of Trainers (TOT) workshop, revision of the health information systems (HIS), implementation of a National Training Assessment, and incorporation of nutrition education as an essential component of CDD case management. A new PRITECH Country Representative was recruited in the last month of PY3 and assumed her position at the beginning of PY4. Both the Country Representative and the Communications Advisor positions were established as full-time positions at that time.

##### a. PLANNING/MANAGEMENT/POLICY/COORDINATION/FINANCE

###### Objectives for PY4:

- Assist the staff of the Kenya CDD Program in revising their plan of action for the period covering CY 1991 through mid-1992;
- Assist the national CDD Program management in revising National CDD Policy to clarify the relative roles of ORS packets and home available fluids in case management;
- Assist the CDD staff in establishing a system for tracking and reporting on critical events occurring in the CDD Program; and

- Encourage greater coordination of activities between the CDD and Nutrition divisions of the Ministry of Health.

Accomplishments and Status:

- PRITECH staff had no meaningful success in influencing issues in areas of public sector planning, management, and policy. The PRITECH Representative encouraged the convening of a meeting to prepare a new plan of action and subsequently drafted a planning document. The Kenya CDD unit management, however, discarded the document and took no further action.
- Given the difficulties of working with the current Kenya CDD management, PRITECH has narrowed its range of activities in the public sector and refocused its efforts toward other, non-public sector activities (see sub-sections c and d below).
- Due to cooperation between PRITECH and NCP, considerable progress has been made in coordinating nutrition messages and CDD training.

b. TRAINING/EDUCATION/SUPERVISION

Objectives for PY4:

- Assist in the implementation of a training of trainers (TOT) workshop;
- Conduct study on the impact of training on case management of health practitioners; and
- Establish a data base on CDD trainees.

Accomplishments and Status:

- Despite lack of general involvement in training exercises in the Kenya CDD program, PRITECH was asked and agreed to support the first CDD TOT workshop. The workshop was coordinated with WHO and introduced use of the "shortened" CDD case management training curriculum for smaller hospitals and clinics. Following the workshop, three CDD provincial level training teams were established to manage training in their respective areas.
- The above-cited TOT workshop participants designed the first national CDD supervision checklist and revised the CDD monthly reporting form.
- For the study on the impact of training, see the section on "Evaluation" (sub-section f below).

- Trainee data base was established and is complete for all people trained at the national level in CDD case management and in supervisory skills; however, the data on trainees at the subnational facilities remain spotty.

c. ORS PRODUCTION, DISTRIBUTION, AND AVAILABILITY

Objectives for PY4:

- In the public sector, monitor the changeover from 1 liter to ½-liter ORS packets; and
- Explore possibilities for private sector production, promotion, marketing, and distribution of ORS.

Accomplishments and Status:

- The public sector now distributes only half-liter sachets through both the National Central Medical Stores and the Essential Drug Kits. Some liter sachets are still in stock but are being used only in ORT centers or in-patient wards. However, the maintenance of adequate supplies remains problematic; the GOK is now calling on UNICEF to supply ORS packets, diverting its limited resources from support of communications activities.
- The PRITECH Social Marketing Manager visited Kenya in August 1991 and is now assisting in the development of a private sector strategy for increasing ORS promotion, distribution, and production.

d. COMMERCIAL AND NONPROFIT ACTIVITIES

Objectives for PY4:

- None specified in PY4 workplan.

Accomplishments and Status:

- However, given the difficulty of working in the public sector, in PY4 PRITECH initiated efforts to work more effectively with the non-government organizations (NGOs) involved in CDD activities. These NGOs provide almost 50% of all health services in Kenya. The USAID Mission to Kenya has fully endorsed this refocused effort.

e. INFORMATION/EDUCATION/COMMUNICATION

Objectives for PY4:

- Assist with development and implementation of a school health program;
- Produce, in cooperation with UNICEF, a diarrhea flip chart for use in education and training programs;
- Support printing of CDD logo stickers and CDD publications and continue support for workshops on the use of information/education materials; and
- Arrange for rebroadcast of 13 radio programs in Kiswahili.

Accomplishments and Status:

- The PRITECH Communications Advisor essentially achieved all of the stated objectives. The only difficulty was with the rebroadcast of radio spots: the local radio station insisted on charging commercial rates and sufficient funds were not available. As an alternative the Advisor arranged with the Kenya Institute of Education to utilize free radio time at the end of the regular school education broadcasts for communicating CDD messages.
- The following additional activities were also accomplished:
  - supporting a Creative Communications Workshop which brought together key health education staff to share experiences and plan strategies for more creative CDD communications approaches; and
  - arranging for the addition of appropriate CDD communications techniques to the supervision checklist. Supervisors are now monitoring health worker attitudes and practices with regard to communications techniques with mothers and other caretakers.

f. EVALUATION/RESEARCH/INFORMATION SYSTEMS/DISSEMINATION

Objectives for PY4:

- Conduct a study on the impact of training on case management by health practitioners;
- Collaborate with NCP in researching the development of messages based on recommendations of the Food and Fluids Committee; and

- Assist the CDD program unit in establishing a functional Health Information System.

Accomplishments and Status:

- PRITECH supported the first national assessment of case management training. The researchers visited 5 districts and 64 health facilities, interviewed 348 trained and 208 untrained staff members and conducted exit interviews with 300 caretakers. The principal findings were as follows:
  - little or no supervision results from the routine and regular visits to health facilities by the district health teams;
  - trained health workers are reasonably good about sharing their knowledge with untrained work colleagues;
  - the system of staff deployment appears to place no emphasis on assigning CDD trained staff to appropriate job positions; and
  - the WHO CDD modules should be adapted to the particular circumstances of Kenya and more training time should be spent on practical work.
- The CDD unit staff, with support from PRITECH, has agreed to conduct a "plan of action" meeting to consider appropriate and practical means of implementing the recommendations stemming from the Training Assessment.
- PRITECH, in coordination with NCP, developed an intervention plan for further study on the use of home feeding and fluids during diarrhea as a basis for preparation of a communications approach for changing caretaker behavior.
- Progress has been made in improving the CDD HIS system. Computerized entry and reporting programs have been designed and data entry procedures have been streamlined. However, there has not yet been an assignment of management level CDD staff to oversee and utilize the potential of the system.

g. RESEARCH AND DEVELOPMENT ACTIVITIES

Objectives for PY4:

- Participate in the January 1991 ADDR persistent diarrhea conference; and
- Assist in the preparation of a plan for a Lactation Management Training Center (LMTC) at Kenyatta National Hospital, including support for a team of Kenyan participants in Wellstart Training.

### Accomplishments and Status:

- The PRITECH Country Representative participated in the Persistent Diarrhea Conference in Mombasa and subsequently commissioned an article for the CDD newsletter by a Kenyan doctor who attended the conference. However, Kenya has yet to establish a policy for treating persistent diarrhea as a special problem in childhood mortality and morbidity.
- PRITECH completed arrangements for the Wellstart training of Kenyan participants and continues to provide assistance in planning for the establishment of the LMTC; however, final commitment of the Kenyan implementing agencies is still needed.

## 5. Mali

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	0	1,200,000	1,200,000
2. Obligated Funds	0	1,211,114	1,211,114
3. Expenditures Project Year 4	0	141,270	141,270
4. Cumulative Expenditures	0	482,790	482,790
5. % Expended of Budget	0%	40%	40%

The overall momentum of the CDD program in Mali has slowed considerably in the past year. The MOH in particular has been plagued by uncertainty during the transition period following overthrow of the military government in early 1991. There have been two different ministers of health since the governmental change and the administrative reforms planned under the previous regime have languished, being neither ratified nor changed. The CDD program manager was appointed to another responsible position and has not been replaced, and another key CDD team member has been assigned responsibility for the family planning section of the MOH's Division of Family Health. Although the CDD program has been accorded a rhetorical high priority, the administrative actions necessary to re-invigorate the CDD program have not been taken. During this period the newly appointed PRITECH Country Representative resigned for personal reasons; the position has now been vacant again for several months.

Despite this difficult environment, the CDD Program has been successful in achieving most of the objectives planned for PY4. The objectives and accomplishments are summarized below:

a. **PLANNING/MANAGEMENT/POLICY/COORDINATION/FINANCE**

Objectives for PY4:

- Recruit and appoint a new, permanent PRITECH Representative;
- Assist with development of a national CDD workplan for 1991; and
- Coordinate budgeting with UNICEF and WHO.

Accomplishments and Status:

- PRITECH recruited and appointed a new country representative, who quickly became an active member of the CDD team, in late 1990; however, with the change in government in early 1991 she felt it necessary to resign in order to avoid potential political conflict of interest problems.
- The PRITECH representative, nevertheless, assisted with the development of a CDD workplan for 1991 and with its successful integration into the general Family Health Division workplan.
- The general uncertainty of the administrative and political situation has made coordination with all concerned difficult during PY4; in addition, both WHO and UNICEF have suffered from funding difficulties. The situation has increased the significance of USAID/PRITECH as a major donor supporting the CDD program.
- The members of the CDD team demonstrated exceptional solidarity and persistence in keeping the CDD Program afloat during a difficult period.

b. **TRAINING/EDUCATION/SUPERVISION**

Objectives for PY4:

- Plan and carry out training of local staff of ORUs, including training in the use of nasogastric tubes and other case management techniques;
- Monitor the teaching of CDD case management in training schools, particularly the Sikasso nursing school, and the subsequent placement of trained personnel; provide supplies of training modules to schools as needed; and assist in the training of teachers in CDD methods; and
- Pursue discussions with the medical school on CDD teaching and follow-up on recommendations made to the Point G nursing school.

### Accomplishments and Status:

- PRITECH staff conducted a training course on the use of nasogastric tubes and other technical issues for health workers from ORUs all across the country; a CDD training course was also held in Segou region for health facility workers; however, it has not been possible to carry out specific CDD training in other regions due to continuation of unsettled conditions and administrative difficulties.
- PRITECH undertook a special visit to the nursing school in Sikasso and made recommendations for improvements in the use of the training modules. Follow-up visits were also made to the three schools in Bamako, all of which are using the training modules to the best of their abilities.
- PRITECH assisted with the organization of three ORU centers in the Bamako district; equipment was purchased for five such centers; however, unrest in Timbuktu and Gao regions made it impossible to set up ORUs in those regions as planned. PRITECH also financed, at the request of the chief pediatrician and the CDD Program, renovations necessary to set up an ORU in Gabriel Touré hospital; however, the reorganization of patient flow necessary to make full use of the renovated facilities has proved difficult.

### c. ORS PRODUCTION, DISTRIBUTION, AND AVAILABILITY

#### Objectives for PY4:

- Monitor ORS packet production and distribution;
- Ensure that instruction leaflet on ORS preparation and use is available in sufficient quantities; and
- Attempt to bring about a price reduction for ORS packets through lobbying at high levels of the MOH.

#### Accomplishments and Status:

- Distribution of ORS packets in Bamako and some other regions was well underway by the first trimester of PY4 but was unfortunately stalled by the general disorder created by the overthrow of the previous government. Pharmacies and depots were looted throughout the country and several months will be required before the system reaches even its previous level of performance. UNICEF has agreed to buy approximately 150,000 ORS packets for distribution through the public sector as an interim measure until regular mechanisms can be re-established.

- The leaflet on ORS preparation was reproduced and is available in sufficient quantities for resumption of ORS distribution.
- The CDD Program was successful in persuading government authorities to reduce the price of ORS to a level that had been indicated by earlier price sensitivity studies; however, the revised price has not been effectively communicated throughout the country due to the general disorganization of the drug distribution and sales system.
- The future of ORS production and distribution is closely linked to decisions being taken on the "Bamako Initiative" and the privatization of Pharmacies Populaires au Mali (PMM). The CDD Program has made considerable efforts to maintain close contact with the Union Malienne de Produits Pharmaceutiques (UMPP) and PPM and to assist with clarification of the current situation and issues.

d. INFORMATION/EDUCATION/COMMUNICATION

Objectives for PY4:

- Monitor distribution of promotional materials; plan new radio and TV spots; arrange for theater group to tour the country with ORT sketch; support and orient Peace Corps on initiatives for health education through song production; and write up Macina PNLMD/CARE educational activities;
- Evaluate efforts of CDD Program to sensitize local leaders on diarrheal diseases; recommend improvements in this effort; and fund follow-up activities if appropriate;
- Undertake a survey of PVO activities in the CDD area and recommend ways of improving coordination with national CDD program; and
- Follow-up on renewal of UMPP marketing efforts utilizing PRITECH-trained salesperson visits to pharmacies.

Accomplishments and Status:

- Radio and TV spots were frequently on the air prior to emergence of civil unrest; the unrest has caused some disruption of all IEC activities.
- The CDD program and Health Education Unit collaborated to test and support the production of an audio cassette on health education developed by the Peace Corps. ORS therapy was featured prominently in this cassette which was widely distributed to PVOs and government services.

- PRITECH assisted the CDD Program with an evaluation of efforts to sensitize local leaders on diarrheal diseases. The activity seemed to have had some positive effects and recommendations were made for some restructuring and improvements. Unfortunately, however, the WHO funds that were allocated for this activity are no longer available.
- PRITECH submitted a proposal to the MOH for a survey of PVO CDD activities with a view to finding ways to improve coordination with the national CDD Program.

e. EVALUATION/RESEARCH/INFORMATION SYSTEMS & DISSEMINATION

Objectives for PY4:

- Improve registers used in sentinel ORUs; and
- Analyze data from sentinel ORUs and provide feedback to field activities.

Accomplishments and Status:

- PRITECH made recommendations for improvement of data collection forms for use by the ORUs, but the Division of Family Health was unwilling to incorporate changes at this time.
- PRITECH undertook a special analysis of the nutritional status of children coming to ORUs in order to highlight the under-reporting and lack of action taken by health staff for children who are nutritionally at risk.
- PRITECH analyzed data in Dakar from sentinel ORUs and provided results to the MOH for distribution and discussion.

f. RESEARCH AND DEVELOPMENT ACTIVITIES

Objectives for PY4:

- Continue qualitative feeding study and extend study to other areas of the country;
- Prepare concept and recipe trials based on study recommendations; and
- Simplify proposed study on traditional remedies for diarrhea.

### Accomplishments and Status:

- The first phase of the PRITECH-sponsored qualitative feeding study was completed and follow-up efforts planned.
- PRITECH has placed the proposed study on traditional remedies for diarrhea on hold, given some confusion over whether we are looking for treatments to stop diarrhea or possible rehydration solutions.
- A medical student has been working with the CDD Program to develop a small proposal to study persistent diarrhea cases in a hospital setting.

## 6. Mexico

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	500,000	0	500,000
2. Obligated Funds	500,000	0	500,000
3. Expenditures Project Year 4	141,575	0	141,575
4. Cumulative Expenditures	170,108	0	170,108
5. % Expended of Budget	34%	0%	34%

The PRITECH II CDD activities in Mexico are undertaken within the framework of a PRITECH-PAHO agreement. This agreement, implemented in PRITECH II PY3, calls for continuation of the earlier PRITECH I work by (a) bringing CDD training and supervision to six additional states, (b) supporting a limited number of seminars for professors of pediatrics in order to influence the medical school curriculum, and (c) providing targeted technical assistance to the national CDD program. Under this agreement, PAHO employs a technical consultant to work with the national program, and to channel the PRITECH resources through PAHO to the program. The consultant serving in the PRITECH/PAHO position left his post in mid-July 1991 and a replacement was still under active recruitment at the end of PY4. The program remains on target with interim support from the PRITECH home office. Objectives and accomplishments during PY4 are summarized below:

#### a. PLANNING/MANAGEMENT/POLICY/COORDINATION/FINANCE

##### Objectives for PY4:

- Initiate discussions with Ministry on issuance of a national CDD policy; and

- Maintain institutional relationships and flow of resources through the PRITECH/PAHO arrangements.

Accomplishments and Status:

- The Ministry promulgated its CDD policy this year in a crisp three-page document that will provide guidance to all levels of health services throughout the nation. This crucial step represents the culmination of discussions about proper diarrhea case management and fully embraces the WHO guidelines for Mexico.
- The institutional relationship has continued in the absence of a resident technical consultant; however, the recruitment process - involving PAHO/Mexico, AID/Mexico, and PRITECH - is proceeding slowly, but with the deliberation necessary for this key post.

b. TRAINING/EDUCATION/SUPERVISION

Objectives for PY4:

- Provide training to health staff in the six new PRITECH states, and support supervision of staff trained in the PRITECH I states; and
- Initiate a rural communications strategy.

Accomplishments and Status:

- The PRITECH/PAHO consultant took the lead in contacting the states and secured agreements from officials in all states for the training to proceed. A planning and programming workshop was held for officials of these states in January. Clinical training for state-level trainers took place at the Children's Hospital, where changes to the curriculum were also developed. By March 1991 the first training course following the new national policy began in Hidalgo, and by June training was underway in all six states.
- Three courses dealt with program management issues within the past year. In addition to the PRITECH states, training for managers of DTUs throughout the country has been conducted in Mexico City.
- PRITECH entered into a subcontract with a Mexican consulting group, CICLOPE, to explore ways of reaching the dispersed rural population with CDD information pursuant to a direct request from the Minister of Health. Focussing on two states, Hidalgo and Vera Cruz, CICLOPE is developing communication messages and channels specifically for the rural peoples of these states, most of whom are indigenous. The CICLOPE intervention uses radio, comic books, face-

to-face training of trainers, and unique presentations at regional markets to bring its message of diarrhea prevention and management to rural people. Based on two months' experience, the CICLOPE intervention seems to have generated considerable excitement and interest and CICLOPE reports that their ability to reach out to the people in their own milieu is engendering an eagerness that they had not anticipated. The CICLOPE intervention will run for eight months, ending in December 1991. At that time, this experience will be reviewed for lessons applicable to other areas of the country that the national program can sponsor directly.

- Systematic supervision of the PRITECH I states has not yet proceeded due to the vacancy in the position.

c. **ORS PRODUCTION, DISTRIBUTION AND AVAILABILITY**

Objectives for PY4:

- Analyze the availability of ORS nationwide, through both public and private outlets, with a view toward developing a comprehensive strategy for increasing ORS access and use.

Accomplishments and Status:

- PRITECH carried out the above analysis which clearly indicated that ORS packets represent a marketing opportunity for the private sector.
- Officials of the national CDD Program approved of PRITECH's exploration of ways to increase private sector sales of ORS in Mexico. Contacts are being followed up to explore commercial interest in expanding the ORS market, especially through the marketing of ORS packets.

d. **INFORMATION/EDUCATION/COMMUNICATION**

Objectives for PY4:

- Monitor and assess the CICLOPE intervention in terms of components appropriate for introduction into the national CDD Program efforts.

Accomplishments and Status:

- CICLOPE work is underway, and proceeding energetically in the rural sites selected. Especially interesting are the market-day events as a method for raising awareness and knowledge. CICLOPE reports dozens of auxiliaries trained in the first two months, and hundreds of participants in the market events each week.

e. EVALUATION/RESEARCH/INFORMATION SYSTEMS/DISSEMINATION

Objectives for PY4:

- Continue to support the PRITECH Information Center as a provider of services to the Mexican CDD program.

Accomplishments and Status:

- The PRITECH Information Center continues as an active source of information for the Children's Hospital, for Dr. Felipe Mota (Director of the ORT Clinic at the Hospital), and for the national CDD program. This year the Center has added cholera information to its services and has sent a considerable number of informational items to Mexico.

f. RESEARCH AND DEVELOPMENT ACTIVITIES

Objectives for PY4:

- No specific research objectives specified.

Accomplishments and Status:

- No formal research has been undertaken, but as a pilot activity the CICLOPE intervention in rural area communications should be viewed as an applied research effort.
- PRITECH, among others, has supported the national household case management survey that will be completed in PY5.

7. Niger

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	0	640,000	640,000
2. Obligated Funds	0	610,000	610,000
3. Expenditures Project Year 4	0	154,962	154,962
4. Cumulative Expenditures	0	413,879	413,879
5. % Expended of Budget	0%	65%	65%

The Niger National CDD Program is built upon a foundation of widespread training and supervision of health staff, production of educational materials for use by health workers, development of health education messages aimed at caretakers, and local production, distribution, and sale of ORS packets. PRITECH provides managerial and technical support to the CDD Program through its full-time resident advisor, regular visits from the Sahel Regional Office staff, and other consultants as requested. The CDD Program is now in a stronger position than at the beginning of this project year. Teamwork among the CDD program members has improved and new leadership has become available with the appointment of a new Director of Health Services. The national CDD committee has met regularly and a successful meeting of the regional CDD coordinators was finally held in late August, after several months of delay.

These positive points are particularly encouraging, given the political unrest that has characterized Niger this year and the difficulties with the CDD Program's funding sources - neither the USAID Health Sector Grant (which was decertified in 1990) nor the World Bank Project has had any funds available for implementation this year. The CDD Program has thus managed to sustain a certain level of activities using funds from UNICEF and PRITECH. Objectives and accomplishments for PY4 are summarized below:

a. **PLANNING/MANAGEMENT/POLICY/COORDINATION/FINANCE**

Objectives for PY4:

- Ensure smooth introduction of new PRITECH representative;
- Assist with development of 1991 workplan including development of regional CDD plans;
- Assist with strengthening of management of National CDD Coordination Team and with organization of CDD committee meetings and regional CDD coordinators meeting; and
- Continue coordination efforts with CDD donor agencies and encourage improved coordination with PVOs and other child survival efforts to ensure program coherence.

Accomplishments and Status:

- The introduction of the new PRITECH representative went remarkably smoothly, despite some underlying conflicts within the CDD Program team. Teamwork and organization have improved greatly over the past year, largely due to the tactful and persistent approach of the PRITECH representative.

