Proj. 931 1180 (2)
PN-PD-AAD-294-B1

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT PAPER FACESHEET

1. TRANSACTION CODE: A (A = ADD, D = DELETE)

2. DOCUMENT CODE: 3

3. COUNTRY/ENTITY: DS/H, RDA 11, Adaptation and Application

4. DOCUMENT REVISION NUMBER:

5. PROJECT