- PRITECH assisted with development of the 1991 workplan on schedule, but funding difficulties mentioned above have considerably slowed implementation. Regions with special funding sources (e.g., UNICEF) have been more successful in carrying out regional plans. Many of the activities planned by the regions rely on funding from the Health Sector Grant which funds are expected to become available in the near future.
- The regional coordinators' meeting held last August and presided over by the new Director of Health Services, was an important event in re-energizing the program after a year of financial instability.
- PRITECH has continued coordination with UNICEF and bilateral health projects.
- PRITECH has improved coordination with PVOs working in child survival. In particular, PRITECH is in close contact with CARE and AFRICARE who implement small field projects in three regions. There has also been active collaboration with the Quality Assurance Project (QAP) in designing an operations research effort to test ways of improving supervision of primary health care workers with particular emphasis on Child Survival activities.
- At the request of USAID, PRITECH fielded a team to assist the Mission in identifying priority areas of systems support and health services delivery for Mission programming over the next five years.

b. TRAINING/EDUCATION/SUPERVISION

Objectives for PY4:

- Assist with regional training sessions planned for 1991; monitor use of training modules; assist with improvement of practicums at nursing schools;
- Continue intensive supervision of Niamey PMI centers and carry out at least one supervision trip to each region; and
- Encourage use of WHO (and other) CDD materials in the medical school.

Accomplishments and Status:

- The CDD Program assisted with training carried out with UNICEF funds in two regions. Other regions were not able to train this year due to lack of funds.
- With national CDD program assistance and continuing input, Niamey district health authorities organized a special three-team supervision effort of ORUs in MCH centers and dispensaries in Niamey. Supervision visits to the regions have

not been carried out so far in 1991, largely due to difficulties in implementing the concept of integrated supervision. However, the cholera epidemic provided an opportunity for CDD program supervisors to visit most of the regions in the country.

- PRITECH has maintained contacts with both nursing schools and held discussions to improve the use of the PRITECH CDD modules. Contacts have also been maintained with pediatricians involved in the medical school, ensuring some appropriate CDD teaching but general curriculum revision has not yet been undertaken.

c. ORS PRODUCTION, DISTRIBUTION AND AVAILABILITY

Objectives for PY4:

- Continue to monitor information on ORS production, distribution and stock levels; and
- Assist the Office National de Produits Pharmaceutiques et Chimiques (ONPPC) in initiating marketing activities through the training and follow-up of detailpersons.

Accomplishments and Status:

- Production of ORS utilizing a newly-designed packet is now under way; however, widespread distribution of new production awaits the utilization of all old stocks. There have been regular contacts between the CDD Program and ONPPC to address distribution issues through the public and private sectors - also the subject of debate in the regional CDD coordinators' meeting.
- During the year ONPPC implemented agreements made with PRITECH on marketing strategies for ORS. A detailman was chosen from within ONPPC staff and trained by a PRITECH consultant.

d. INFORMATION/EDUCATION/COMMUNICATION

Objectives for PY4:

- Develop, test and produce materials to promote new ORS packet;
- Join with Health Education Service to strengthen community education effort; and
- Participate in monitoring PVO and other project educational activities.

Accomplishments and Status:

- Promotional poster, brochure, stickers, labels, etc. on new ORS packet have been developed and tested, and are presently at the printer's. Radio and television spots are in production and agreement has been reached on the sources of financing for their broadcasting.
- Discussions have been held with a local soap factory and plans have been made to collaborate on promoting soap products for better hygiene.
- Key messages and recipes for feeding a sick or recuperating child have been identified through qualitative research and message trial procedures. These are now ready to be tried out on a wider basis.

e. EVALUATION/RESEARCH/INFORMATION SYSTEMS/DISSEMINATION

Objectives for PY4:

- Collaborate with Quality Assurance Project in improving VHW skills in CDD and nutrition.

Accomplishments and Status:

- PRITECH has finalized with the Quality Assurance Project and MOH staff the protocol for operations research on improved VHW supervision in technical areas. An integrated VHW supervision form was developed for the protocol and will be a useful tool in itself.

f. RESEARCH AND DEVELOPMENT ACTIVITIES

Objectives for PY4:

- Carry out qualitative feeding study and message trials on nutrition and diarrhea; and
- Collaborate with Quality Assurance Project in improving VHW skills in CDD and nutrition.

Accomplishments and Status:

- Both the ethnographic and message trial phases of the qualitative feeding study were carried out this year and have surfaced interesting possible directions for nutrition education efforts in the future.

- The PRITECH representative has worked closely with Quality Assurance Project personnel and MOH staff to prepare the operations research effort to test ways of improving VHW supervision and performance.
- After discussions with WHO and the PRITECH Technical Unit, a descriptive study of persistent diarrhea in health facilities in Niamey has been undertaken in collaboration with Tufts University and the University of Niamey.

g. OTHER ACTIVITIES/ACCOMPLISHMENTS

- The CDD Program took a leadership role in MOH efforts to deal with the cholera epidemic which lasted for several months in mid-1991.

8. **Pakistan**

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	60,000	1,042,746	1,102,746
2. Obligated Funds	60,000	1,042,746	1,102,746
3. Expenditures Project Year 4	(113)	371,312	371,199
4. Cumulative Expenditures	57,958	893,305	951,263
5. % Expended of Budget	97%	86%	86%

PRITECH began working in Pakistan in 1985, and established an office with a resident representative in 1988. Initially PRITECH provided only limited short-term technical assistance in the area of communications support. Later, due to delays in initiating the USAID Child Survival Project, work responsibilities with the national CDD program were expanded. Eventually, PRITECH was supporting (i) training through the establishment of diarrhea training units (DTUs), (ii) management information systems and computerization, (iii) breastfeeding, and (iv) the commercial sector. However, in June 1990 the Child Survival Project team arrived and assumed responsibility for all PRITECH functions except the work in the commercial sector.

Hence, in the past year, the PRITECH focus has been on the commercial sector, with some activities in breastfeeding continuing from the previous year. At the request of the government and of USAID, some work was also undertaken for the development of TV messages. However, the work in the commercial sector has been predominant over the past year. Accomplishments and status under PY4 activities are provided below:

a. **PLANNING/MANAGEMENT/POLICY/COORDINATION/FINANCE**

Objectives for PY4:

- Promote rescindment of restrictive rulings and policies in order to free the marketplace to consider ORS on its own merits; and
- Develop breastfeeding policies for hospitals and health facilities.

Status and Accomplishments:

- By the end of PY4, the Government had repealed or modified restrictions limiting ORS sales to pharmacies, the import tax on printed foil, and the price ceiling on ORS. ORS can now be sold in non-pharmacies or any small shop anywhere in the country, the tax on printed foil is being rebated to manufacturers of ORS, and the price ceiling has been raised to a level that gives much greater incentive to commercial production and promotion of ORS.
- The MOH approved breastfeeding policies developed with PRITECH assistance.

b. **TRAINING/EDUCATION/SUPERVISION**

Objectives for PY4:

- Transfer responsibility for the DTU and other training activities to the Child Survival Project; and
- Establish program of work with the commercial ORS producers and distributors as a training advisor to assist the companies in educating their staffs about the properties and benefits of ORS.

Accomplishments and Status:

- The Child Survival Project has assumed full responsibility for the DTU and training activities.
- PRITECH (i) assisted several of the pharmaceutical companies with the production of educational and training materials highlighting the values of ORS and (ii) encouraged them to position ORS with food as a strategy to enhance sales and as a way of promoting feeding during diarrhea.

c. **COMMERCIAL ACTIVITIES-ORS PRODUCTION AND DISTRIBUTION**

Objectives for PY4:

- Increase the awareness, availability, prescription, and correct use of ORS for children through the private sector;
- Develop a sustainable model for ORS marketing in order to increase the demand for ORS; and
- Convince companies to market ORS within the context of the national policy (i.e., the use of ORS plus breastfeeding plus feeding).

Accomplishments and Status:

- The government, with PRITECH encouragement, is now airing messages alerting people to the presence of ORS in their neighborhood shops.
- PRITECH targeted pharmaceutical companies (i) with a detail staff making at least 5,000 sales visits to doctors or pharmacies per month and (ii) who agreed not to co-position ORS with harmful products like infant formula or antidiarrheals. The companies also agreed to allow PRITECH to review their promotional materials to ensure conformity with national policy.
- In 1990, ORS sales increased by 50% and the market share of ORS when compared with anti-diarrheal drugs rose from 18 percent to 29.2 percent..
- PRITECH's technical guidance and assistance in the development of marketing plans, promotion and detailing materials, and lobbying for the repeal of disincentives helped achieve the following key results:
  - the commitment of commercial firms to support of ORT, not just ORS sales (i.e., to promoting ORS plus breastfeeding plus feeding);
  - the alliance of two major pharmaceutical firms, one a major producer and the other a major distributor, providing 70,000 new outlets for ORS sales;
  - the recognition by additional companies of the market value of ORS, so that two introduced cereal-based ORS (i.e., CBORS) during the year;
  - the launching of liquid ORS products by dairies, and the marketing of this product wherever milk was sold; and

- a commitment by Lever Bros. to market their Lifebuoy soap as a key to prevention of diarrhea when used to wash hands regularly.

d. INFORMATION/EDUCATION/COMMUNICATION

Objectives for PY4:

- Encourage development of promotional materials placing ORS sales in the appropriate ORT context; and
- Develop educational materials to support implementation of new breastfeeding policies.

Accomplishments and Status:

- A number of ORS producers are now utilizing promotional materials containing acceptable ORT messages. For instance Searle's promotional leaflets to physicians and consumers previously stated that no food (only ORS) should be given for 24 hours; they now explain the importance of breastfeeding and continued feeding throughout diarrheal episodes. Searle has also developed posters about prevention of diarrhea, signs of dehydration, and nutrition during diarrhea.
- An Urdu language poster was prepared on breastfeeding, along with promotional activities such as workshops, seminars, and a booth at a pediatric conference and materials such as prescription pads, scientific articles, and billboards.

e. EVALUATION/RESEARCH/INFORMATION SYSTEMS/DISSEMINATION

Objectives for PY4:

- Document the Pakistan ORS commercialization story, recognizing that we are "inventing" a new model for "social marketing" efforts and the final outcome is yet to be determined; and
- Support research on breastfeeding to determine attitudes and practices currently prevalent among mothers and health providers.

Accomplishments and Status:

- PRITECH field reports have documented the commercialization story to date and pointed out the major differences between this marketing approach and other "social marketing" approaches both in terms of methods and results. An in-depth assessment will be undertaken in late PY5.

- PRITECH sponsored and conducted breastfeeding research with technical assistance from the Manoff Group; the results were disseminated through workshops and a series of reports.

## 9. Uganda

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	13,025	820,000	833,025
2. Obligated Funds	13,025	819,946	832,971
3. Expenditures Project Year 4	13,757	160,076	173,833
4. Cumulative Expenditures	13,757	160,076	173,833
5. % Expended of Budget	106%	20%	21%

The Uganda CDD program was initiated in 1984; however, until 1987 the national CDD office was staffed solely by a Ugandan program manager. Since that time the program has grown to encompass a large number of full-time staff, including a national program director, two regional supervisors, and eight training officers. PRITECH has provided intermittent short-term technical assistance since 1988; however, approval was only sought and received in late Summer 1991 for initiating a sustained program in Uganda. As PY4 ended a candidate for the PRITECH resident representative position had been identified and active recruitment was underway. As a result of this status, no specific program plan or objectives were prepared for PY4; however, activities have been undertaken by the PRITECH Senior Program Manager (SPM) for Central, East and Southern Africa (CESA) and there have been some accomplishments during the PY4 period which are enumerated below:

### a. PLANNING/MANAGEMENT/POLICY/COORDINATION/FINANCE

- PRITECH home office developed and obtained A.I.D. approval for a program of assistance to be carried out by the new PRITECH Country Representative under the sustained country program category.
- PRITECH participated in the planning and design of a diarrhea training unit (DTU) at Makerere University's Mulago Hospital. It is expected that the unit will be operational early in PY5.
- The MOH, with PRITECH assistance, is developing strategies for collaborating with traditional healers to improve their case management skills.

- In March 1991 PRITECH jointly sponsored with WHO a Health Facility Survey aimed at identifying the CDD program's strengths and weaknesses.
- b. TRAINING/EDUCATION/SUPERVISION
- PRITECH assistance was provided for the development of the curricula for medical and nursing students to receive training at the DTU.
  - PRITECH has worked with the MOH in identifying and implementing in-service training needs of the Health Inspectorate Staff to equip them with the knowledge and ability to provide CDD education to mothers, school children and community groups.
  - The PRITECH staff has designed the strategy for training traditional healers in Uganda, incorporating comments from outside reviewers of the background research report. Planning sessions have been held and the first activity, a training of trainers (TOT) workshop is planned for December. The PRITECH consultant contracted to assist with the design of the Uganda evaluation will attend the workshop as well. A task force will be held to review and discuss the proposed evaluation design during PY5.
- c. ORS PRODUCTION, DISTRIBUTION AND AVAILABILITY
- A collaborative effort between UNICEF, PATH/USAID, the MOH, and Medipharm (a private pharmaceutical manufacturer) has culminated in the recent start-up of local production of ORS packets. Technical assistance was provided with manufacturing technology, quality control techniques, storage methods, and distribution strategies. Marketing and promotional schemes, which have also been developed, will require rigorous monitoring and follow-up as the sales and distribution efforts get off the ground.
- d. COMMERCIAL AND NONPROFIT ACTIVITIES
- See items in sections a and c above.
- e. RESEARCH AND DEVELOPMENT ACTIVITIES
- Last year, PRITECH consultants contributed to the design of a retrospective HIV/Persistent Diarrhea Study aimed at identifying the changing pattern of diarrheal disease in hospitalized children from Kampala, particularly with respect to the role of HIV seropositivity in persistent diarrhea. However, poor data quality from old records led to cancellation of the study; planning for a similar prospective study is being considered.

## 10. Zambia

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	883,482	0	883,482
2. Obligated Funds	883,482	0	883,482
3. Expenditures Project Year 4	178,217	0	178,217
4. Cumulative Expenditures	375,578	0	375,578
5. % Expended of Budget	43%	0%	43%

The Zambia CDD Program was initiated in 1985 and PRITECH involvement began in September 1986 when a PRITECH representative was appointed and established an office in Lusaka. The existence of the PRITECH program has been instrumental in the development and progress of the CDD program in Zambia. The AID-financed, external evaluation of PRITECH II in November 1990 concluded "that PRITECH is doing an excellent job to support and stimulate the Zambian CDD program. Acknowledged by other donors and the government, PRITECH has played the critical catalytic role in the country...."

This early progress, however, is now threatened by the severity of the problems facing the program. The problems arise from the continuing deterioration of the economy during 1991 and the ensuing constraints on governmental finances and employment; furthermore, the country has faced a major cholera epidemic which claimed 900 lives and caused many delays and disruptions to planned CDD activities. In principle cholera should act as a catalyst for CDD and spur interest and support for CDD in general and water/sanitation/prevention activities in particular. However, this has not been the case in Zambia due, perhaps, to a range of economic, organizational, managerial and operational problems. Declining resources and growing demands on the system have led to a rapidly deteriorating health infrastructure and to severe personnel shortages. The conditions pose serious threats to the CDD program and require exploration of new approaches for achievement of sustainable activities.

Despite these problems, a great deal was accomplished during PY4. The objectives and major accomplishments are summarized below:

a. **PLANNING/MANAGEMENT/POLICY/COORDINATION/FINANCE**

Objectives for PY4:

- Improve managerial/administrative capacity of CDD Secretariat;

- Improve operational problem-solving ability of CDD program staff;
- Enhance coordination with other donors involved in CDD activities; and
- Pursue ORS financing/sustainability issues with MOH/UNICEF.

Accomplishments and Status:

- Program planning and operational problem solving for the CDD program have been erratic during most of the year due to the cholera outbreak and a staff shortage. However, the situation has improved during the last quarter of PY4 with the reinstatement of weekly operational meetings (UNICEF, WHO, PRITECH and MOH).
- PRITECH coordination with other major donors continues to be good and efforts are underway to involve additional donors such as SIDA, DANIDA and UNDP, particularly in water and sanitation activities.
- In October 1990, the PRITECH Representative prepared, and presented to the MOH for approval, a national CDD policy statement based on the outcome of the Program Managers meeting held in Lusaka in August 1990. The policy was accepted and disseminated in a manual as guidelines for health workers responsible for implementing CDD policy.
- The issue of cost recovery, user fees and community financing continues to be discussed but little progress has been made. During the past year UNICEF supported a study of household budget expenditures on health and a review of a community financing scheme. In addition, the World Bank has continued its interest in the issue and has sent several consultants to collect information prior to presenting more detailed recommendations to the Ministries of Finance and Health in September 1991.
- Financial sustainability for continuing ORS production or importation continues to be problematic. The local production facility has been unable to provide sufficient local funds to accept a UNICEF offer to import raw materials on a reimbursable basis. The problem stems from the impact of a rapidly devaluing Kwacha and is complicated by the uncertain future of parastatals in Zambia. However, negotiations among UNICEF, the local manufacturer and the MOH will continue.

b. TRAINING/EDUCATION/SUPERVISION

Objectives for PY4:

- Continue training of health personnel, including: decentralized training at district/provincial level with emphasis on cholera/dysentery, training of "critical mass" of physicians/nurses in clinical case management, conducting a National Program Managers course for Provincial Medical officers, working with General Nursing Council to assist and monitor implementation of revised curricula, planning for a special training seminar/workshop for private physicians and pharmacists, working with Medical Education Committee to revise current materials on diarrhea in medical student curricula, and involvement of more participants from Mines and Mission facilities in National DTU courses;
- Carry out supervision of all DTU trained personnel using revised checklist and continue efforts to improve local level supervision;
- Investigate possibility of establishing DTU at Arthur Davidson Children's Hospital and/or others in Eastern/Western Provinces; and
- Carry out training of selected group of traditional healers for pilot project in urban Lusaka.

Accomplishments and Status:

- The DTU at the University Teaching Hospital (UTH) in Lusaka, a WHO sub-regional facility which has been functional since October 1989, was officially opened by the Prime Minister in October 1990. The event was well attended and received good media coverage.
- The National CDD Program continued to train various cadres of health workers both at the DTU and through provincial/district courses. Seven national courses in clinical case management were held at the DTU in October 1990 and one international course was held in November 1990 with participants from six countries in the sub-region.
- A total of 54 doctors, 34 nurses and 21 clinical officers were trained. WHO and PRITECH supported national courses while UNICEF provided funding for district level training. The Chainama College of Health Sciences, a Belgium government supported institution, held a course at the DTU for clinical officers/health assistant tutors in collaboration with PRITECH, WHO, and the CDD Program staff. Immunization, Family Planning and Growth-monitoring programs have been integrated into the DTU training program; this integrated approach will be continued and improved.

- The General Nursing Council (GNC) held a four week training workshop for nurse tutors in May 1991 to implement their revised curricula. The new curricula includes a CDD component, both theoretical and practical. The impetus for including a CDD component in the curricula came from PRITECH and the CDD Secretariat who have worked with the GNC throughout the process. A total of 30 nurse tutors from 17 nursing schools participated in the training workshop including five days at the DTU.
- The national CDD Program developed plans for decentralized training courses to be held in at least five provinces beginning in September 1991 with an emphasis on cholera/dysentery. Facilitators include DTU staff, WHO, the PRITECH Representative, CDD Secretariat, district/provincial health staff, and a WHO consultant. Funding for the courses will be provided by WHO, PRITECH, and Doctors without Borders (Medicins sans Frontieres). The decentralized training approach should have a multiplier effect which would benefit general CDD program activities.
- WHO has selected Zambia as a field test site for the self instructional clinical management course being developed. Arrangements are underway and testing is likely to begin in October 1991.
- An effort to improve supervisory activities continued throughout the year. A supervisory checklist adapted from one used in Pakistan was used in two provinces and was later replaced by a refined checklist used by a PRITECH evaluation team in May 1991.
- The PRITECH representative held discussions with the MOH and the Traditional Healers' Association on the involvement of traditional healers in promotion of ORS/ORT. A pilot project for Lusaka-based healers following a 2-3 day training program is tentatively planned for early 1992.

c. ORS PRODUCTION, DISTRIBUTION, AND AVAILABILITY

Objectives for PY4:

- Improve monitoring/coordination of stocks distributed by Medical Stores Limited, General Pharmaceuticals Limited (GPL), the SIDA Essential Drug Program (EDP), and donated supplies from UNICEF, Red Cross, and Mission organizations;
- Improve distribution/supply of ORS to high use areas such as urban clinics and district hospitals; and
- Assist private sector pharmaceutical firms to promote/market ORS.

### Accomplishments and Status:

- Monitoring by EDP, PRITECH review and CDD supervisory visits all confirm that ORS supply has been fairly good throughout the year. Nevertheless, the supply situation remains precarious; stock outages are common, particularly in Lusaka and Copperbelt urban clinics, and continued production by the local parastatal producer (GPL) is in doubt. Raw materials for ORS production previously provided by PRITECH have now been exhausted and current warehouse stocks are less than 80,000 packets. UNICEF has offered \$70,000 in foreign exchange with repayment in local currency to GPL for importation of additional raw materials. However, GPL has been unable to obtain the local currency equivalent and discussions are continuing.
- The Essential Drug Program (EDP) supported by SIDA will increase the number of ORS sachets in each drug kit for Rural health centers to 200 in 1992 and will also begin targeting some urban areas. In addition, discussions with UNICEF regarding ORS supplies to Lusaka urban clinics have led to an arrangement whereby distribution of ORS will be done along with monthly vaccine supplies using a UNICEF supplied vehicle.
- The PRITECH representative is holding discussions with two private sector pharmaceutical firms regarding possible production and promotion of ORS. One firm, Interchem, once produced ORS but production ceased over a year ago when a sealing machine broke down. Interchem is interested and willing to produce again and has agreed to discontinue making antidiarrheals by the end of 1991. Another firm, Gamma, has expressed willingness to produce a flavored ORS product and is awaiting approval by the Zambia Food and Drug Board. Both firms may require social marketing assistance and guidance in production of promotional materials. The two remaining firms producing antidiarrheals have been targeted for an active campaign to halt production by the Zambia Pediatric Association and National Formulary Board.

#### d. INFORMATION/EDUCATION/COMMUNICATION

##### Objectives for PY4:

- Continue and expand social mobilization activities including use of popular theater, radio (both English and local languages), newspapers and other IEC materials;
- Involve private sector in promotional campaign for ORS/ORT;
- Improve distribution of available IEC materials;

- Revitalize the Child Survival Health Education Committee to develop a coordinated plan to ensure uniformity of CDD materials/social mobilization campaign;
- Assist MOH Health Education Unit in developing appropriate messages for cholera; and
- Assist provincial/district health education officers in developing local language materials.

Accomplishments and Status:

- The CDD Program has made significant progress in IEC material production and social mobilization in spite of delays caused by the cholera epidemic and numerous operational problems associated with local printing and production. The popular theater group has continued to promote ORS/ORT through performances and training of other groups throughout the country. The group has also developed a play on cholera which was performed for the International Cholera meeting in March 1991.
- A manual entitled Guidelines for Health Workers on Diarrhoea Case Management and Prevention was developed and printed during the year and will be distributed soon. In addition 100,000 copies of a leaflet for mothers have been printed with support from UNICEF and a rerun of an ORS poster will be printed and distributed by early 1992.
- PRITECH has been working closely with the Nutrition Unit, MOH, and a SIDA consultant in the development of an integrated child survival materials package which will be launched during a workshop in December 1991. The package includes materials on nutrition/growth promotion, diarrhea, malaria, ARI and AIDS.

e. EVALUATION/RESEARCH/INFORMATION SYSTEMS/DISSEMINATION

Objectives for PY4:

- Continue operational research activities with emphasis on key program planning issues;
- Assist district level CDD coordinators in using available statistics for district level planning;
- Improve information dissemination, particularly to district level; and

- Assist in planned evaluation activities.

Accomplishments and Status:

- Two major reviews/evaluations of the CDD program were carried out during the year. In November 1990 an evaluation team from USAID/Washington focussed on PRITECH activities in Zambia and in May 1991 a PRITECH review team examined all aspects of the CDD program including ORS production/distribution, policy, case management and training. Attention in the latter review was also devoted to private sector possibilities and the role of the religious missions and mining enterprises in the CDD program. The results and recommendations from both provide a useful guide for future activities.
- In addition to the above, USAID carried out a major Health, Population and Nutrition Sector review in May 1991 which provided background for possible future USAID activities in Zambia.

f. RESEARCH AND DEVELOPMENT ACTIVITIES

Objectives for PY4:

- Conduct baseline follow-up survey, using WHO Household survey protocol, in five provinces; and
- Continue country research programs.

Accomplishments and Status:

- The Zambian CDD program continued an active research schedule during the year. Preparations continued for the National CDD 1986 Baseline follow-up scheduled for November 1991. The Survey will be a household case management survey using adapted WHO protocols in five provinces. The Survey will be a collaborative effort involving PRITECH, UNICEF, WHO and MOH. Two operations studies were completed including a missed opportunities study in urban Lusaka and a breast-feeding KAP study of hospital/clinic health workers and mothers.
- In addition, the PRITECH Representative provided technical assistance to three post graduate medical students, two post basic school of nursing students, two university students, and two students in the department of community medicine, all of whom were doing diarrhea related research.
- A baseline survey using WHO cluster sample methodology was conducted in two districts as part of the Belgium government health manpower support program.

The survey used an adapted version of the household case management protocol for diarrhea as well as modules on persistent diarrhea, ARI and malnutrition. The experience gained from this survey will prove valuable for the proposed National baseline follow-up.

- A DHS survey is planned for November 1991 conducted in collaboration with the University of Zambia and MOH. The CDD Program and the PRITECH Representative provided input on questions related to diarrhea, infant feeding and health service utilization.

g. CASE MANAGEMENT

Objectives for PY4:

- Establish functioning ORT Corners in 40% of health centers by end of 1992; and
- Improve communication between health workers and mothers/caretakers.

Accomplishments and Status:

- The results of a health facility assessment and several evaluations of the CDD Program have identified a number of deficiencies in diarrhea case management. While training has continued at various levels (district/provincial/national), many participants have not implemented ORT Corners nor had a significant impact on improving overall case management in their respective institutions. There are many reasons for this including lack of equipment or training materials, poor supervision, lack of motivation or incentive, and poor working environments. The CDD Program plans to concentrate efforts on improving this situation following recommendations/suggestions offered by the recent evaluation including setting up ORT corners, training more people per institution and better/more frequent supervision.

B. INTERMITTENT PROGRAMS

Intermittent programs represent less comprehensive interventions in a country's CDD programs. In such countries, PRITECH agrees to undertake a limited range of tasks over a period of time on an "as needed," intermittent basis rather than responsibility for the CDD program as a whole. Intermittent programs have been approved for six countries and one regional organization. The programs in two countries - the Sudan and Chad - were inactive during PY4. The former was inactive due to A.I.D. decisions related to the political situation in the country. The latter was not activated by the USAID following the initial buy-in. The accomplishments and status of the four active country programs and the regional program during PY4 are summarized below:

## 1. **Bolivia**

<b>FINANCIAL SUMMARY</b>			
	<b>R&amp;D/H</b>	<b>BUY-IN</b>	<b>TOTAL</b>
1. Approved Budget	361,000	0	361,000
2. Obligated Funds	361,000	0	361,000
3. Expenditures Project Year 4	87,744	0	87,744
4. Cumulative Expenditures	220,971	0	220,971
5. % Expended of Budget	61%	0%	61%

The PRITECH intervention in Bolivia has centered on the provision of technical assistance to PROCOSI, the umbrella group created by USAID/La Paz to coordinate and streamline its assistance to PVOs receiving child-survival funds. Two PRITECH professionals, who worked under PRITECH I in Bolivia, were assigned to the staff of the PROCOSI Executive Secretariat. One is a pediatrician; the other was in communications. An internal A.I.D. review and evaluation of PROCOSI was carried out during the first quarter of PY4. One of the recommendations was that the technical assistance provided by PRITECH be funded directly by PROCOSI under its anticipated new grant. In July 1991 PROCOSI made offers of direct employment to both advisers, stipulating that they should become PROCOSI employees by October 1, 1991, or conclude their services with PROCOSI. The communications adviser chose to remain as a PROCOSI employee; the pediatrician chose to conclude her work with PROCOSI at the end of PY4. With the end of the direct PRITECH/PROCOSI relationship, a team from PRITECH/Washington travelled to Bolivia as PY4 came to a close to explore the possibilities for working with the MOH in Bolivia through a bilateral project to assure that adequate supplies of ORS are accessible to as many Bolivians as possible through both public and private channels. Objectives and accomplishments during PY4 are outlined below:

### a. **PLANNING/MANAGEMENT/POLICY/COORDINATION/FINANCE**

#### Objectives for PY4:

- Maintain collaboration with PROCOSI;
- Undertake joint research activities with the Community and Child Health (CCH) project, including joint financing; and
- Assist the Nutrition Communication Project (NCP) with the production of a growth-monitoring video.

### Accomplishments and Status:

- PRITECH continued its collaboration with PROCOSI throughout PY4, but the existing arrangements were concluded at the end of the period. Despite uncertainty about the future relationship, there was no lessening of the PRITECH level of effort with PROCOSI in PY4. Apart from PRITECH's usual technical responsibilities, the two advisers contributed significantly to the development of the project paper for renewal of the Operational Program Grant (OPG) with PROCOSI; however, the likelihood of finding a basis for future collaboration with PROCOSI is limited.
- Research on persistent diarrhea, carried out with the CCH project, took a long time to develop but is now ongoing. The study will proceed through March 1991 and attempt to identify risk factors for persistent diarrhea with a view toward identifying appropriate interventions for this most at risk group of childhood diarrhea patients. The study is following up patients in their homes within the La Paz area.
- The NCP video, "¡Comuniquemonos Ya!", has been completed with major input from PRITECH, especially on the production and testing of the instructional guide that accompanies the film. PRITECH paid for the printing of the guide. This teaching tool, filmed in Bolivia and Guatemala, will be used throughout Latin America.

### b. TRAINING/EDUCATION/SUPERVISION

#### Objectives for PY4:

- Work with Caritas on (i) publication of the educational material needed for Area III of the Proyecto Mejoramiento Infantil, (ii) redesign of the user's guide for the CDD flipchart for Area III, (iii) development of a follow-up plan for areas I and II to support and reinforce the field staff in their use of the educational materials, and (iv) support of a course in areas I and II to retrain field staff about diarrhea;
- Work with Project Esperanza on (i) a retraining course for nurses' aides on feeding during and after diarrhea and (ii) inclusion of CDD information in its radio programming;
- Conduct training and retraining courses for nurses' aides and rural health promoters in the Oruro Health District;
- Undertake to validate a health curriculum on diarrhea in the schools of Inquisivi Province; and

- Participate in the integrated child-survival courses for MOH and PVO staff given at Children's Hospital.

Accomplishments and Status:

- The objectives for the year have all been realized with the exception of the formal education intervention in Inquisivi province. That effort was found to be duplicative of work being done through the Radio Education Project, which incorporates correct diarrhea information into the school curriculum.
- In addition to the achievement of the listed objectives, many other calls on PRITECH were made for services in this area, including collaboration on a video on ARI, training workshops in communication methods for the PVOs, the development of a flyer, video and manual on Chagas disease, and supervision of other materials production for PVOs.

c. ORS PRODUCTION, DISTRIBUTION AND AVAILABILITY

Objectives for PY4:

- Carry out an analysis of the current public sector system for supplying, distributing and promoting ORS on behalf of the MOH as requested by USAID.

Accomplishments and Status:

- This analysis was completed by a consultant from PATH in June 1991. The study contained a series of recommendations that were discussed with USAID, the MOH, and the CCH project for possible implementation through PRITECH. A PRITECH team was in Bolivia at the end of PY4 to explore possibilities for proceeding on these recommendations. Implementation would presumably be by way of a transfer of funds to PRITECH from the CCH project. The recommendations included undertaking an assessment of how private-sector mechanisms could aid ORS access, immediate technical assistance to the public distribution system, further training for public health staff in the importance of widespread ORS distribution, and research in selected communities to determine behavioral, cultural, and educational factors that might influence resistance to ORS use, even when ORS was available.

d. INFORMATION/EDUCATION/COMMUNICATION

Objectives for PY4:

- Respond as appropriate to PVO requests for technical assistance in developing effective communications activities in their child-survival programs; and

- Distribute the bibliographic materials provided by PRITECH's Information Center.

Accomplishments and Status:

- In addition to achieving the above objectives, PRITECH also distributed additional information to PROCOSI members and others that was received regularly from PRITECH's Information Center, including a packet of material on cholera.

e. EVALUATION/RESEARCH/INFORMATION SYSTEMS/DISTRIBUTION

Objectives for PY4:

- Continue research at the Children's Hospital on unusual complications of diarrhea, especially persistent diarrhea; and
- Participate in an ADDR research meeting on persistent diarrhea in Mombasa.

Accomplishments and Status:

- The persistent diarrhea study in collaboration with the CCH project and Children's Hospital is underway and going well. PRITECH also carried out an observational study relating to the mother-child interactions and the development of those interactions.
- Participation in the Mombasa persistent diarrhea meeting was not possible due to Gulf War travel restrictions at the time.

f. OTHER ACCOMPLISHMENTS

- The PRITECH pediatrician continued to work with COTALMA, the breastfeeding group, making important contributions to the pediatrics society and other professional groups in Bolivia.
- The communications adviser has been invited by UNICEF to a meeting of nutrition-communication experts in Colombia and by the French government to a meeting of communication experts in Guatemala.

## 2. The Gambia

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	0	300,000	300,000
2. Obligated Funds	0	300,000	300,000
3. Expenditures Project Year 4	0	51,194	51,194
4. Cumulative Expenditures	0	94,957	94,957
5. % Expended of Budget	0%	32%	32%

The focus of the Gambia National CDD Program is on the improvement of case management through intensification of community education efforts and training of health workers and other personnel. The national CDD coordinator, who has been with the Program since 1986, was joined this year by a program assistant. Progress in the program has been limited this year. The national CDD coordinator has been preoccupied with (a) the ARI program, (b) abortive attempts to find funding for long-term study leave, and (c) five months of accrued annual leave. The MOH did appoint a CDD program assistant in late 1990 - a well motivated and sensible young health inspector. It became clear, however, that he alone would be unable to get the CDD Program back on its feet, especially given that the CDD coordinator would eventually be going away for long-term training.

Up until recently, PRITECH had been providing intermittent technical assistance solely through its Sahel Regional Office staff and other consultants as requested. This year, in an effort to strengthen program management, a PRITECH representative was hired to provide full-time administrative and managerial support to the Program. Additional support is given by UNICEF, which has been responsible for disbursing PRITECH funds for local costs, contributing its own funds to the Program when necessary.

Objectives and accomplishments for PY4 are summarized in the following sections:

### a. PLANNING/MANAGEMENT/POLICY/COORDINATION/FINANCE

#### Objectives for PY4:

- Update and revise workplan for 1991; encourage discussion of plan with related health service units (e.g., Education, Training, Nutrition, Pharmacy, PHC, Epidemiology);
- Set up alternative arrangements with UNICEF for management of local costs;

- Assist with orientation of new CDD program assistant when appointed, of nutrition/CDD Regional Officers, and of Regional Health Teams as a whole; and
- Find alternative funding for regional case management courses if WHO funds are irrecoverable.

Accomplishments and Status:

- PRITECH assisted with workplan revision which was accomplished on schedule.
- The arrangements whereby UNICEF took responsibility for disbursing PRITECH funds for local costs worked well on the Gambian side and ensured full involvement of UNICEF in the CDD Program; however, given changes in USAID regulations, the current plan is that the new PRITECH representative will administer most of the local costs directly. Continuing efforts will be made to assure that UNICEF funds some local costs, particularly for those items that require more administrative flexibility than present USAID/PRITECH regulations will permit.
- The PRITECH Representative has made initial contacts with Regional Health Teams for starting the process of decentralized planning.

b. TRAINING/EDUCATION/SUPERVISION

Objectives for PY4:

- Support case management training in two remaining regions and other appropriate CDD training courses; and
- Follow-up on ORUs established in the Western Region, distribute equipment to functioning units, and supervise establishment of ORUs in the other regions after training.

Accomplishments and Status:

- The PRITECH Representative made follow-up visits to the eight ORUs set up after an initial case management training course. Only half of the units are functional owing to changes in personnel and delays in the case management course that were to have taken place in 1990 and 1991.
- The three nursing schools in the Gambia are using the CDD modules.

c. **ORS PRODUCTION, DISTRIBUTION, AND AVAILABILITY**

Objectives for PY4:

- Coordinate efforts with Drug Revolving Fund (DRF) on ORS distribution;
- Assist in establishing distribution system to assure ORS packet availability in PHC villages; and
- Continue discussions with National Pharmacy on modalities for packet imports in private sector.

Accomplishments and Status:

- The national Drug Revolving Fund (DRF) is experiencing financial problems and is scheduled for reorganization. Decisions made will affect ORS distribution in the public sector which is presently carried out outside the DRF.
- There has been agreement in principle that VHWs should have ORS packets; however, the system for their supply and resupply has not yet been established and probably hinges on the eventual DRF reforms.
- Discussions on ORS packet imports and pricing have not advanced this year. Some packets are apparently being imported by the private sector but no coherent strategy has been adopted; therefore no special promotional efforts have been undertaken.

d. **COMMERCIAL AND NONPROFIT ACTIVITIES**

- PRITECH has supported the Gambian Food and Nutrition Association (GAFNA), providing technical and financial assistance to enable it to undertake an ethnographic study of feeding practices (see section g. RESEARCH AND DEVELOPMENT ACTIVITIES).

e. **INFORMATION/EDUCATION/COMMUNICATION**

Objectives for PY4:

- Define strategy for ORS promotion; print ORS-mixing flyer; and follow-up on Radio Gambia theater initiatives and include ORS promotion if commercialization takes place.

Accomplishments and Status:

- Little progress was made on IEC issues this year. An ORS-mixing flyer was developed but has not yet been circulated due to unresolved policy issues. Radio Gambia has continued to air spots on diarrhea and related issues but these are not part of a coordinated IEC effort.

f. EVALUATION/RESEARCH/INFORMATION SYSTEMS/DISSEMINATION

Objectives for PY4:

- Work with epidemiology unit to implement at least one survey.

Accomplishments and Status:

- PRITECH has discussed the community surveillance system questionnaire with the Epidemiology Unit and other technical services within the MOH. A revised copy has been produced but not yet implemented this year.

g. RESEARCH AND DEVELOPMENT ACTIVITIES

Objectives for PY4:

- Finalize report on qualitative feeding study by GAFNA; and
- Develop with GAFNA proposal for message/recipe trials.

Accomplishments and Status:

- The report of the first phase of the ethnographic feeding study was finalized in late 1990. GAFNA organized a workshop for MOH and PVO interested parties to discuss the results of the study and lay some guidelines for the second phase of message/recipe trials. A first draft proposal for the second phase was developed by GAFNA and is currently being finalized.

### 3. Mauritania

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	250,000	0	250,000
2. Obligated Funds	250,000	0	250,000
3. Expenditures Project Year 4	29,865	0	29,865
4. Cumulative Expenditures	100,597	0	100,597
5. % Expended of Budget	40%	0%	40%

The Mauritania CDD Program has moved forward - despite continuing political and civil instability - largely because of the persistent and tenacious efforts of the national CDD program manager who has been with the Program since 1985. A five-year workplan has been written; progress vis-à-vis its objectives has been limited. Focus has been on training of health workers, the establishment of oral rehydration units in regional capitals, and on the integration of CDD modules into the curriculum of schools of nursing and public health.

PRITECH supports program management and provides short-term technical assistance from its Regional Office in Dakar. Support is also provided by UNICEF and WHO, who finance educational and training materials development, training courses for health workers, supervision, and supply of ORS packets. Basic objectives and accomplishments are summarized below:

a. **PLANNING/MANAGEMENT/POLICY/COORDINATION/FINANCE**

Objectives for PY4:

- Negotiate WHO/PRITECH agreement for funding some local program costs and follow up request for special WHO/AFRO and UNICEF funds; and
- Organize planning/training session with regional CDD coordinators.

Accomplishments and Status:

- PRITECH finalized agreements with WHO for handling some local costs with PRITECH funds. WHO has also continued to obtain special WHO/AFRO funds when needed, particularly for training activities.

b. **TRAINING/EDUCATION/SUPERVISION**

Objectives for PY4:

- Assist with organization of DTU in National Hospital, establishment of information system, and the initiation of training courses in the DTU;
- Establish, purchase equipment for, and follow-up ORUs in Nouakchott health facilities, Rosso and six other regional hospitals and PMIs; and
- Organize workshop for nursing school (Ecole Nationale de Santé Publique) teachers on use of CDD modules; assist ENSP in review of Arabic translation, reprint modules in Arabic with necessary revisions and assist school with organization of practicums.

Accomplishments and Status:

- The DTU in the National Hospital was opened with television coverage in late 1990; however, staffing of the unit is still problematic. Difficulties are compounded by the new status of the hospital as a financially autonomous unit.
- PRITECH assisted with two training courses in the DTU for health personnel from Nouakchott.
- Materials for ORUs were purchased for the nine health facilities in Nouakchott district. There has been a major turnover in district personnel in 1991 and the establishment of regional units awaits a period of greater stability.
- PRITECH staff visited the nursing school and held a meeting with French and Arabic sections to discuss improvements in CDD teaching.

c. **ORS PRODUCTION, DISTRIBUTION AND AVAILABILITY**

Objectives for PY4:

- Follow up on distribution problems for public sector facilities; seek financing for transportation; and improve monitoring of stocks.

Accomplishments and Status:

- UNICEF has assisted with transportation of ORS for the public sector but supply and distribution remain problematic.

- The CDD Program and the Pharmapo approached DIPHAR, a large private drug distributor, to explore possibilities for ORS importation for the private sector.

d. INFORMATION/EDUCATION/COMMUNICATION

Objectives for PY4:

- Distribute and discuss the study on the use of educational materials;
- Develop a plan to reactivate IEC component of Program; develop promotional strategy and materials on ORS; reprint materials on Sugar-Salt Solution; and collaborate with World Vision on development of TV spots; and
- Collaborate with Health Education Service on communications training activities and assist in finding funds for implementation.

Accomplishments and Status:

- PRITECH completed the study on the use of education materials and initiated discussions with the Health Education unit on the results.
- The PRITECH staff has not found it possible to implement follow-up IEC activities this year; an outline for television spots on ORS was developed with the HE unit and World Vision, but they have not yet been produced.

e. OTHER ACCOMPLISHMENTS

- The national nutrition plan was finalized with assistance from Dr. Moussa Coulibaly, a consultant who has carried out CDD/nutrition-related activities for PRITECH. This activity, however, was funded by UNICEF.

4. Senegal

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	0	820,000	820,000
2. Obligated Funds	0	359,009	359,009
3. Expenditures Project Year 4	0	18,387	18,387
4. Cumulative Expenditures	0	45,251	45,251
5. % Expended of Budget	0%	6%	6%

The Senegal CDD Program has developed slowly and in a rather piecemeal fashion; some pre-service and in-service training has taken place, some educational materials have been developed, and a number of studies have been carried out. The Program has been without a national CDD coordinator since 1987, and as a result, the mounting of a sustained national effort has been virtually impossible. Some progress is being made at regional levels; however, without national guidelines, the quality and effectiveness of implementation varies considerably among regions.

The main donors (USAID, UNICEF, and the World Bank) have committed themselves to supporting decentralized health plans (PRDS - Plans Regionaux de Developpement Sanitaire) and have, as a corollary, been unwilling to allocate funds for national program efforts. The process of developing the PRDS has been lengthy and rather poorly managed. The plan preparation phase has taken almost two years and the first drafts of the plans are only now being discussed with the central level ministry and donors. In this environment PRITECH has provided intermittent technical assistance, primarily in the area of program management through the Sahel regional staff based in Dakar. Objectives and accomplishments for PY4 are summarized below:

a. PLANNING/MANAGEMENT/POLICY/COORDINATION/FINANCE

Objectives for PY4:

- Obtain agreement from USAID/Dakar for pay for certain local costs from contract funds;
- Assist SANAS in discussions of PRDS with regions and with orientation and training of SANAS regional representatives;
- Assist in preparation of SANAS annual plans for CDD and nutrition and in organization of donors meeting on the plans; and
- Assist SANAS with preparation for CDD policy discussions (e.g., on local ORS production, SSS composition, official policy on drug use).

Accomplishments and Status:

- USAID/Dakar has agreed, in principle, to an amendment of the PRITECH contract to permit coverage of some local costs; however, this is linked to extension of the PACD of the bilateral project which had not occurred at end of PY4.
- PRITECH late in PY4 participated in a three-day workshop to discuss the PRDS submitted by the three regions (Kaolack, Fatick and Louga) that USAID is planning to support financially. CDD and nutrition activities were not prominent

in the first draft submitted but are being included in revisions as a result of USAID and MOH orientations. At PRITECH's suggestion, the MOH decided to withhold 20% of the USAID budget allocated for the year to the three regions in order to finance central level program activities.

- A donor meeting was convened by the Director of Public Health in October 1990 to discuss the CDD five-year plan. The new Director of SANAS wished to modify the five-year nutrition plan and this has only recently been completed and submitted to the donors.
- The MOH has been undergoing considerable restructuring this year and has not yet expressed readiness to follow up on work planned in the Bamako Initiative.

b. TRAINING/EDUCATION/SUPERVISION

Objectives for PY4:

- Assist with revision of training and technical materials on CDD and nutrition used in Senegal, help with preparation of training manuals and with training of trainers;
- Revise list of required material for ORUs and assist with establishment and follow-up of ORUs, especially in USAID-financed regions; and
- Involve SANAS in follow-up on impact of teaching from PRITECH modules in six training schools.

Accomplishments and Status:

- No training activities have been organized by the CDD Program this year. PRITECH is assisting SANAS to identify and/or produce CDD training materials for activities scheduled during the coming year. SANAS has decided to adopt, with some modifications, the PRITECH Manual de Recyclage originally developed for Burkina and widely used in Niger. SANAS has asked for assistance with developing a curriculum for in-service nutrition training.
- The head of SANAS and two people from other MOH units attended the program managers' course in Bamako. Unfortunately, administrative constraints impeded Senegal's participation in the Bobo clinical case management course.
- The main nurse training school in Senegal did not use the PRITECH modules this year, apparently because of several strikes and disruptions of the school's schedule. The school plans to reintegrate the modules in the next academic year.

The nursing school director has promised to assist with improving CDD teaching in the school of midwifery.

- PRITECH has done some follow-up with two auxiliary level schools outside Dakar, both of which are making partial use of the teaching modules. The private Catholic auxiliary nursing school taught the modules in a one-week block this year.

c. ORS PRODUCTION, DISTRIBUTION AND AVAILABILITY

Objectives for PY4:

- None

Accomplishments and Status:

- SANAS has agreed to update the ORS feasibility study carried out with PRITECH assistance in 1985. This update should address the issue of production vis-à-vis importation and present alternatives for MOH decision-makers.
- An official authorization has been processed for the importation of ORS but no packets are as yet available in the commercial sector.

d. INFORMATION/EDUCATION/COMMUNICATION

Objectives for PY4:

- Complete study on the use-of-educational materials.

Accomplishments and Status:

- The use-of-educational materials study was completed and a day-long seminar was organized with SANAS and the Health Education Division (with HEALTHCOM participation) to discuss implications of this study and of the KAP study done in 1989. The issue of improving communication of measures for sugar-salt solution (SSS) was addressed but not resolved (the question being can instructions be made clear enough to avoid excess salt or should Senegal drop the level teaspoon approach altogether). This policy decision needs to be clarified before further IEC activities concerning SSS can take place. Similarly, a decision is needed on ORS production/importation policies before embarking on social marketing efforts.

e. EVALUATION/RESEARCH/INFORMATION SYSTEMS/DISSEMINATION

Objectives for PY4:

- Assist MOH in improving its MIS and in training its key personnel on the job.

Accomplishments and Status:

- The Planning Directorate in the MOH, which was responsible for MIS, has been eliminated and it has taken some time to restructure the MIS function within the new administrative set-up. The MOH has, however, recently expressed interest in following up on activities planned over a year ago and PRITECH assistance for this has been requested.

f. RESEARCH AND DEVELOPMENT ACTIVITIES

Objectives for PY4:

- Carry out qualitative infant-feeding study.

Accomplishments and Status:

- PRITECH has completed the first phase of the feeding study (observations of health workers and exit interviews with mothers) with the help of three SANAS staff. A draft report has been written and included a proposal for the second phase (focus groups with mothers, training some health workers to give specific recipe/feeding messages, and follow-up of mothers at home).
- The breast-feeding study (health workers KAP) has been completed in maternity and MCH centers and hospitals in the Dakar region. A report is being prepared and also a presentation to be delivered at the Lome conference.
- PRITECH is financing a small descriptive study of persistent diarrhea in Fann Hospital and a large health center in the Dakar region. This study, which is being carried out by a Burkinabe physician doing his specialization in pediatrics, follows a protocol similar to that of the study in Niger. A second phase of testing the WHO/ADDR treatment algorithm is planned, providing technical requirements can be met.
- PRITECH is supporting the investigation, carried out by the Institut Pasteur of Senegal, of the etiologies of dysentery in rural areas. The protocol for this study is similar to that used in the Burkina study on the same subject.

5. **ORANA**

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	27,000	650,000	677,000
2. Obligated Funds	27,000	516,000	543,000
3. Expenditures Project Year 4	0	94,902	94,902
4. Cumulative Expenditures	20,877	232,343	253,220
5. % Expended of Budget	77%	36%	37%

ORANA is an African regional nutrition institution located in Dakar, Senegal. ORANA receives some financial support from PRITECH as well as from AHRTAG for CDD and nutrition-related activities and is supported by PRITECH through its Sahel Regional Office. ORANA maintains an ORT and Nutrition Information Center which, among other activities, gathers technical documents and educational materials on CDD and nutrition, publishes and distributes regular acquisition lists, and puts together an African supplement for Dialogue on Diarrhoea. ORANA activities supported by PRITECH during PY4 are summarized below:

a. **INFORMATION/EDUCATION/COMMUNICATION**

Objectives for PY4:

- Work with ORANA to print and distribute compilation of theses on CDD/nutrition issues and continue producing resumes of those received.

Accomplishments and Status:

- PRITECH has printed the compilation of CDD/nutrition theses and distributed them to training schools with CDD programs; resumes are being made of new theses as received by ORANA.

b. **EVALUATION/RESEARCH/INFORMATION SYSTEMS/DISSEMINATION**

Objectives for PY4:

- Coordinate efforts with AHRTAG for ongoing production of Dialogue on Diarrhoea (DD) in French and continue to produce French DD Africa supplement for each issue of the publication;

- Continue distribution of the TLU in French; and distribute acquisition lists on CDD and nutrition, separately; and
- Translate and distribute key documents to decision-making members of the community and government; analyze questionnaire for decision-makers on ORANA activities.

Accomplishment and Status:

- ORANA has continued production and distribution of DD supplement, TLU translations, back copies and acquisition lists.
- VITAL, AHRTAG and PRITECH have agreed to fund a new computer for ORANA since documentation activities have slowed considerably due to the breakdown of the old computer almost a year ago. A request for approval for this purchase was submitted to A.I.D.
- ORANA has continued to respond to demands for documents. Demand is increasing particularly for those on nutrition (e.g., 33 documents dispatched in June 1991).
- The ORANA Information Center is working on compilations of key documents for decision-makers (including training schools) on nutrition, vitamin A and CDD; to date four key documents have been translated and distributed; however, only a small percentage of questionnaires sent to decision-makers have been returned and these are presently being analyzed.
- An AED Information Center Specialist visited ORANA and provided helpful oversight and orientation.

6. **Sahel Regional Office**

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	0	950,000	950,000
2. Obligated Funds	0	1,051,000	1,051,000
3. Expenditures Project Year 4	8,204	347,201	355,405
4. Cumulative Expenditures	8,204	870,562	878,766
5. % Expended of Budget	0%	92%	93%

The Sahel Regional Office provides technical and managerial support for the development and implementation of national CDD programs in six countries in the Sahel. More specially, the Regional Office monitors country programs, provides technical assistance through its own staff of three professionals, and identifies, briefs, and supervises short-term consultants.

In addition to working with country programs, the Sahel Regional Office oversees PRITECH and AHRTAG-funded CDD and nutrition-related activities at ORANA, an African regional nutrition research institute. The Sahel Regional Office also produces technical materials, often jointly with ORANA.

The staff of the Regional Office continues to spend over 50% of their time on country programs. Apart from general supervision of country programs, the staff have been particularly involved with training activities, and also with the multiple applied research efforts that have been undertaken this year. Specific objectives and accomplishments for PY4 are summarized below:

a. **PLANNING/MANAGEMENT/POLICY/COORDINATION/FINANCE**

Objectives for PY4:

- Ensure continued supervision and support of CDD programs in six countries in the Sahel region; and
- Collaborate with WHO in organizing Program Managers' Course and Case Management Course for MOH and PRITECH Sahel personnel.

Accomplishments and Status:

- During the PY4 period the PRITECH Sahel Regional staff made a total of 34 visits to country program activities and 14 visits were made by outside consultants. Country representatives for three national programs were recruited and oriented during this period.
- The PRITECH Sahel Regional staff continued frequent contacts with WHO/Geneva and Brazzaville during the year and the following activities were jointly undertaken:
  - Regional Case Management Course in Bobo Dioulasso was jointly organized and financed; and
  - Program Managers' Course similarly conducted in Bamako.

- The Senior Program Manager (SPM) and Deputy SPM travelled to Brazzaville during the year for general discussions on future collaboration with WHO. The activities planned include joint sponsoring of a West African meeting on cholera, joint visits to medical schools in the Sahel region, joint sponsoring of case management courses for nursing school teachers, and possibly medical school instructors.
- The SPM participated in the revision of the WHO Comprehensive Program Review Process with the WHO/CDD team in Geneva.
- The SPM participated in a WHO/ARI Program Managers' course in Tunisia and held follow-up discussions with WHO/Geneva on possible activities to lay the groundwork for ARI programs in the Sahel. Subsequently, initial discussions were held with MOH authorities in Senegal, Niger, Burkina, and Mali, all of which expressed interest in addressing ARI issues.

b. TRAINING/EDUCATION/SUPERVISION

Objectives for PY4:

- Assist the national CDD programs and PRITECH Country representatives in monitoring the introduction of PRITECH teaching modules into the curriculum of 20 nursing schools in the region; reprint modules to provide stocks that may be required over the next five years; finalize draft of nutrition-diarrhea module and discuss with schools; encourage national CDD programs to give special attention to health facilities that receive students for practicums; and develop instruments for evaluation/monitoring of CDD teaching in the schools;
- Ensure that medical schools in the region have WHO CDD teaching materials and continue to discuss refinement of the CDD curriculum with them;
- Participate in technical orientation during the Infant Feeding Conference organized with Nutrition Communications Project (NCP); and
- Sponsor Nigerien pediatrician and PRITECH staff member for participation in Mombasa meeting on persistent diarrhea.

Accomplishments and Status:

- The PRITECH Sahel Regional staff made visits to 15 nurse training schools this year. Out of the 21 schools that PRITECH is working with to improve CDD teaching, 16 are making full or partial use of the PRITECH/Sahel CDD modules.

- The PRITECH Regional staff are currently engaged in efforts to improve the quality and use of the CDD teaching modules: A paper was written during the year, at WHO/Brazzaville's request, on "Lessons Learned" from the use of the teaching modules; discussions are being held with CDD program managers in Senegal, Niger, Mali, and Burkina to plan case management training efforts for teachers at the various schools; updating of the CDD modules is presently underway with a view to their reprinting early in the academic year; comments on the CDD/nutrition module draft are still being received, hence it has not yet been finalized.
- PRITECH/Sahel collaborated closely with the Nutrition Communications Project in the technical preparation for the Lome Breast-feeding/Infant feeding Conference which took place in September 1991. PRITECH country representatives and regional office staff attended.
- Unfortunately, no one from the Sahel Regional Office attended the Mombasa persistent diarrhea meeting due to the travel advisory in place at that time; however, the Deputy SPM did participate in the WHO/ADDR workshop in New Delhi on persistent diarrhea treatment protocol testing.

c. INFORMATION/EDUCATION/COMMUNICATION

Objectives for PY4:

- Reprint physiology fold-out, ensure its use during pre-service and in-service training in the Sahel as well as responding to demand from other francophone countries (e.g., Cameroon, Madagascar, Guinea);
- Adapt Special Diet Poster for Sahel countries with country-specific SSS measures;
- Finalize training module for establishment of ORUs;
- Print limited number of continuing education modules, make them available to regional health teams, and encourage their use for refresher training sessions; and
- Prepare technical wall posters on dysentery and persistent diarrhea.

Accomplishments and Status:

- PRITECH/Sahel has reprinted the physiology fold-out and distributed it as requested for pre-service and in-service training.
- PRITECH/Sahel has finalized the Special Diet Poster for Niger and Mali.

- The Sahel staff has suspended development of the training module for the establishment of ORUs. Each country program has evolved a different methodology for establishing ORUs based on human resources and time available in the specific country context. A range of WHO and PRITECH materials is already available as resources, e.g., the WHO short clinical course published in late 1990.
- The PRITECH/Sahel Continuing Education modules have not yet been widely distributed as most training efforts so far have been based on the Manual de Recyclage; however, the demand is beginning to show signs of increasing.
- PRITECH/Sahel has delayed development of wall posters on persistent diarrhea and dysentery given the continuing research on these issues.
- The Staff is developing a draft for an assessment of dehydration wall chart based on the new WHO film on this subject; a wall chart is also being developed to promote and assist the evaluation of the nutrition status of children when they are weighed in outpatient situations.

d. RESEARCH AND DEVELOPMENT ACTIVITIES

Objectives for PY4:

- Develop proposal for health worker KAP on breast-feeding and organize its application in urban centers in the region (Dakar and Bamako in 1991);
- Monitor qualitative nutrition studies in the Gambia, Mali, Niger, Senegal and Mauritania, ensuring coordination with NCP and HEALTHCOM as appropriate; proceed to carry out message/recipe trials in the Gambia and Mali;
- Set up one or two additional studies on etiologies of dysentery if results of Burkina study suggest this is worthwhile;
- Establish a protocol for assessing the problem of persistent diarrhea presented in health facilities and organize its application in three or four countries; and
- Research the opportunities for improving health worker communication skills in the region using results of Utilization-of-Health-Education Studies in Mali, Niger, Mauritania, Senegal now being finalized.

### Accomplishments and Status

- The persistent diarrhea studies in Niger and Senegal are now underway. In both countries, a first phase describing the problem and its treatment in urban health facilities is being carried out.
- The dysentery study in Burkina is nearing completion. Progress has been slow in finding control cases since children are purged before coming to the health center. The study of etiologies of dysentery in rural areas of Senegal started up in June 1991.
- The recipe/message trials in Niger have been successfully completed and the final report is being drafted. A proposal has been submitted for an operations research intervention to implement some of the findings of the Niger study in collaboration with the CARE/Zinder child survival project. A proposal for the second phase of the feeding study in the Gambia (recipe/message trials) is being developed.
- The Mali first (ethnographic) phase report has been submitted. The Senegal feeding during diarrhea study has been completed and the draft report submitted. A proposal for the second phase of this study (recipe/message trials) has been submitted. A proposal is also being developed for an operations research intervention to measure the impact of different nutrition education channels in a rural area of Senegal (Fatick region). This study will build on the results of the feeding during diarrhea study.
- The Senegal breast-feeding study (health worker KAP) has been completed and a draft report prepared.

### 7. **Central, Eastern and Southern Africa (CESA) Regional Office**

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	575,000	0	575,000
2. Obligated Funds	575,000	0	575,000
3. Expenditures Project Year 4	80,597	0	80,597
4. Cumulative Expenditures	219,303	0	219,303
5. % Expended of Budget	38%	0%	38%

The CESA Regional Office does not represent a separate program but is responsible for planning, coordinating, overseeing and supporting country representatives and programs

in the CESA area. The active, sustained programs in the region during PY4 were in the Cameroon, Kenya and Zambia. In addition a new sustained program was initiated in Uganda. The Senior Program Manager (SPM) who heads the office is also responsible for new program development and has been active in country program development efforts in Madagascar and Uganda and in development of several non-country-specific initiatives. No specific objectives were identified for the regional office in the PY4 workplan; however, the following accomplishments during the PY4 period are noteworthy:

- The CESA Regional Office was successfully moved from Nairobi, Kenya, to Yaounde, Cameroon, with a minimal disruption in program activities.
- The country program for Uganda was developed, approval obtained and a country representative recruited.
- Program development visits were made to Madagascar early in PY4; however, development efforts were suspended later in the year due to political uncertainties.
- In recognition of the fact that more than 50% of the health care in the CESA region is provided by a variety of private sector sources, development work was undertaken on special initiatives for work with
  - church-linked health facilities;
  - traditional healers;
  - modern health-care providers not under the direction of the MOH or religious organizations (i.e., private physicians and pharmacists); and
  - local NGOs/PVOs and through them both indigenous and refugee populations.
- Development was also initiated on other special initiatives for work with
  - targeted urban populations;
  - linkages with water supply and sanitation projects for preventive measures;
  - improvements in drug use practices; and
  - exploration of potential for work in ARI linked to CDD programs.

## 8. Central America Regional Office

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	245,500	0	245,500
2. Obligated Funds	245,500	0	245,500
3. Expenditures Project Year 4	6,658	0	6,658
4. Cumulative Expenditures	6,658	0	6,658
5. % Expended of Budget	3%	0%	3%

PRITECH's Central America component was launched in mid-1991, with the placement of a Senior Program Manager in Honduras to coordinate regional activities for Central America and Mexico. A Central American Strategy document has now been completed, which is designed to address key constraints to the reduction of mortality and morbidity from diarrheal diseases in the area. These regional-wide constraints include physician resistance, underuse of operations research, and the lack of skilled and knowledgeable people to deal with the cholera epidemic in the region. The focus of program development is on Guatemala and Nicaragua, the two countries in the region with the worst diarrhea mortality among children. The cholera threat has highlighted the need for training in oral rehydration therapy, which in turn is advancing the use of ORT in acute watery non-cholera diarrhea.

PRITECH is taking steps to collaborate with the A.I.D. missions in the region, with ROCAP, with PAHO, and with INCAP. INCAP is a particularly promising partner, with its research base ready to be applied to CDD issues in the region. INCAP would like to collaborate with PRITECH on a communication intervention, focussed on nutritional therapy for diarrhea, that takes advantage of the AED resources within PRITECH with the dual purpose of improving mothers' practices relating to feeding during diarrhea and developing within INCAP a communication capacity. INCAP and PRITECH are also working toward an agreement on operations research efforts.

### C. AD HOC COUNTRY ACTIVITIES

Ad hoc country activities represent responses to requests from A.I.D. or USAID missions for specific short-term technical services related to CDD for the benefit of the USAIDs or CDD country programs. Such services are normally funded through the project's "buy-in" mechanism. It is a component of the project that has not been widely used. During the previous project years, including PY4, there were no specific plans developed for the use of the ad hoc country program component of PRITECH II.

Nevertheless, assistance has been provided to the regional activities of INCAP in Guatemala, and to the national CDD programs of Honduras and Jordan.

#### D. OTHER COUNTRY BASED PROGRAM ACTIVITIES

In PY4 a large number of countries were visited or contacted in connection with the Health Systems Support and Research and Development components of the project; furthermore, exploratory/promotional visits were made to a number of countries by PRITECH staff members. Such countries are enumerated below with a brief observation on their status relative to the PRITECH project:

**Cambodia** - PRITECH's PY4 Cambodia initiative was in response to an invitation from A.I.D. requesting expressions of interest from international relief agencies and U.S. private and voluntary organizations for grants to assist children and other civilian victims of war in Cambodia. PRITECH submitted a concept paper proposing (i) to cooperate with UNICEF/Phnom Penh in efforts to strengthen the capacity of the MOH and NGOs in treating diarrheal and respiratory diseases in children and (ii) to work over the longer-term with the MOH in developing policies that would assure continuing improvement in child-survival programs. A.I.D. rejected the PRITECH proposal on the grounds that PRITECH did not qualify as a PVO; however, A.I.D. found the substance of the proposal interesting and promised to consider the possibility of other funding sources for support of the proposed activities.

**Ecuador** - Toward the end of PY4, USAID requested an array of technical assistance relating to cholera. PRITECH proposed to head up a three-person team, as it had in Nicaragua, involving HEALTHCOM and WASH.

**Ghana** - In PY4, a PRITECH staff member visited Ghana to assess current CDD case management practices of traditional healers and make recommendations concerning implementation of future collaborative efforts between the biomedical and traditional sectors. The information from this visit was incorporated into a comprehensive Africa region strategy review. PRITECH anticipates that any future assistance to the national CDD program of Ghana will be short-term technical assistance on request.

**Guatemala** - Since the early days of PRITECH I, PRITECH has provided technical assistance to INCAP, and has continued to seek ways of collaborating with INCAP in the provision of technical assistance to Central America. In PY4, at the invitation of ROCAP, discussions were held in Guatemala City that led to some concrete proposals for partnership, particularly in the provision of technical assistance for cholera management in the region. Those proposals are now being forwarded to R&D/H by ROCAP.

Earlier in PY4, PRITECH was invited by USAID for discussions on developing a bilateral program. Upon arrival, however, PRITECH staff learned of a USAID request

for proposals that had just been issued; the RFP related to diarrheal disease, so proceeding with discussions at that point would have given the appearance of impropriety. PRITECH hopes to renew discussions early in PY5, after the responses to the RFP are in and the award is made.

**Guinea** - In the fourth quarter, PRITECH learned that the CDD Coordinator, MOH/Guinea, had expressed interest in PRITECH assistance to the national CDD program. In response to this information, PRITECH drafted a cable to USAID/Conakry proposing a visit by a PRITECH senior staff member to have discussions with CDD/MOH and the Mission, to make a preliminary assessment of the program and to make recommendations for future assistance. PRITECH was advised that the Mission was moving totally out of the health sector; the cable was not sent.

**Haiti** - In PY4, PRITECH was asked by the USAID mission to organize a three-person team, including one person from HEALTHCOM, to review child-survival issues, such as the use of home-mix versus packaged ORS; the quantity and quality of training in CDD provided in both the private voluntary and public sectors; the potential for expanding ORT centers to additional hospitals and other health facilities; the availability and limitations of funding to support strengthening of Haiti's CDD program; and the potential for further integration of ORT into other PHC programs in both private and public sectors.

The USAID mission also requested an expert to look at local production of ORS, including quality of product, production capacity, financial incentives, and ability/willingness of producer/wholesaler to promote product; and the distribution system, including length of supply pipeline, inventory management at different levels of the system, availability of stock in distribution outlets and public access to distribution outlets. PRITECH had begun an assessment of the commercial ORS sector earlier in PY4. Whether PRITECH develops a program in Haiti will depend on political events in that country.

**Honduras** - Honduras has had a long history of public education about CDD, but little training for health staff in proper diarrhea management. In PY3, PRITECH sponsored the training of two leaders of the Honduran CDD program at the Children's Hospital in Mexico. As a follow-on, PRITECH sent the Director of Training of the Children's Hospital along with a PRITECH staff member to Honduras early in PY4 to develop a plan for a national DTU in Tegucigalpa, to determine technical assistance needs, and to assess PRITECH's future role in Honduras. The team recommended that USAID support the establishment of a correctly functioning diarrhea training unit in the Tegucigalpa hospital, with rotations for all pediatricians, interns, and medical students. PRITECH also urged that when this unit is up and running well, staff from other hospitals, especially from San Pedro Sula and La Ceiba, be trained so that they can set up units of their own and bring training to their regions and communities. To back these efforts up, courses for pediatrics professors and doctors responsible for primary health care were

recommended. Furthermore, the CDD program needed funding for educational materials --flipcharts, posters, flyers, videos, etc. USAID agreed to look into ways to support these DTUs, but so far these recommendations have not been implemented.

**India** - PRITECH sent a three-person team to India in January 1990 to assess the role, activities, and potential of the private sector in CDD, to make a preliminary evaluation of ORS commercialization, and to explore the possibility of a regional conference in Asia to increase private sector involvement in ORS in the region. The team made some concrete proposals for USAID support to the ORS commercialization effort and agreed upon the need for an Asian ORT conference for private sector representatives. A country program plan to promote ORS commercialization, involving a full-time resident expert, was presented to R&D/Health and the head of the Health/Population/Nutrition Office at USAID/India in September 1990. As a follow-up, the S&T Assistant Administrator sent a letter to the Mission Director asking him to consider applying the successful Pakistan commercialization model in India. No action has yet been taken by the mission. A proposal for an Asian ORS commercialization conference is being prepared.

**Madagascar** - Due to the political disturbances in Madagascar, the technical assistance planned for the third quarter of PY4 by PRITECH pharmaceutical marketing and case management experts was delayed until the situation is more stable. At such time, the PRITECH CESA Regional Officer will also visit Madagascar to finalize, in collaboration with the MOH, WHO and UNICEF, the PRITECH program plan for the next two years. Funding for the Madagascar program has been provided to date by R&D/Health. It is hoped that some of the funding for the PRITECH assistance program will be supported eventually by the bilateral project now being developed. Meanwhile, PRITECH has prepared a proposal for Africa Bureau funding of the first year of start-up costs in Madagascar. These include a locally recruited representative and short-term technical assistance and supervision.

**Malawi** - In the fourth quarter of PY4, PRITECH proposed to the Mission a visit by PRITECH Assistant Director-Africa to discuss possible PRITECH assistance to the national CDD program and a proposed regional workshop for NGOs. USAID/Lilongwe responded that the Mission was understaffed and over-extended at the time and preferred to defer such discussions.

**Mozambique** - In response to a request from CARE for technical assistance, the PRITECH/Kenya Resident Representative visited Mozambique for three weeks during the third quarter. Her discussions with the MOH suggested that PRITECH assistance to the national CDD program in the future, if any, will probably take the form of short-term technical assistance on request.

**Nicaragua** - In Nicaragua, discussions held during PY4 focused on cholera. PRITECH headed up a team that went to Managua to review the national plan. Recommendations

for technical assistance came out of this team's visit, and PRITECH is awaiting a formal request from USAID for this. The mission is developing its own child-survival bilateral project, through which it intends to buy-in to PRITECH for CDD; in the interim, the mission will use LAC cholera funds to strengthen the MOH's ability to respond to cholera in particular and CDD in general.

**Nigeria** - During the third quarter of PY4, PRITECH held discussions with the USAID/Lagos project staff and was advised that the mission would welcome an exploratory visit by a PRITECH team in the fourth quarter. PRITECH sent a draft cable to R&D/Health (July 18, 1991) proposing that a three-person team, headed by the PRITECH Project Director, visit Nigeria in the next quarter. R&D/Health sent State 245359 (July 26, 1991) to USAID/Lagos offering assistance in planning and conducting a health sector assessment. In September R&D/Health is arranging meetings to coordinate contractors' potential assistance to the Nigeria health program.

Meanwhile, PRITECH sub-contractor, the Center for Development and Population Activities (CEDPA), held preliminary discussions in Nigeria regarding future PRITECH assistance, which resulted in a letter from the Assistant Director, EPI/CDD, FMOH, to the CCCD project indicating interest in PRITECH support to the national CDD program.

**Tanzania** - In the third quarter of PY4, PRITECH made its first visit to Tanzania. A two-person team held exploratory discussions with the mission, the MOH and UNICEF regarding future assistance. Following this visit, PRITECH, at WHO/Geneva's request, funded and staffed a two-person team to conduct a Health Facilities Survey in the fourth quarter. The PRITECH Technical Officer participating in this team took the opportunity to have further discussions with the MOH and the mission to identify potential areas for PRITECH assistance. In the first quarter of PY5, PRITECH had hoped to develop with the MOH, WHO and UNICEF, a program plan for PRITECH assistance to the national CDD program of Tanzania, as part of the process of developing the five-year national plan in November/December 1991. The USAID mission, however, has not taken a favorable view of such an initiative.

**Zaire** - At the beginning of PY4, PRITECH staff visited Zaire to have initial discussions with the MOH and USAID/Kinshasa regarding areas of assistance to the national CDD program. Following these discussions, at the request of the Mission, PRITECH proposed a visit by a two-person team to assess the potential for ORS production in Zaire by a local food producer. This visit was postponed due to the uncertain political situation in Zaire and has yet to be rescheduled, pending more stable conditions.



## **IV. DEVELOPMENTAL PROGRAMS**

PRITECH's developmental, technical support and research activities are managed by the Project's Technical Division. The Division undertakes three major types of activities in support of PRITECH country programs and the A.I.D. Office of Health:

- Review of all country program technical materials and activities for accuracy of medical and public health content;
- Development and implementation of research and development activities;
- Provision of technical review, input and updates to AID.

Provision of technical support and assistance to PRITECH's field staff in the implementation of country programs is the major activity and the highest priority of the Technical Division. This support includes the initiation of program problem-solving studies (PPSS), or operations research, to assist the field staff in identifying the source of problems and/or in identifying new approaches for overcoming impediments to progress. The second major activity of the Technical Division is the initiation and management of PRITECH's research and development activities in selected areas. These activities are selected on the basis of their importance to the success of the CDD country programs. PRITECH currently has research and development activities in the following functional areas, grouped by major objective:

### **IMPROVEMENT OF CASE MANAGEMENT:**

- Quality of Care/Case Management
- Persistent Diarrhea/Dysentery
- Acute Respiratory Infections (ARI)
- Drug Management
- Medical/Nursing Education

### **IMPROVEMENT OF ACCESS TO CARE:**

- Traditional Healers
- School Health Education
- Commercialization (discussed in a separate section)

### **IMPROVEMENT OF PREVENTIVE MEASURES:**

- Nutrition/Household Management of Diarrhea
- Breast-feeding

- Measles Vaccination
- Hygiene

## EVALUATION

The third major type of activity undertaken by the Technical Division is technical assistance to R&D/H, when requested, and participation in international health and CDD-related conferences, seminars and meetings.

### A. SUMMARY OF PY4 ACTIVITIES

An important activity of PY4 was the development of a collaborative effort with WHO, the Quality Assurance Project and HEALTHCOM to strengthen case management training in DTUs by providing support for the training and supervision of health workers. The objectives are (i) to enhance the communication and supervisory skills of health workers who will in turn be training other health workers and (ii) to develop a methodology for evaluating the quality of training through performance-based testing of health workers. Activities in these areas took place in Uganda, Zambia, Kenya and the Philippines during PY4.

The extensive literature review and background research was completed for the Traditional Healers program and an intervention is being planned in Uganda. The first training of trainers workshop is planned for October 1991 in Uganda. The development of the RXDD (Prescribing for Diarrheal Disease) computer software program was completed and the program was field-tested with much success in health facilities in Honduras. There were many activities in breast-feeding during PY4. In August and September, PRITECH supported lactation management training at Wellstart/San Diego for five Zambians and five Ugandans plus follow-up training for one 'fellow' from Uganda. In September, PRITECH co-sponsored a francophone conference with the Nutrition Communication Project for key officials and policy-makers from nine African countries on optimal infant feeding. The conference, which was held in Lome, was successful in that high levels of decision-makers, researchers and field staff actively participated. All sessions were well-attended. The presentations, nearly all by Africans, were of high quality. Country action plans were developed during the final days of the conference. Finally, initial plans were made to undertake follow-up activities.

In the area of evaluation, PRITECH collaborated with WHO to revise the comprehensive Country Program Review (CPR) protocol to improve its utility for program problem-solving and use of results for replanning. PRITECH also developed a country profile evaluation instrument to assess the progress of CDD activities and to identify specific deficiencies and information gaps. The instrument is accompanied by instructions and guidelines and is for use by PRITECH country representatives. Both of these instruments will be field tested and implemented in PY5. PRITECH in collaboration with the Quality

Assurance Project and WHO developed and tested a competency-based test for CDD training in the Philippines.

RAD funds supported several operations research studies during PY4 including four studies of feeding practices during diarrhea, three studies of breast-feeding practices, three studies of persistent diarrhea, two studies of "the etiology of dysentery in West Africa" and two health facility surveys.

## B. TECHNICAL SUPPORT TO COUNTRY PROGRAMS IN PY4

### Objectives

- Provide technical input for country programs
- Support Program Problem-Solving Studies (PPSS).

### Accomplishments and Status

- Technical staff provided direct technical assistance to PRITECH country programs in Cameroon, Senegal, the Gambia, Zambia, Kenya and Uganda. Technical staff also participated in program development visits to Nicaragua, Guatemala, and Tanzania. Finally, technical staff reviewed the content of the following:
  - Country plans
  - Field notes
  - Training materials
  - Educational/communications materials
  - Operations research proposals
  - Evaluation activities, and responded to specific questions on country programs.
- PRITECH's RAD funds supported a number of operations research studies during PY4. The studies of feeding practices during diarrhea are discussed in the section on Nutrition. The studies of breast-feeding practices are discussed in the section on Breast-feeding. The studies of persistent diarrhea and dysentery are discussed under the section of that name. In addition, RAD funds supported health facility surveys in Burkina Faso and Cameroon. The results of these studies are discussed in the country program sections of this report.

- A third area, provision of support of improved clinical training of health workers, has been included in the functional area on Quality of Care/Case Management and is addressed in section C below.

### C. COMMERCIAL PRIVATE SECTOR PARTICIPATION

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	989,000	0	989,000
2. Obligated Funds	989,000	0	989,000
3. Expenditures Project Year 4	180,707	0	180,707
4. Cumulative Expenditures	180,707	0	180,707
5. % Expended of Budget	18%	0%	18%

#### Objectives

- Promote universal access to Oral Rehydration Therapy (ORT) and Oral Rehydration Solution (ORS) via enlistment of the marketing capabilities of the commercial sector.
- Reduction of the incidence of diarrhea by promotion of hand washing through commercial messages.

#### Accomplishments and Status

- PRITECH's marketing specialists worked in Indonesia, Mexico and Kenya to assess the potential for commercial production of ORS. Each assessment has led to some interest by manufacturers to explore introducing ORS products. A company in Kenya has begun feasibility work for launching an ORS product by the end of 1992. Several multinational firms were contacted, and discussions about the benefits of and opportunities for marketing ORS were held with senior management staff. So far, however, these overtures have not resulted in any movement by multinationals into the ORS market. PRITECH staff also held meetings with donor organizations such as UNICEF and Ministry of Health program managers to obtain the public health perspective concerning commercialization of ORS.
- Market research information is being obtained in Indonesia regarding production and consumption of anti-diarrheal medications and ORS in Asia.

- A need was identified for a workshop for promotion of ORS production in Asia. A preliminary plan was developed for a workshop, to be held in Bangkok, Thailand, during 1992. Workshop participants would be representative of Asian-based businesses with potential and interest in producing ORS.
- Discussions were held with Unilever and other soap manufacturers to help raise interest in promoting hand washing as part of diarrhea prevention. Unilever expressed interest in positioning one of its soap products in Africa for hygiene and the prevention of diarrheal diseases.

D. RESEARCH AND DEVELOPMENT ACTIVITIES IN PY4

FINANCIAL SUMMARY			
	R&D/H	BUY-IN	TOTAL
1. Approved Budget	2,054,734	0	2,054,734
2. Obligated Funds	1,451,328	0	1,451,328
3. Expenditures Project Year 4	425,693	0	425,693
4. Cumulative Expenditures	711,887	0	711,887
5. % Expended of Budget	35%	0%	35%

APPROVED BUDGET LEVELS BY FUNCTIONAL AREA	
Functional Area	Amount
Quality of Care/Case Management	\$61,000
Persistent Diarrhea/Dysentery	36,500
Acute Respiratory Infection (ARI)	175,000
Breastfeeding	270,000
Drug Management	70,000
Medical/Nursing Education	4,700
Traditional Healers	85,000
Nutrition/Household Management	85,000
Program Problem-Solving Studies (PPSS)	195,000
Other and/or Prior Activities	217,409
Staff Time	855,125
<b>TOTAL</b>	<b>\$2,054,734</b>

## **1. Quality of Care/Case Management**

### Objectives

- Support WHO-organized case management courses
- Support activities to improve quality of care
- Support operations research in quality of care.

### Accomplishments and Status

- Two WHO-organized courses were held during June 1991. A clinical case management training (CMT) course was held in Bobo-Dioulasso, Burkina Faso and a program managers' course was held in Bamako, Mali. These courses were co-sponsored by WHO and PRITECH.
- Health facility surveys were completed in Kenya and Uganda in PY4 and the results are being used to improve the quality of CDD training. The outline for the Uganda DTU training curricula was finalized and plans for implementation updated. A methodology for performance-based testing of health worker competence which was field tested in Zambia and the Philippines was developed in collaboration with the Quality Assurance Project and WHO. The first phase of the Philippines training evaluation took place in September 1991 following numerous delays due to the unavailability of key WHO and JHU staff and the volcanic eruptions. The second phase is scheduled for early 1992.

## **2. Persistent Diarrhea/Dysentery**

### Objectives

- Assist CDD programs to implement cost-effective approaches to collect information on dysentery and persistent diarrhea through:
  - Support of a year-long study of persistent diarrhea in Bolivia.
  - Inclusion of questions on persistent diarrhea/dysentery in a routine data collection system of the Andean Rural Health Project in Bolivia.
  - Support of studies of the magnitude of persistent diarrhea and care-seeking behavior in Niger and Senegal.
  - Inclusion of questions on persistent diarrhea/dysentery in the WHO household survey in Zambia.

- Support of studies of the etiologic agents of dysentery in Burkina Faso and Senegal.
- Test the WHO persistent diarrhea algorithm in Sub-Saharan Africa as relevant.
- Support the PRITECH/Sahel regional technical officer's participation in the WHO/ADDR-sponsored persistent diarrhea workshop in New Delhi.

#### Accomplishments and Status

- The persistent diarrhea study and Andean Rural Health survey are in progress in Bolivia. The two dysentery studies and two persistent diarrhea studies in the Sahel were initiated in PY4 and will be completed in PY5. Questions on persistent diarrhea/dysentery have been incorporated into the protocol for the WHO household survey planned for PY5 in Zambia.
- PRITECH is considering supporting testing of the WHO/ADDR persistent diarrhea treatment protocol in the facilities in which the persistent diarrhea studies are being conducted in Niger and Senegal. In preparation for possible testing of the algorithm by PRITECH, Dr. Adama Kone of the PRITECH/Sahel office participated in the WHO/ADDR-sponsored workshop on persistent diarrhea in New Delhi in June 1991. The purpose of the workshop was to review the proposed persistent diarrhea treatment algorithm and to prepare researchers participating in WHO/ADDR's multi-center test of the algorithm.

### 3. Acute Respiratory Infections (ARI)

#### Objectives

- Explore possibility of initiating activities with A.I.D. to support ARI program development in up to two Sahel countries.

#### Accomplishments and Status

- PRITECH's Assistant Director for Research and Development and the Senior Program Manager for the Sahel participated in the WHO ARI Program Managers Course held in Tunis in June 1991. The purpose of their participation was to learn what is involved in setting up and managing an ARI program in order to assess the feasibility of PRITECH's possible involvement in ARI activities in the Sahel. PRITECH's proposed involvement in ARI in selected countries in the Sahel in collaboration with Johns Hopkins University and WHO has been approved in principle by A.I.D.. Implementation depends on finding an ARI expert to undertake this activity in the Sahel by January 1992.

#### 4. **Breast-feeding**

##### Objectives

- Support lactation management training and evaluation
- Support a francophone conference on infant feeding in West Africa
- Support pre- and post-conference research.

##### Accomplishments and Status

- PRITECH supported five Zambians and five Ugandans (plus one Ugandan Wellstart 'fellow') at Wellstart lactation management training in San Diego in August and September. PRITECH plans to provide additional 'seed money' support for establishment of a national or regional lactation management training center in Uganda and/or an adapted approach in Cameroon. In PY5 PRITECH will support training for seven Kenyans since commitment by the Kenyan MOH to support follow-up activities has been obtained. PRITECH will contract a consultant to design the evaluation of lactation management training in Uganda and Zambia. The evaluation will be completed in PY5.
- The West Africa conference on infant feeding was held in September in Lome and included over one hundred participants. Participants included key decision makers, researchers, program implementers, and representatives from ministries of health from Burkina Faso, Cameroon, Cote d'Ivoire, Guinea, Mali, Niger, Senegal, Togo, and Zaire. Also attending were representatives from WHO, FAO, A.I.D., and several S&T projects. Conference highlights were as follows:
  - African researchers presented the results of recent studies on improved weaning foods, the relationship of infant feeding to diarrhea, and the unnecessary use of supplementary water during exclusive breast-feeding. For many participants, this was the most useful part of the conference.
  - Participants had the opportunity to exchange views on issues such as the definition of exclusive breast-feeding for 4-6 months and the role of ORS in exclusive breast-feeding.
  - National delegations developed country plans of action, including activities such as developing national breast-feeding policies, conducting operations research on obstacles to breast-feeding, and establishing national breast-feeding steering committees.

- Participants endorsed the Innocenti Declaration and developed recommendations on infant feeding and child survival for African governments and donors, which will be widely distributed throughout the region.
- PRITECH, the Nutrition Communication Project (NCP), other A.I.D. projects and the other donors will be offering support for follow-up activities in the participating countries.
- Two research studies on breast-feeding practices of health workers and mothers in Cameroon and Senegal were completed and the results were presented at the conference. A study of the need for supplemental water in exclusively breast-fed infants in Cameroon was also completed and presented. This study confirmed that exclusively breast-fed infants in hot, arid climates receive adequate fluids through breast-milk alone and there is no need for supplemental water. The interviews of individual urban center health workers and mothers were carried out to gather baseline data needed for future evaluation of any KAP changes that occur as a result of the breast-feeding promotion activities to be initiated in Zambia.
- Proposals for PRITECH support of post-conference research or program activities are being prepared and will be considered by PRITECH in PY5.

## 5. Drug Management

### Objectives

- Develop drug prescription analysis computer software programs:
  - Develop the RXDD (Prescribing for Diarrheal Disease) computer software program and user's documentation
  - Test field application of the RXDD program in Honduras
  - Develop the RX (Drug Use Analysis System) program.
- Improve drug prescribing practices:
  - Develop and implement a proposal for working with private health facilities in Zambia, based on the successful INRUD strategy.
  - Develop and disseminate a drug management information package for PRITECH field staff.

### Accomplishments and Status

- The development of the RXDD computer program has been completed and the user's documentation is available in English, French and Spanish. The program was field tested in public health facilities in Honduras in May 1991. The next step is to promote the use of RXDD in PRITECH country programs, a focus for PY5.
- PRITECH has agreed to support the development of the next generation program, RX, which will have wider applicability to many diseases in addition to diarrhea if it is desired by Ministers of Health, USAID missions or regional bureaus. The program will be developed by MSH's Drug Management Program (DMP) in PY5.
- PRITECH will support a proposal for working to increase rational use of drugs in church mission and/or mines facilities in Zambia, based on the successful International Network for the Rational Use of Drugs (INRUD) model if feasible. Implementation will begin in PY5. Data from the drug prescription monitoring system will be used to evaluate the effectiveness of the intervention.
- PRITECH supported the development of an information/promotion package on drug management services available for PRITECH field staff. The package will be distributed to field staff in PY5. The objective of the package is to generate interest in drug management services, such as RXDD, available through PRITECH and MSH/DMP.

## **6. Medical/Nursing Education**

### Objectives

- Assist medical schools in the Sahel to incorporate CDD modules into pre-service training curricula through -
  - Participation of the PRITECH/Sahel regional technical officer in a WHO workshop for medical school teachers
  - Organization of a course similar to the WHO course in the Sahel.
- Assist nursing schools to incorporate CDD modules into pre-service training curricula through -
  - Work with nursing schools to improve methods for evaluating CDD knowledge and skills

- Development and testing of the new nursing school module on Nutrition and Diarrhea
- Encouragement of use of CDD modules during pre-service training in nursing schools in the Sahel
- Revision and reprinting of current nursing school modules following consultation with schools on projected need over five years
- Updating and printing of Arabic version of nursing school modules.

#### Accomplishments and Status

- PRITECH/Sahel Regional Technical Officer, Dr. Adama Kone, will participate in a WHO-sponsored workshop on medical education if possible in FY5. PRITECH/Sahel plans to organize a similar francophone workshop in PY5. All of the other activities listed above are planned for PY5. These activities are supported by country or regional PRITECH funds. Refer to the section of this report on the Sahel regional program for additional information.

### **7. Traditional Healers**

#### Objectives

- Conduct literature review and background research on working with traditional healers
- Develop, implement, and evaluate PRITECH's strategy for working with traditional healers in Uganda.

#### Accomplishments and Status

- PRITECH completed the literature review and background research on working with traditional healers. The final report was reviewed by outside experts and their comments are being incorporated into the design of the Uganda intervention.
- The PRITECH staff has designed the strategy for training traditional healers in Uganda, incorporating comments from outside reviewers of the background research report. Planning sessions have been held and the first activity, a training of trainers (TOT) workshop is planned for December. The PRITECH consultant contracted to assist with the design of the Uganda evaluation will attend the workshop as well. A task force will be held to review and discuss the proposed evaluation design during PY5.

## **8. Nutrition/Household Management of Diarrhea**

### Objectives

- Conduct operations research on feedings practices in the Sahel through -
  - Completion of four to five studies on feeding practices
  - Up to three trials to implement and evaluate recommendations
  - Evaluation of results
- Develop a nutrition checklist/guidelines for diarrheal disease control programs
- Provide technical assistance in developing policies on the home management of diarrhea
- Complete a field implementation aid on nutrition.

### Accomplishments and Status

- PRITECH's overall plan for feeding practices research in the Sahel includes studies in The Gambia, Senegal, Mali and Niger. These studies consist of three phases:
  - documenting current feeding practices and the cultural context in which they occur
  - assessing which dietary practices and content changes mothers are likely to adopt and
  - testing interventions that promote the recommended improvements.
- During PY4, first phase studies of feeding practices were completed in Mali, Senegal, Niger and the Gambia and the second phase study was completed in Niger. The results of the above studies were presented at the West Africa infant feeding conference held in Lome in September (see Breast-feeding section). Plans are proceeding for the continuation of research in the Gambia, Senegal and Niger. The continuation of research in Mali is on hold due to the political unrest and the uncertainty of the status of the CDD program.
- The nutrition checklist was developed and sent to outside reviewers, whose comments have been incorporated. The checklist was presented and distributed to key participants at the Lome Conference. It also will be sent to the researchers

and program people involved in the feeding practices studies for recommendations regarding country-specific application. The checklist will be sent to PRITECH field staff and other organizations in PY5.

- PRITECH Technical Officer, Elizabeth Herman, worked with the Nutrition Communication Project to develop a research methodology designed to assist CDD programs in making country-specific recommendations regarding home fluids to promote for use during diarrhea. Implementation of the methodology was planned for Kenya but has been postponed due to lack of support/interest of the Kenyan MOH. PRITECH plans to explore the possibility of implementing the methodology in another country or doing a smaller scale study in Kenya through other channels.
- The field implementation aid will be completed in PY5.

## 9. **Water and Sanitation/Hygiene**

### Objectives

- Arrange participation of PRITECH's Senior Program Manager for Central and East Africa as facilitator at the CARE-sponsored water/sanitation workshop for PVOs held in Mali
- Support and conduct a performance analysis and training needs assessment of Health Inspectorate Staff, (Environmental Hygiene Workers) in Uganda
- Encourage countries with a high incidence of Shigella to incorporate specific handwashing messages into IEC activities
- Collaborate with WASH and the Quality Assurance Project to develop a hygiene checklist/infection control guidelines for adaptation/use by different levels of health facilities
- Explore opportunities for working with soap manufacturers in selected countries to develop campaigns to promote handwashing.

### Accomplishments and Status

- PRITECH's Senior Program Manager served as facilitator at the CARE-sponsored water and sanitation workshop held in Mali. The performance analysis/training needs assessment of the Ugandan health inspection was completed in May-June, 1991. Initial contact was made with WASH to determine its interest in collaborating on the development of a hygiene checklist. WASH confirmed its interest in this activity, which will be pursued early in PY5 due to prior

commitments in PY4. PRITECH plans to contact soap manufacturers in selected countries regarding potential handwashing campaigns as the opportunity arises.

## 10. **Evaluation**

### Objectives

- Revise the WHO/CDD comprehensive Country Program Review (CPR) protocol in collaboration with WHO
- Develop a country profile evaluation instrument
- Complete a case study of CDD efforts in Kenya
- Assist evaluations of developmental programs in Breast-feeding and Traditional Healers.

### Accomplishments and Status

- During PY4, PRITECH and WHO collaborated to revise the CDD comprehensive Country Program Review protocol. The revision will be completed in PY5 and plans are in progress to field-test the revised protocol in countries of mutual interest to PRITECH and WHO in PY5 and 6.
- PRITECH developed a country profile evaluation instrument and manual to be used by PRITECH sustained country programs to assess periodically the progress of specific program activities, including sustainability status, and to identify specific deficiencies and information gaps. The country profile was field-tested in Zambia and Kenya in PY4. It will be distributed to PRITECH field staff for use in PY5.
- PRITECH completed research on the Kenya case study during PY4. The report is being revised by PRITECH and will be available for dissemination by the end of 1991.
- PRITECH plans to evaluate activities in Breast-feeding and Traditional Healers in PY5; these are discussed in those sections of this report.

## 11. **Other Activities**

### Objectives

- Respond to opportunities in selected country settings in order to extend the reach of messages on CDD and hygiene through schools.

- Complete a field implementation aid (paper) on activities CDD programs should consider to increase measles vaccination coverage and reduce the incidence of measles-associated diarrhea.

#### Accomplishments and Status

- A number of innovative activities in school health education are in progress throughout the Kenya country program (refer to the section on Kenya for more detailed information on these activities). No centrally-funded or -directed activities have been planned to date.
- The first draft of the field aid has been completed and will be reviewed prior to revision and distribution to PRITECH field staff in PY5. The paper focuses on actions CDD programs might take to reduce the number of 'missed opportunities' for vaccination of children seeking care at health facilities.

### E. TECHNICAL SUPPORT, LIAISON AND COORDINATION WITH R&D/H AND OTHER ORGANIZATIONS INVOLVED IN CDD

#### Objectives

- Support A.I.D. as requested
- Attend meetings/annual exchanges with other organizations.

#### Accomplishments and Status

- PRITECH technical staff reviewed and commented on draft documents from A.I.D. such as the CDD sections of drafts of A.I.D.'s annual report to Congress and a list of medical supplies requested for the cholera outbreak in Peru. At A.I.D.'s request, PRITECH prepared a summary of the status of CDD worldwide which included A.I.D.'s program for addressing CDD and A.I.D.'s future role in CDD. In addition, PRITECH completed the 1990 Child Survival Questionnaire for A.I.D. PRITECH assisted R&D/H and the Latin America Bureau with a meeting on cholera organized for centrally funded health projects and contractors.
- During PY4, Technical Division staff participated in meetings with WHO/CDR in Geneva and in Washington and a PAHO meeting on Breast-feeding. Also this year, meetings were held with staff from the Center to Prevent Childhood Malnutrition, HEALTHCOM, the Quality Assurance Project and DHS/Macrosystems.

## F. PROGRAM ISSUES AND PROPOSED ACTIONS

- A major Technical Division activity planned for PY4 in Kenya has been postponed indefinitely due to the lack of interest/commitment by the Kenyan MOH. This activity was the research on identifying home fluids to recommend during diarrhea. PRITECH proposes to conduct the home fluids research in another country where there is interest or in Kenya through another group/channel.
- The lack of a clear home management policy in Uganda is cause for concern in light of training planned for traditional healers. PRITECH has expressed this concern to the Ugandan MOH and will continue to encourage the definition of a clear household management policy.
- The WHO-organized courses which PRITECH has supported have placed an unacceptably heavy management burden on the Finance and Administration Division due to the lack of in-country administrative capability by WHO. Instead of being completely organized/managed by WHO, much of the country-level management has had to be assumed by PRITECH field and headquarters staff. PRITECH plans to discuss the problem with WHO directly before supporting additional courses.
- An issue that has arisen during implementation of developmental program activities in countries is how to ensure the incorporation of research results and development activities be incorporated into country program plans and PRITECH's overall agenda for support to specific countries. PRITECH decided to ensure that developmental program activities are addressed in country program reviews and in quarterly and annual reports from the field and supports workshops and follow-on activities.

## G. LESSONS LEARNED

- Experience from Pakistan has shown the need for strong support to teams returning from Wellstart training to assist them in establishing lactation management units and other follow-up activities. PRITECH proposes to reserve funds to support selected follow-up activities in countries participating in Wellstart training.
- Experience with WHO-organized courses has shown the need to establish clear administrative mechanisms with WHO before proceeding with any other jointly-sponsored courses.

- The potential administrative difficulty of collaborating with other organizations on major projects should be weighed carefully against the potential benefits of such collaboration in undertaking future projects.

## V. HEALTH SYSTEMS SUPPORT

### A. OVERVIEW

As it was originally conceived in the PRITECH II Technical Proposal, the Health Systems Support component of PRITECH continues to meet the short-term technical assistance needs of A.I.D./Washington, USAID Missions, regional bureaus, Ministries of Health, and other institutions in the area of primary health care.

During PY4, 29 assignments were undertaken by 45 consultants in a total of ten different countries.

TABLE 1

	NUMBER OF ASSIGNMENTS	NUMBER OF COUNTRIES
Africa	5	4
Asia/Near East	3	3
Latin America	16	3
Inter-Regional	5	
TOTAL	29	10

In meeting the goal of strengthening and/or enhancing a country's health care system of which CDD is a part, the type of technical assistance provided under Health Systems Support (HSS) achieved four primary objectives:

- **flexibility** in meeting a broad range of primary health care goals;
- **rapid responsiveness** to Mission and R&D/Health short-term technical assistance needs;
- **complementarity** to CDD/ORT programs; and,
- **institutional development** in primary health care.

By fulfilling these objectives, HSS proved useful and effective to Missions and R&D/Health in meeting short-term technical assistance needs throughout PY4.

Over the last year, these needs fell primarily in the following areas:

- prosthetics/rehabilitation needs assessment and project design
- drug management and rational drug use
- maternal/child health
- environmental health/health in the urban setting
- evaluation and health sector assessment
- institution building.

The last decade saw many developing countries severely damaged by civil strife and guerilla warfare. The result has been large numbers of people in these countries left without limbs or without the effective use of their limbs. In continuation of past efforts generated by the ANE Bureau in prosthetics, R&D/Health worked with Missions to find ways to help those countries facing the greatest need in this area. Subsequently, R&D/Health produced two buy-ins to PRITECH--\$85,000 in PY3 and \$250,000 in PY4--to utilize Health Systems Support as a mechanism through which to field expert consultants in prosthetics and rehabilitation needs assessment and project design to several targeted countries. During PY4, activities were carried out in Sri Lanka, Vietnam, Ethiopia, and Nicaragua.

A second example, illustrating the flexibility and responsiveness of HSS in meeting a range of primary health care needs is that of the role of HSS in funding consultant participation in environmental/urban health workshops. Health in the urban setting is viewed as an emerging area of need in those developing countries with large urban concentrations as their populations begin to suffer from environmentally-related afflictions such as respiratory infections and cholera. These diseases are often endemic in the urban setting and will require innovative and intensive new approaches in health care.

In its role of complementing and thereby strengthening CDD/ORT programs, HSS was again utilized, as in the past, in the area of essential drug management and the rational use of drugs. R&D/Health funds financed HSS consultancies to develop, test, and apply a prescribing practices computer program and to prepare for and present case studies on the RXDD program, pharmaceutical supply needs for cholera and a drug procurement program in the Caribbean at the annual meeting of HPN Officers for Latin America and the Caribbean in September 1991. The management of drug use and of prescribing practices in the health care community is an essential component of CDD programs, with these HSS consultancies serving to strengthen and complement CDD activities being undertaken in the Latin America region.

Throughout PY4, PRITECH consultant Barry Smith (currently Senior Program Manager for PRITECH's Central America operations) provided technical assistance to USAID/Managua under HSS by aiding in the preparations for a major health sector project. Beginning with extensive data compilation and the production of a recommendation report, a team of consultants contributed to the institutional development of the Nicaraguan health care system by pulling together a strategy outlining A.I.D.'s potential role in health care in Nicaragua. Finally, the PRITECH consultant prepared a New Project Description (NPD) and a scope of work for a project proposal team. Plans for the development of a new health sector project are currently underway in Nicaragua. Continued assistance to Nicaragua under HSS is anticipated.

Several other key activities were carried out during PY4 in the areas of water and sanitation, ORS production and supply, and maternal/child health. In the latter field, a strategy and a project for addressing high risk births in Guatemala were developed in completion of a process which spanned two and a half years.

In addition, two activities took place in the area of management systems. Funded through a buy-in from USAID/Niamey, a health sector assessment of the health management system in Niger was conducted. The final evaluation of the Health Systems Management Project in the Dominican Republic, centrally funded, was also carried out under HSS.

## B. FINANCIAL SUMMARY

During PY4 approximately 25 person months of short term technical assistance were provided through Health Systems Support. This represents a sharp decline in the amount of technical assistance provided in comparison to previous years. In PY3, for example, 62 person months of short term technical assistance was provided through HSS. The decline can be attributed to the virtual cessation of overseas travel during the four month Gulf Crisis. Project activities were reduced significantly during this period. To date, approximately 145 of the 250 person months allocated in the contract have been utilized. This leaves 105 person months for the remainder of the project.

Within the PRITECH project budget, \$2.5 million has been allocated for HSS activities. Expenditures for PY4 through June 1991 totalled approximately \$171,744. This combined with expenditures for PY1-PY3 and estimated accruals for the period July-September 1991 generates an estimated total of \$1,869,530 through PY4. A balance of \$1,421,361 remains for the life of the project.

As in previous years, buy-ins continue to fund many of the HSS assignments; however, in PY4 the number of centrally funded technical assistance assignments rose significantly. Per the chart below, 16 of the 29 assignments conducted this past year were centrally funded. This represents roughly 55% of the total.

TABLE 2  
FUNDING SOURCE

REGION	BUY-INS	CENTRAL	TOTAL
AFRICA	2	2	4
ASIA/NEAR EAST	1	1	2
LATIN AMERICA	5	10	15
INTER-REGIONAL	5	3	8
TOTAL	13	16	29

The Latin American Region continues to utilize HSS extensively to meet their technical assistance needs. Fifteen of the 29 assignments conducted this past year were in Latin America. Unlike previous years, however, the Latin American Region tapped central funds for 10 of their 15 assignments.

Three major buy-ins were received this past year for HSS assignments. These included buy-ins from Niger, Nicaragua, and R&D/Health (prosthetics). For PY5 we expect additional mission and bureau buy-ins to cover the majority of assignments. A breakdown of the buy-ins received in PY4 by funding source is provided below:

TABLE 3  
PY4 BUY-INS

FUNDING SOURCE	AMOUNT
AFRICA	\$150,000
ASIA/NEAR EAST	0
LATIN AMERICA	37,100
R&D/HEALTH	250,000

A reallocation of regional funding levels by person months and budget was proposed and approved in the PY4 workplan. This reallocation was proposed to better reflect regional utilization rates. The budget below reflects this and provides estimated expenditures through June of PY4.

**TABLE 4  
FINANCIAL SUMMARY**

BUY-INS					CENTRAL			
AREA	BUDGET	FY4 EXP	CUM EXP	% EXP	BUDGET	FY4 EXP	CUM EXP	% EXP
AFR REG	300,000	2,930	171,069	57%	150,000	6,220	84,056	56%
ANE REG	360,000	6,749	67,601	19%	240,000	494	143,593	60%
LAC REG	540,000	79,387	484,991	90%	310,000	27,502	121,097	39%
FVA	300,000	1,311	273,920	91%	0	0	0	0%
R&D/H	160,000	37,906	140,695	88%	140,000	9,246	115,614	83%
<b>TOTAL</b>	<b>1,660,000</b>	<b>128,283</b>	<b>1,138,275</b>	<b>69%</b>	<b>840,000</b>	<b>43,461</b>	<b>464,360</b>	<b>55%</b>

**TABLE 5  
UTILIZATION OF PERSON-MONTHS**

BUY-INS					CENTRAL			
AREA	P/M BUDGETED	FY4 USE	CUM USE	% USE	P/M BUDGETED	FY4 USE	CUM USE	% USE
AFR REG	30	0	14	47%	15	1	5	33%
ANE REG	36	0	5	13%	24	0	7	29%
LAC REG	54	6	48	90%	31	2	12	39%
FVA	30	0	28	93%	0	0	0	0%
R&D/H	16	2	10	60%	14	1	9	64%
<b>TOTAL</b>	<b>166</b>	<b>8</b>	<b>105</b>	<b>63%</b>	<b>84</b>	<b>4</b>	<b>33</b>	<b>39%</b>

**C. STRATEGY**

In order to fulfill its mandate of the provision of expeditious and efficient quality technical assistance to countries throughout the developing world in the area of primary health care, Health Systems Support will continue to be used as the mechanism through which PRITECH can readily respond to the short-term requests of A.I.D./Washington and USAID missions. A number of strategies for PY5 have been devised with this goal in mind.

**Staffing** - During PY4, the Financial and Administrative Unit, which has primary control over HSS activities, was restructured, with a new position created in response to plans outlined in the PY4 Workplan. This position, Deputy to the Chief of the Unit, was in part created to take on the responsibility of daily management of both HSS and overall project technical assistance. In order to achieve maximum efficiency in finance, management and administration as it relates to the provision of short-term technical

assistance through HSS, during the early part of PY5, the Unit will redefine the roles and responsibilities of the various staff members in Finance and Administration.

**Funding** - PRITECH will continue to solicit Mission and Regional Bureau buy-ins to fund the technical assistance provided under HSS.

Vis-à-vis sixth year funding for the PRITECH Project, the Finance and Administrative Unit plans to monitor the utilization rate of HSS throughout PY5 so as to be able to accurately project the person month and budget needs of HSS for the anticipated one-year extension of PRITECH.

**Types of technical assistance** - During PY4 several key, new areas of assistance developed reflecting the changing and emerging primary health care needs of the countries serviced by HSS. A strategy for PY5 will be to expand HSS in order to continue to meet these new needs, such as in the area of prosthetics, street orphans, urban health, and cholera.

One way in which to remain responsive to these needs will be to expand PRITECH's consultant registry by recruiting expertise in these areas, particularly seeking out consultants with experience in prosthetics/rehabilitation needs assessment and project design, health in the urban setting and environmental health, and in programs related to the orphan problem and AIDS.

**Follow-on technical assistance** - Many activities carried out under HSS over the past year could be considered "seed" activities or first steps in the establishment of a project or program. During PY5, PRITECH hopes to see HSS utilized to fund follow-on activities to provide technical assistance in establishing the next steps.

For example, in the area of environmental health and health in the urban setting, HSS funded the participation of two key consultants in workshops dealing with these areas of health care. Both consultants are Management Sciences for Health employees and thus are accessible, almost "in-house" resources to countries seeking assistance in designing activities to meet the needs of their urban populations suffering from environmentally-related health afflictions.

Approximately 70% of the funds remain in the R&D/H buy-in for prosthetics/rehabilitation activities. Though there are plans to continue to use this money to fund needs assessments in new countries such as Angola, PRITECH would support having this money applied to project design in those countries which received assistance in assessment during PY4. This goal is consistent with that of R&D/H as expressed by Allen Randlov who is managing all activities carried out under this buy-in.

Other areas of assistance funded by HSS during PY4 lend themselves to this follow-on strategizing. USAID/Managua utilized HSS to provide assistance putting together an

NPD; during PY5, a project proposal team will need to be fielded. PRITECH could provide one or more members of this team through HSS and should position itself to be involved in this effort given its past role in the institutional development of Nicaragua's health care system over the last two years.

This spectrum of assistance closely parallels the process carried out in Guatemala in the development of a high-risk birth strategy as part of the Mission's family health program. Funded through a series of buy-ins to PRITECH, HSS provided technical assistance over the course of a few years to USAID/Guatemala in the area of maternal/child health, beginning with studies of the problem and culminating in a health strategy.

#### D. SUPPORTED CONFERENCES

##### 1. Overview

In PY4, PRITECH continued to provide technical assistance to conferences addressing CDD and primary health care issues, by supporting the attendance of staff members and outside consultants to a total of eight conferences, sponsored by organizations such as the American Public Health Association (APHA), the Pan American Health Organization (PAHO), WHO, and CARE. The majority of support was provided to PAHO-sponsored conferences, as reflected in Table 2.

TABLE 6

Sponsoring Organization	Number of Conferences	Number of Persons
PAHO	5	20
WHO	1	1
CARE	1	1
APHA	1	1
<b>TOTAL</b>	<b>8</b>	<b>23</b>

Support of conferences in PY4 began with the attendance of PRITECH Technical Officer, Dr. Larry Casazza, at the 1990 Annual Meeting of the APHA, dedicated to the topic, "Forging the Future: Health Objectives for the Year 2000."

The prevention and control of cholera in Latin American was the focus of three of the five PAHO conferences to which PRITECH supported the attendance of staff members and Latin American physicians. Two of the conferences were held in Washington, D.C. PRITECH also supported the attendance of Latin American physicians in Mexico City at the PAHO-sponsored Sixth International Conference on Advances in the Treatment and

Prevention of Diarrheal Disease in Children and in Washington, D.C., at a meeting of the Latin America Regional Consultation Group on Breastfeeding at PAHO headquarters.

PRITECH Senior Program Manager for East and Central Africa, Agma Prins, served as a trainer and facilitator at the WHO International Clinical Managers Course held in Yaounde, Cameroon. In addition, Ms. Prins developed the curriculum and served as a facilitator for a CARE workshop in Mali, which focussed on the integration of water supply and sanitation with the control of diarrheal diseases in the programming of primary health care projects.

## 2. Financial Summary and Strategy

Actual expenditures in support of conferences during PY4 decreased from PY3. Consistent with previous project years, funds for these activities were drawn from R&D/Health central funds. Expenditures to date, by project year, are as follows:

TABLE 7

Project Year 1	\$126,062
Project Year 2	\$ 79,596
Project Year 3	\$125,539
Project Year 4	\$ 72,575
<b>TOTAL</b>	<b>\$403,772</b>

Consistent with the PRITECH II objective to promote the exchange of technical and programmatic information among persons responsible for designing and implementing ORT/CDD programs, technical assistance in support of these activities will continue in PY5. Of the \$637,197 allocated for this purpose, a total of \$403,772 has been spent, leaving a balance of \$233,425 available for the support of conferences in Project Years 5 and 6.

## **VI. INFORMATION SUPPORT COMPONENT**

One of the most important contributions that the PRITECH Project can make is to leave technical and programmatic information in the hands of those who are implementing diarrheal disease control programs in the field. The Information Center collects information about diarrheal disease control (CDD) and other related health interventions and makes it available to AID missions, ministries of health, and health practitioners worldwide. Through its database and access to outside databases, the Information Center responds to information requests on diarrheal disease topics from individuals around the world. The Center publishes the Technical Literature Update, a bi-monthly review of child survival literature available in English, French and Spanish. In addition, the Information Center distributes the PRITECH Occasional Operations Papers, a series of papers based on programmatic experience in the field and lessons learned. For the past four years, the Information Center has helped increase awareness of the proper management of diarrhea among health professionals and project implementers through four mechanisms:

- Sending the Technical Literature Update on Diarrhea to more than 10,000 health professionals around the world
- Responding to more than 1,500 information requests a year, primarily from health professionals in the developing world
- Providing articles to 300 key policymakers and project implementers on primary health care on a monthly basis. This service is the only one of its kind and may well represent the recipients' most reliable source of information on child survival issues.
- Documenting country program experiences through the Quarterly Highlights Report, Weekly Activities Report, and the Occasional Operations Papers.

### **A. SUMMARY OF PY4 ACTIVITIES**

PY4 saw an increase in Information Center responsibilities as the staff added project documentation and production of publicity materials to collection and dissemination of information. The Center began producing two new PRITECH products: a quarterly highlights report, which documents the project's progress on a quarterly basis; and a series of country program profiles, which describes PRITECH activities in sustained country programs. The Center also produced an array of project publicity materials, including portfolios, report covers, stationery, and a new project leaflet.

To document project experiences, a member of the Center staff attended the joint PRITECH/NCP Conference on Optimal Infant Feeding Practices and visited the Sahel

Regional Office in Dakar. During PY5, three occasional papers will be written on the basis of these experiences. In addition, the Center began to distribute a new series of PRITECH Occasional Operations Papers.

This year, the Information Center contributed to cholera prevention and control efforts by developing a cholera information package, which was sent to HPN officers throughout Latin America and cholera-affected African countries, R&D/H projects and to others upon request. The Center also produced a special cholera issue of the TLU. This issue has been reprinted in large quantities to meet the demand for extra copies.

During PY4, the Information Center handled a record number of information and document requests. One of the reasons for the increase in requests was the addition of 42 overseas child survival PVO offices to the Monthly Acquisitions List.

The growing volume of information requests from health professionals and project implementers in developing countries attests to their urgent need for information. Since 1989, information requests have tripled. Moreover, evidence suggests that Information Center products are filling an important niche. The Director General of Health Services in Saudi Arabia writes, "With reference to the TLU, I'd like to express my thanks and appreciation for this most useful publication." A provincial CDD Coordinator from Tanzania comments that the slides and cassette he received from the Center "will be of great help to me when teaching other health workers." The head of A.I.D.'s PVO Child Survival Support Program says of the TLU, "Your comments cannot fail to be of interest to each of the PVO Child Survival Projects."

## B. OBJECTIVES AND ACCOMPLISHMENTS

### 1. Acquisitions

#### Objectives

- Acquire at least 70 documents a month
- Improve computer efficiency
- Maintain exchange relationships with other information centers.

#### Accomplishments and Status

- In Fall 1990, the Information Center converted its database from SciMate to ProCite. The conversion allowed the Center to take advantage of the latest information technology and to conform to other AID-funded information centers. Information Center staff also upgraded their computer skills, taking courses in WordPerfect desktop publishing and Harvard Graphics. As a result, the staff now

desktop publishes the annual bibliography, the Quarterly Highlights Report, PRITECH Monthly News, and the country program profiles.

- During PY4, the Center collected about 1100 documents pertaining to technical CDD issues, program implementation, and behavioral science, as well as materials produced in developing countries. New documents continue to be supplied through the Institute for Scientific Information, the AID Research & Reference Service, the National Library of Medicine, and PRITECH field offices. In keeping with the project's priorities, the Center expanded its collection in the areas of breastfeeding, private sector activities, ARI, and nutrition.
- In regard to exchange relationships, the Center continued to exchange documents with other information centers both in the U.S. and abroad. Center staff met with the information managers of INCAP, ORANA and AHRTAG during the project year, as well as the managers of the other AID health projects. These meetings have led to mutually beneficial exchange relationships and provision of technical assistance with computer software and mailing list development.

## 2. Dissemination

### Objectives

- Respond promptly to information requests
- Send out Monthly Acquisitions List and fill requests for documents
- Add child survival PVOs and country program managers to the Monthly Acquisitions mailing list
- Conduct user survey of the Monthly Acquisitions List
- Produce and distribute the annual bibliography
- Send out mass mailings to field representatives and others
- Exhibit at conferences.

### Accomplishments and Status

- In order to increase awareness worldwide of the proper management of diarrheal disease, the Center continued to target developing country health professionals, the health officers at USAID Missions and Bureaus, the field offices of PVOs, CDD Program Managers, other S&T health contractors, and overseas information centers with the latest CDD technical and program information.

- This year the Information Center responded to 1,580 requests from the groups mentioned above. The proportion of requests from developing country nationals has increased, largely through word of mouth. The number of requests handled is 8 percent higher than last year's total, and continues to grow as the Center becomes better known, particularly in developing countries. The Center's largest user group is now developing country nationals, followed by PRITECH staff, A.I.D. contractors, A.I.D. staff, and PVOs.
- Reaching overseas libraries and information centers is particularly important, since these institutions reach hundreds of developing country nationals. In Dakar, Senegal, for instance, the CDD Information Center at ORANA receives nearly all of its documents from PRITECH. These documents are in turn sent out to 750 health policymakers throughout francophone Africa. The PRITECH Information Center also sends documents to information centers in Uganda, Pakistan, the Philippines, Indonesia, and Bangladesh.
- The Center expanded the number of people receiving the Monthly Acquisitions List to include the domestic and overseas offices of the AID Child Survival PVOs and CDD managers in developing countries. Since the PVOs are implementing CDD projects in the field, they have become an important user group of Information Center services. Due to the growing number of information requests and the time spent on project publicity materials, the Center was unable to conduct a survey of the recipients of the Monthly Acquisitions List. The survey will be conducted during PY5.
- During the past year, the Center provided information services to a new client group: private commercial companies who are interested in producing and promoting ORS and in public education about preventive activities. These companies included Lever Brothers, Johnson & Johnson, and Highnoon Laboratories.
- The Information Center also provided numerous proactive services over the course of the year, most notably in the area of cholera. Soon after the cholera epidemic broke out in South America, the Center started receiving requests for information on cholera treatment and prevention strategies. After handling several of these requests, the Center developed a cholera package, consisting of practical, "how to" documents and the latest technical information. The Center distributed the cholera package at an AID cholera workshop in June, and sent copies to the AID HPN officers in the Latin American and African countries affected by cholera.
- In addition, the Center sent out numerous copies of videos and slide shows on ORT to rural clinics, teaching hospitals, and NGOs, where they are used to teach health workers and mothers about ORT.

- During PY4, the Information Center disseminated about 100 copies of the fourth annotated bibliography, mostly to health workers in developing countries who used it to request documents from the Center. The Center also produced the fifth annotated bibliography, which will be distributed in Fall 1991.
- During the course of the year, the Information Center sent out more than 70 documents to field representatives, based on their research or program interests. These documents help keep PRITECH field staff up-to-date about the latest developments in the child survival area.
- The Center had its most successful year to date at the NCIH Annual Conference in June. Staffing the PRITECH exhibit, the Center responded to 150 requests for documents and information and distributed hundreds of project leaflets and publication lists.

### **3. Technical Literature Update**

#### Objectives

- Produce 10 issues of the TLU
- Coordinate guest editor issues
- Produce subject index for Volumes 4 and 5
- Learn how to desktop publish the TLU.

#### Accomplishments and Status

- The TLU is currently distributed to more than 10,000 physicians, health professionals and public health officials throughout the world. Requests for subscriptions and reprints of the articles continue to grow. The English version has grown to 5,665 readers, an increase of 11 percent over last year. Distribution of the French version, which totals 1,200 (an increase of 20 percent), is handled jointly by ORANA and PRITECH. The Information Center currently sends out 3,400 copies of the Spanish version. Distribution has grown by 150 percent this year.
- The Center produced six issues of the TLU during PY4. Three of these were edited by TLU Technical Editor Dr. Robert Northrup and the remainder by guest editors. Although the Center produced fewer than ten issues this year, the six were longer and more comprehensive than usual. Two issues are particularly noteworthy: a special WHO issue, in which the staff of WHO/CDR chose the

most important CDD articles of the past decade; and a special cholera issue, which has been reprinted to meet the extra demand.

- Bound versions of the back issues of all three languages are now available. In addition, the Center completed a subject/author index for volumes 4 and 5 which is sent out with all back issues.
- During the summer, the Information Center sent letters to all TLU readers who distribute more than 50 copies of the TLU to determine how and to whom they distribute it. To date, the respondents have indicated that they distribute the TLU to pediatric residents, nursing schools, medical libraries, DTUs, PVOs, and other institutions. Some respondents have asked if they could distribute more copies.
- Information Center staff attended a course to learn how to desktop publish several PRITECH products, including the annotated bibliography, the quarterly highlights report, the monthly bulletin, and the TLU. However, other demands on staff time make it unlikely that the TLU can be published in-house.

#### **4. Documentation of the Project**

##### Objectives

- Produce Weekly Activities Reports, Monthly News Bulletins, and Quarterly Highlights Reports
- Develop project publicity materials
- Maintain central files
- Arrange for translation and distribution of PRITECH publications.

##### Accomplishments and Status

- Information Center responsibilities grew during PY4, as the Center assumed the production of two new PRITECH publications: the Quarterly Highlights Report and a series of country program profiles. The Quarterly Highlights Report keeps AID/W, PRITECH subcontractors, and other AID contractors up-to-date on the project's progress. The country program profiles describe the national CDD program and PRITECH's contribution in each PRITECH country. The Center continues to produce the Weekly Activities Report to AID/W and the Monthly News Bulletin, which informs PRITECH field staff about project activities.
- Another new activity was production of a set of publicity materials for the project. Working with graphic design firms, the Center developed a portfolio,

report covers for the project's annual and quarterly reports and the occasional operations papers, new stationery, and a new PRITECH leaflet. These materials give the project a more attractive, professional image.

- The Center continued to organize and maintain the project's central files, as well as research and respond to project information requests from the staff and AID/W. The files are used daily.
- This year, the Center arranged for the printing of 3,000 copies of the Spanish version of Talking with Mothers about Diarrhea for PAHO. In addition, the Center has begun to copy-edit, produce and distribute the PRITECH Occasional Operations Papers.
- An unanticipated new activity which the Center has taken on is the documentation of program experiences in PRITECH countries through the preparation of operations papers. A staff member travelled to Togo in September to document a joint PRITECH/NCP conference on optimal feeding practices in West Africa and to the Sahel Regional Office in Dakar to document several successful experiences in that region.

#### C. PROGRAM ISSUES AND PROPOSED ACTIONS

- Although the Information Center used three guest editors for the TLU in an attempt to produce ten issues this year, only six were actually produced. Since the contract calls for bimonthly TLUs, however, this does not present a contractual problem. The PRITECH Management Team suggested that the Center plan on producing a minimum of six issues next year.
- Because of the increasing volume of information requests and escalating postage costs, the Center exceeded its annual budget by 2 percent. In a meeting in July, the PRITECH Management Team agreed that the Center could increase the annual budget by 10 percent, rather than cut back on services.

#### D. LESSONS LEARNED

- The growing volume of information requests (and repeat requests) from developing country nationals shows that the demand for information in developing countries is practically insatiable. Health professionals desperately need information that will help them do their jobs, and have little access to information in-country. PRITECH should do everything possible to meet these information needs and to steer health workers to other existing sources of information.

## **VII. MANAGEMENT AND ADMINISTRATION**

### **A. WORKLOAD AND STAFFING**

The PRITECH Project remains one of A.I.D.'s largest and most complex at a level of financing of \$35.9 million over a five-year period.

- It currently operates 18 country or regional programs in Africa, Asia, and Latin America. These programs are managed by 21 full-time resident staff positions.
- It has, through its Health Systems Support component, provided over 140 person months of short-term technical assistance to some 37 countries.
- It carries out a research and development program involving \$2 million for activities and contributions from nine experts on the PRITECH staff in a variety of functional areas which complement country programs.
- It has, through its information dissemination section, developed one of the most comprehensive and influential sources of technical and institutional information in the world related to the treatment of diarrheal diseases. This effort is managed by a staff of three.
- It has carried out all of the complex financial and administrative tasks for this program with a staff of five in the Finance and Administration Division of the headquarters operation; a staff increase is urgently needed.
- As of the end of PY4, a total of 1,409 professional person months of effort have been used out of a total contracted level of 2,527, or approximately 56 percent.

#### **1. Headquarters Workload Analysis**

##### **a. Field Support Function**

The unique capability and complexity of PRITECH relate to its field operations. There is general agreement reflected in the Mid-term Evaluation, in discussions with WHO, UNICEF, and other international donors, and in the conclusions of the TAG, that development of effective national CDD programs is best supported with the kind of hands-on, day-to-day field operations which have been the hallmark of PRITECH. It is the extensive field operation, most notably in Africa, which most distinguishes this project from other centrally funded activities.

With this field presence and capability, however, there are also heavy administrative and financial management burdens resulting from the plethora of A.I.D. regulations governing every step of the process of assigning and maintaining a field staff and administering local programs.

Some of these relate to the complexities of financial and administrative support of field operations:

- field accounting and voucher review;
- training of staff in A.I.D. procedures;
- establishing and maintenance of local bank accounts;
- funds transfers and exchange;
- compliance with auditing requirements;
- PIO/T reporting and tracking of buy-ins.

Others of these relate to the assignment of long-term staff overseas:

- USAID and A.I.D./W approvals including salary approvals and allowance approvals; we currently have a checklist for 13 to 17 separate approvals for routine staffing assignments;
- negotiation of housing and office leases;
- vehicle and equipment procurement;
- establishment and administration of overseas employee benefits including education allowances, housing allowances, and shipping and storage of effects;
- hiring of local staff according to local employment regulations with USAID and host country approvals.

Others of these relate to the mandate to collaborate with international donors and to develop local capabilities:

- sub-contracting with WHO and other international organizations involving layers of approvals, or sub-contracting with local institutions which have no experience with A.I.D. regulations;
- establishing and approval of salary levels;
- establishment of reporting procedures related to field operations;
- provisions for audit and bookkeeping for local operations;
- hiring of local professionals and local firms, including the orientation of individuals in A.I.D. procedures and requirements.

Others relate to the review, analysis, and processing of field reports and workplans. In the case of each field operation, workplans are prepared on an annual basis outlining accomplishments expected and activities to be completed during the coming year. These are based on the overall Country Program Plan approved at the initiation of the country program.

The reporting requirements for each Country Representative and covering each field program are as follows:

- A detailed Quarterly Report on progress, problems, and overall status of each field program.
- Monthly Field Letters from each overseas country representative, which supplement the Quarterly Reports.
- An Annual Report and Annual Workplan is also prepared on each country program.

The administrative and financial problems are manifold. Supporting a project such as PRITECH is not like supporting a large field contract team in a single country project. In such a case, only one or two people need to be trained to handle financial accounting and reporting tasks, local procurement or personnel procedures, compliance with audit requirements and general A.I.D. regulations and requirements included in the contract. Similarly, in such cases there is only one monthly report of each type to receive, review and process; and in the case of the financial report it is in a single currency. The task faced by PRITECH is that of a large contractor with field teams in fifteen different locations, with different local procedures and different currencies and banking regulations. All field personnel have to be trained in the financial and administrative procedures; and reports from fifteen field operations in fifteen different locations with fifteen different currencies have to be received, reviewed and processed. In most country projects A.I.D. approvals for local procurement or personnel actions can be obtained locally from the A.I.D. mission with any questions or issues handled in face-to-face negotiations or discussions before confirmation in writing. Under PRITECH virtually all local procurement must be approved in Washington by the CTO in R&D/H on the basis of justification prepared by the PRITECH Home Office. This adds to the substantial volume of paperwork that must be processed.

#### b. Overall Washington Workload

The preceding section describes the workload associated with support of field programs, especially financial and administrative support. Other programs managed entirely from Washington -- developmental activities described in Section IV, health systems support described in Section V, and information functions described in Section VI -- add substantially to the financial and administrative workload. For example, there are eight major developmental activities, such as the breast-feeding initiative; each rivals a typical country program in terms of management complexity and administrative workload. Usually these developmental activities are implemented in the field, which means these activities also create a field support burden. The overall financial and administrative workload which results from all these programs is difficult to describe. Some sense of

the load is apparent from the numbers of documents or transactions involved. During PY4:

- 243 task orders were prepared for approval by the CTO; the cumulative task orders, each a unit of management, exceed 1,000;
- 118 travel authorizations were prepared for approval by the CTO;
- 125 assignment reports were submitted to A.I.D.

PRITECH is managing 23 active sub-contracts and purchase orders. In PY4, 20 new sub-contracts were negotiated. There were 20 competitive procurement actions, most of which required documentation of specifications and bids, and approval by the CTO. In PY5, PRITECH will review the approval requirements with A.I.D. seeking opportunities to reduce the approval workload by aggregating requests, by avoiding redundant serial requests, and by identifying any requests where approval can be delegated to the contractor.

Both the field staff and the Washington staff devote considerable time to preparation of regular reports to A.I.D. PRITECH tries to use these reports for internal program management as well as for informing A.I.D. These reports, their normal length, and their frequency are listed below:

<u>Report Title</u>	<u>Length</u>	<u>Annual Frequency</u>
Project Implementation Plan	75 pages	1
Annual Project Report	75 pages	1
Quarterly Management Report	60 pages	3
Quarterly Highlights Report	40 pages	3
Monthly Financial Report	30 pages	12
Child Survival Activities Report	40 pages	1
Weekly Activity Report	1 page	50

In addition, PRITECH submits multi-year program plans and budgets for each country program and developmental activity, with revision as programs expand or extend; approximately 15 such reports were prepared last year. PRITECH is asked to prepare technical papers for A.I.D., such as the program guidance papers on cholera. Of course, on a day-to-day basis, a substantial portion of staff time is spent on communications for USAID mission and regional bureaus: drafting scopes of work for assignments; working out travel schedules; and drafting telegrams for mission concurrences for travel.

A large share of senior management time is devoted to pursuing opportunities for country programs. As explained in Section VI, PRITECH has made promotional efforts for programs in 45 countries. In each case, substantial staff time is needed to learn about the country, to consult with A.I.D., WHO and UNICEF staffs about program needs, to field teams to assess country situations, and to develop proposals for programs. The

development of support for a country program sometimes takes two years; and sometimes, after two years' effort, the proposal is rejected, not because of lack of need nor because the proposal is unsatisfactory, but because of the limited ability of USAID Missions to take on added activities for either staffing or budgetary reasons. Frequently, decisions by A.I.D. not to approve the proposal come late in the process.

## 2. Organizational Structure and Staffing

The present structure of field and headquarters operations has been endorsed by the Mid-term Evaluation and has proven cost-effective in practice. The three Divisions at headquarters provide differing and complementary perspectives, assuring that each activity is managed and reviewed from the points of view of technical adequacy, administrative feasibility and compatibility with appropriate program strategy.

MSH successfully recruited a new Director for the project, Glenn Patterson, a senior executive in the foreign assistance field with experience in health program planning. He began working full time in mid-February 1991. This recruitment fills one of the two long-vacant leadership positions on the project. MSH continues intensive recruitment for the Technical Director's position.

### a. Field Staff Structure

The field staff structure was maintained in PY4. In most sustained country programs, there is a country representative supervised by a Senior Program Manager for the respective region. The SPM provides both technical and management direction to the country programs. The country representative works directly with host government officials, the USAID in the country and with other donors. He/she is also responsible for developing annual workplans and for monthly, quarterly, and annual field reporting.

In Africa there are eight country representatives and an additional five technical staff positions, supervised by two SPMs located in Senegal and Cameroon. In Asia there is at present one country representative located in Indonesia and supervised directly from PRITECH headquarters. In the Latin American/Caribbean region, there are at present two country representative positions which are located in Mexico and Bolivia. A Senior Program Manager is located in Honduras to direct program activities in Central America and Mexico, especially as related to cholera.

The Mid-Term Evaluation recommended that PRITECH give priority to recruiting three to five new candidates for country representative positions. In PY4, candidates were recruited for Indonesia, Cameroon, Burkina Faso, Gambia and Uganda as well as the regional position in Central America. Appointments of staff were completed for five of these positions.

## **b. Headquarters Staff**

The Mid-Term Evaluation strongly recommended that PRITECH fill the Technical Director's position as quickly as possible. Subsequently, MSH has identified six well qualified candidates; however, five candidates declined the position. One candidate is still under consideration. Nevertheless, PRITECH has taken steps to provide technical leadership through other means. The School of Public Health at Johns Hopkins (JHU) has agreed to increase their technical staff support through the sub-contract with MSH. Dr. David Sack has agreed to spend two days each week on technical and case management issues; he is currently in demand for his expertise with cholera epidemics. Dr. Elizabeth Herman is doubling her time, from two to four days per week; she is taking the lead on a broad range of issues, notably nutrition and feeding practices, traditional healers, operations research design, and overall program strategies. JHU will also provide technical guidance for acute respiratory infection activities. PRITECH is continuing the services of Dr. Robert Northrup, currently a member of the faculty at Brown University Medical School; Dr. Northrup is very well-known in the CDD community, especially as the Technical Editor of PRITECH's Technical Literature Update.

Managerial direction of the project has been strengthened by adding a new Assistant Director position for Operations functions. The tasks of program development, design and management for a growing portfolio of country programs have exceeded the management capacity and required extensive overtime work. Without adequate senior-level managers, management by crisis had become the norm. Routine visits to field sites compete unsuccessfully with urgent matters at headquarters; as a result the headquarters staff risks getting out of touch with field operations. Without adequate senior managers, able to interact with field staff and to visit the field, PRITECH becomes increasingly less able to monitor the quality of the field programs. Bill Jansen adds significantly to PRITECH's capability to handle the varied and frequent issues that emerge from country programs and to give attention to program development.

The heavy burden on the Finance and Administration Division is described above, notably the workload of supporting field offices and administering programs according to A.I.D. regulations. More rapid implementation or expansion of program activity is not possible without enlarging the capacity of this Division. The Finance and Administration Division is presently composed of six persons. Although a new position for a Deputy in the Division has been filled, the Division is still seriously understaffed; additional positions are needed. More work has to be delegated by the head of the Division; more senior staff is needed to allow this delegation. The full rationale for this increased staff is discussed in separate documentation.

## B. FINANCIAL STATUS

The Mid-Term Evaluation team recommended that "S&T/Health should apply for a no-cost extension of the PRITECH contract which would extend the effort until at least September 1993."

PRITECH has reviewed the implementation plans for approved programs and activities and determined that an additional year is needed to achieve project objectives, mainly because the first year of the project was an overlap with PRITECH I, which also required a one-year no-cost extension. As a result, PRITECH II program activities and expenditures of funds did not get underway until the second year of the project, thereby deferring implementation schedules for one year. We have reviewed past expenditures and the projected spending and level of effort needed for an additional year. PRITECH can continue operation through August 31, 1993 within the funds and person-months currently authorized by the contract.

PRITECH is proposing an amendment of the contract to provide for the extension, with a revised budget supporting the proposal. Other amendments are being proposed to clarify unclear or contradictory language in the present contract. Some proposed amendments will document changes previously agreed on by the Office of Health and PRITECH, such as revised reporting requirements and broadening of the research program. A final version of the proposed amendments will be submitted to the A.I.D. Office of Contracts by MSH early in PY5. These amendments, when approved by A.I.D., will permit both commitments and expenditures into PY6 at no additional cost to A.I.D.

The most important issue to be resolved by A.I.D. in the proposed amendment is whether the definition of level of effort included only professional positions or also includes administrative support staff. The original MSH proposal and the final negotiated budget for PRITECH were based on the narrower definition, professional positions only. If A.I.D. has changed the basis of calculation to the broader definition, the level of effort will not be sufficient to extend the project through the sixth year.

### 1. Financial Planning

The project financial plan has been revised to cover extension of activities through PY6. The estimated costs for this additional year were presented in the Workplan for PY5. We are able to cover the costs of the extension without reducing project activities. The budget provides more resources for research and development activities, in line with recommendations of the mid-term evaluation team, including an allocation for nutrition-related research in the Sahel. The costs of some field programs previously approved for R&D Bureau funding are now being proposed for Regional Bureau or Mission funding; the principle is to reserve R&D funds for innovative programs and to ask Bureaus to share the financial burden for established programs. The Central and Eastern Africa

Region program and the Zambia country program are examples of well-established programs that R&D alone has funded.

## 2. Rates of Expenditure

The Mid-Term Evaluation team recommended that "PRITECH should significantly increase its spending on country programs ..." The financial analysis presented in this report indicates that 47 percent of the funds set aside for country programs in the revised budget, as presented in the PY4 Workplan, have been expended. This rate of spending was achieved despite a slow-down of activity in the second and third quarters because of travel restrictions caused by the Gulf War. The overall spending for the project has passed the halfway mark.

The momentum of the program reflected in the expenditure levels is steadily building; however, it will be difficult to increase the rate of expenditures without taking steps to expand the administrative capacity of the project. The Finance and Administration Division is already operating far above normal capacity, mainly by extending working time into evenings and week-ends. This pace cannot be maintained.

Assuming that the project can resolve the problems in financial and administrative systems to permit more rapid implementation, the table below presents the planned rates of expenditure.

**SUMMARY OF ACCRUED AND PROJECTED EXPENDITURES**  
(\$'s millions)

FUNDING CATEGORY	Accrued Expenditures Thru 9/30/91		Accrued PY4 Expenditures		Projected PY5 Expenditures		Projected PY6 Expenditures		Total Expenditures	
	Total	R&D	Total	R&D	Total	R&D	Total	R&D	Total	R&D
Country Programs	8.5	3.1	3.5	1.3	4.6	1.5	4.9	1.5	18.0	6.1
System Support	2.3	0.9	0.5	0.3	0.8	0.4	0.9	0.5	3.9	1.8
R&D/Info. Services	1.6	1.6	0.9	0.9	1.0	1.0	1.2	1.2	3.8	3.8
Project Management	6.2	6.2	1.9	1.9	2.0	2.0	2.0	2.0	10.2	10.2
<b>TOTAL</b>	<b>18.5</b>	<b>11.8</b>	<b>6.8</b>	<b>4.4</b>	<b>8.4</b>	<b>4.9</b>	<b>9.0</b>	<b>5.2</b>	<b>35.9</b>	<b>21.9</b>

## C. OTHER MANAGEMENT OBJECTIVES

### 1. Country Program Development

The contract requires PRITECH to develop 12 to 15 sustained and up to 15 intermittent country programs. The Mid-Term Evaluation team recommended that PRITECH accelerate the establishment of new sustained country programs. The PY4 Workplan

proposed promotional visits to eleven countries, anticipating that program plans could be developed for a few of these countries.

As reported in the preceding sections on Country Programs, PRITECH has given top priority to identifying opportunities for new or expanded country programs. The effort involved in pursuing any single country opportunity is substantial, and is especially costly in terms of senior management time. Not all of these are successful because of competing priorities of A.I.D. Missions and due to limitations on their administrative capacity.

Up to this point, PRITECH has developed 18 country programs and set up three regional operations. Four other countries are currently candidates for programs. PRITECH staff and consultants have made promotional visits to fifteen additional countries, and have attempted promotional visits for five more countries. In total, PRITECH has undertaken substantial promotional work for forty-five programs to produce the existing eighteen programs.

We expect that additional country program opportunities will develop so that PRITECH will achieve its country program targets. R&D Bureau initiative and support is often crucial to opening up country opportunities. For example, direct messages to Mission Directors, such as Assistant Administrator Richard Bissell's letters related to the Pakistan private sector program, can open up a broader discussion with more funding possibilities, such as funds for private sector programs. Likewise, direct discussion with Mission staffs, when Health Officers visit R&D/Health or when PRITECH staff visit Missions, can bring to life potential programs which Mission staff might not otherwise initiate; promotional work with Central American Missions is an example.

## **2. Coordination with CDD Donors and other Cooperating Agencies**

Section F.4.g. of the contract states "The contractor will be expected to coordinate with the DDC coordinators of WHO and UNICEF ..." R&D/Health and USAID Missions encourage A.I.D.'s central contractors to collaborate and to avoid overlapping activities in the field.

WHO and UNICEF have each engaged with PRITECH in actively collaborating on joint endeavors. Organizing and promoting country programs has been an important joint endeavor during the year: Cambodia, Cameroon, Nigeria and Uganda with UNICEF; Bangladesh, Nicaragua, Guatemala, Mexico, and Tanzania with WHO. UNICEF's renewed commitment to CDD, resulting from James Grant's decision to double UNICEF funding for CDD, is becoming apparent at the country level as UNICEF funding is increased, e.g., Cameroon. PRITECH is joining with WHO, the Quality Assurance Project, and Healthcom in a broad assessment of the effectiveness of training for health workers, evidence of more openness at WHO to collaboration with A.I.D. contractors on strategically important topics.

PRITECH is making special efforts to organize joint activities with other A.I.D. projects:

- continued work with Wellstart and the Nutrition Communication Project (NCP) on breastfeeding, notably in West Africa and East Africa;
- organization of a cholera program with Healthcom and WASH, also coordinating with WHO, PAHO, and INCAP;
- a successful West Africa nutrition conference with NCP which reviewed results of PRITECH research and action plans for several countries;
- agreement to continue ORS production and marketing activities begun by Project SUPPORT;
- a joint training program with WASH in the Sahel; and
- the training assessment mentioned above, with the Quality Assurance Project and Healthcom.

### **3. Other Management Activities**

PRITECH worked closely with the Mid-Term Evaluation team, both at headquarters and in the field. This effort involved preparation of extensive briefing materials by the Information Center, formal briefings, and numerous informal meetings between PRITECH staff and the team members.

The headquarters staff has energetically begun to standardize, to make more efficient, and to document routine management procedures. Many of PRITECH's routine management procedures have evolved over time without being documented and often without a basis for standardized action. PRITECH now has an Operations Handbook which prescribes documents and reports, outlining responsibilities for preparation, processing and review, as well as other administrative matters, such as management of central files. PRITECH has introduced a new report, Quarterly Highlights, which will inform other A.I.D. contractors and cooperating organizations about PRITECH's current activities. A PRITECH Action Log is now being used to monitor outstanding assignments.

## VIII. FINANCIAL ANALYSIS

At the end of PY4, PRITECH had accrued expenditures totalling \$18.5 million, of which \$11.8 million was from S&T Bureau funds. Unexpended S&T funds in the contract at the end of PY4 are \$3.6 million, less than the amount estimated for expenditures in PY5. We expect annual expenditures for PY5 from S&T funds to be about \$4.9 million, increasing slightly from PY4. In PY6, we project another slight increase in expenditures from S&T funds to \$5.2 million. PRITECH will need new commitments of funds from the S&T Bureau totalling \$6.5 million, which could be obligated as equal amounts of \$3.25 million in PY5 and PY6. The PY6 funds will be needed early in A.I.D.'s fiscal year 1993.

PRITECH has received \$11.0 million of "buy-in" funds from USAID missions and bureaus other than the S&T Bureau. From this amount, PRITECH has accrued expenditures of \$6.6 million. PRITECH is seeking \$3.0 million of additional buy-ins. In August and September of 1991, PRITECH submitted proposals to the S&T Bureau for \$2.1 million in buy-ins from the Africa Bureau, for country and regional programs in Africa. The table below projects expenditures for the major components of the contract during PY5 and PY6:

SUMMARY OF ACCRUED AND PROJECTED EXPENDITURES

FUNDING CATEGORY	Accrued Expenditures Thru 9/30/91		Accrued PY4 Expenditures		Projected PY5 Expenditures		Projected PY6 Expenditures		Total Expenditures	
	Total	R&D	Total	R&D	Total	R&D	Total	R&D	Total	R&D
Country Programs	8.5	3.1	3.5	1.3	4.6	1.5	4.9	1.5	18.0	6.1
System Support	2.3	0.9	0.5	0.3	0.8	0.4	0.9	0.5	3.9	1.8
R&D/Info. Services	1.6	1.6	0.9	0.9	1.0	1.0	1.2	1.2	3.8	3.8
Project Management	6.2	6.2	1.9	1.9	2.0	2.0	2.0	2.0	10.2	10.2
<b>TOTAL</b>	<b>18.5</b>	<b>11.8</b>	<b>6.8</b>	<b>4.4</b>	<b>8.4</b>	<b>4.9</b>	<b>9.0</b>	<b>5.2</b>	<b>35.9</b>	<b>21.9</b>

A more detailed financial summary by individual sub-component and by country is provided in the attached Annexes.

The projected increase in total expenditures for PY5 would be approximately \$1,600,000 or 26 percent; the modest increase in PY6 would be approximately \$600,000 or the equivalent of only 7 percent. This magnitude of increase should be easily achievable since a significant portion will be the results of inflation increases, related annual salary increases and new staff members. Furthermore, a permanent increase of four overseas staff positions occurred in late PY4 or early PY5 - in Central America, in the Gambia, in Uganda and an additional professional staff

member in the Sahel Regional Office. Beginning in late PY4 MSH is providing all overseas staff with the full range of benefits and allowances authorized under the PRITECH contract and consistent with MSH world-wide policies on allowances. These changes alone would lead to a substantial increase in the expenditure rate in PY5 without consideration of the additional program activity that this new staff will generate. Continued emphasis on commercialization, research and development and information services activities should also have a positive effect on the project expenditure rate. PY6 will also involve repatriation costs for all overseas staff members. The increase in expenditure rates achieved during PY4 indicates the Project's ability to meet implementation targets implied by the budgetary data. Even after suppressing the accrual amounts, the increases in the combined country program categories and the research and development (including information services) category in PY4 over PY3 were \$463,000 and \$256,000 respectively. With increased field staff and upgraded and streamlined administrative procedures it should be possible to exceed even that rate of increase in both PY5 and PY6. As can be seen from unexpended balances in current budget sub-categories (see Annex I) some shift in budget sub-categories may be necessary (e.g., between intermittent country programs and sustained programs or country program development, under which commercialization activities are financed).

Also, as indicated by Annex II, some shift in country budgets may be necessary. The approved budgets for country programs exceed the buy-in obligations by over over \$1.1 million. Some of this (e.g., in Indonesia for the "old" program and in Senegal for bi-lateral program) represents excess budget approvals; however, the additional funds are likely to be required in the other African countries. Furthermore, additional budget approval and bi-lateral funds will likely be required in a number of countries (e.g., Burkina Faso, Kenya and Uganda. In addition the regional offices in Africa and Central America, which have heithertofore been financed by central (i.e., R&D/H) funds will all require additional budget approvals and accompanying allocation of funds. The specific details in all cases will be provided to R&D/H in memoranda requesting the allocation of the required funds.

# ANNEXES

**ANNEX I - PROJECT EXPENDITURES BY PROJECT YEAR**  
**End of Project Year 4 - 9/30/91**

TECHNOLOGIES FOR PRIMARY HEALTH CARE (PRITECH) II						
PROJECT EXPENDITURES						
PROGRAM CATEGORY	PY1 EXPENDITURES	PY2 EXPENDITURES	PY3 EXPENDITURES	PY4 EXPENDITURES	CUMULATIVE EXPENDITURES	UNEXPENDED BALANCE
<b>I. COUNTRY PROGRAM SUMMARY</b>						
Sustained Country Programs (a)	20	1,700,646	2,120,131	2,758,700	6,579,497	6,202,827
Intermittent Country Programs	7,092	280,109	269,710	340,739	897,650	1,741,666
Ad Hoc Country Programs	14,974	21,883	2,560	13,670	53,088	106,330
Promotion of Country Programs	309	14,565	41,287	39,307	95,469	82,905
Country Program Development (b)	24,230	313,724	112,319	274,505	724,778	707,794
Supervision/Program Management	0	29,931	42,913	27,845	100,690	426,133
Evaluation of Country Programs	0	0	0	51,867	51,867	270,274
<b>SUB-TOTAL</b>	<b>46,626</b>	<b>2,360,859</b>	<b>2,588,920</b>	<b>3,506,634</b>	<b>8,503,039</b>	<b>9,537,929</b>
<b>II. SYSTEMS SUPPORT ACTIVITIES</b>						
Health Systems Support	115,354	730,630	584,908	438,639	1,869,530	1,421,361
Supported Conferences	126,062	79,596	125,539	72,575	403,772	233,425
<b>SUB-TOTAL</b>	<b>241,415</b>	<b>810,226</b>	<b>710,447</b>	<b>511,214</b>	<b>2,273,302</b>	<b>1,654,786</b>
<b>III. RESEARCH AND DEVELOPMENT</b>						
Research & Development	61,190	52,143	172,861	425,693	711,887	1,342,847
Info Collection/Dissemination	0	166,797	196,238	309,500	672,535	521,669
Sponsored Conferences	0	0	0	216,775	216,775	308,225
<b>SUB-TOTAL</b>	<b>61,190</b>	<b>218,940</b>	<b>369,100</b>	<b>951,968</b>	<b>1,601,198</b>	<b>2,172,740</b>
<b>IV. PROJECT MANAGEMENT</b>						
Advisory Groups	0	15,446	34,691	320	50,457	50,080
Project Management Costs	552,075	1,771,637	2,006,313	1,779,447	6,109,471	3,975,766
<b>SUB-TOTAL</b>	<b>552,075</b>	<b>1,787,083</b>	<b>2,041,004</b>	<b>1,779,767</b>	<b>6,159,928</b>	<b>4,025,846</b>
<b>UNALLOCATED COSTS</b>	<b>20,618</b>	<b>77,309</b>	<b>(89,257)</b>	<b>106,684</b>	<b>115,354</b>	<b>(115,354)</b>
<b>GRAND TOTAL (c)</b>	<b>921,923</b>	<b>5,254,417</b>	<b>5,620,213</b>	<b>6,856,268</b>	<b>18,652,821</b>	<b>17,275,947</b>

- (a) Sustained Country Programs is a total of Local Program Costs; Field Office Support and Sustained Country Programs, including Regional Programs.  
 (b) Includes ORS Commercialization Activity.  
 (c) Cumulative expenditures include disbursements of \$17,737,821 and accruals of \$915,000 as of 9/30/91.

## ANNEX II

## SUSTAINED AND INTERMITTENT COUNTRY PROGRAMS

SUMMARY FINANCIAL STATUS - 9/30/91						
PRITECH II						
COUNTRY/PROGRAM	SOURCE OF FUNDS	APPROVED BUDGET (1)	OBLIGATED AMOUNT (2)	EXPENDITURES (3)	UNEXPENDED OBLIGATIONS (2)-(3)	UNOB'D BUDGET (1)-(2)
BURKINA FASO	R&D	3,800	3,800	13,105	(9,305)	0
	BUY-IN	400,000	420,000	298,341	121,659	(20,000)
BOLIVIA	R&D	361,000	361,000	220,971	140,029	0
CAMEROON	R&D	5,000	5,000	6,049	(1,049)	0
	BUY-IN	1,147,000	867,000	637,326	229,674	280,000
CHAD	R&D	5,000	5,000	4,521	479	0
	BUY-IN	100,000	100,000	0	100,000	0
GAMBIA	BUY-IN	300,000	300,000	94,957	205,043	0
HONDURAS	R&D	31,500	31,500	28,711	2,789	0
INDONESIA (NEW)	R&D	1,037,000	1,037,000	0	1,037,000	0
INDONESIA (OLD)	R&D	100,000	100,000	65,590	34,410	0
	BUY-IN	667,000	544,365	544,365	0	122,635
KENYA	R&D	344,000	344,000	366,046	(22,046)	0
	BUY-IN	571,000	523,570	319,232	204,338	47,430
MALI	BUY-IN	1,200,000	1,211,114	482,790	728,324	(11,114)
MAURITANIA	R&D	250,000	250,000	100,597	149,403	0
MEXICO	R&D	500,000	500,000	170,108	329,892	0
NIGER	BUY-IN	640,000	610,000	413,879	196,121	30,000
PAKISTAN	R&D	60,000	60,000	57,958	2,042	0
	BUY-IN	1,042,746	1,042,746	893,305	149,441	0
PHILIPPINES	R&D	100,000	100,000	21,337	78,663	0
	BUY-IN	491,206	491,206	372,565	118,641	0
SENEGAL	BUY-IN	820,000	359,009	45,251	313,758	460,991
SUDAN	BUY-IN	175,000	175,000	0	175,000	0
TUNISIA	R&D	10,000	10,000	7,785	2,215	0
UGANDA	R&D	13,025	13,025	13,757	(732)	0
	BUY-IN	820,000	819,946	160,076	659,870	54
ZAMBIA	R&D	883,482	883,482	375,578	507,904	0
ORANA	R&D	27,000	27,000	20,877	6,123	0
	BUY-IN	650,000	516,000	232,343	283,657	134,000
SAHEL REG OFC	R&D	0	0	8,204	(8,204)	0
	BUY-IN	950,000	1,051,000	870,562	180,438	(101,000)
CESA REG OFC	R&D	575,000	575,000	219,303	355,697	0
CEN AM REG OFC	R&D	245,500	245,500	6,658	238,842	0
SUB-TOTALS						
R&D		4,551,307	4,551,307	1,707,155	2,844,152	0
BUY-INS		9,973,952	9,030,956	5,364,992	3,665,964	942,996
ACCRUALS				405,000		
TOTALS		14,525,259	13,582,263	7,477,147	6,510,116	942,996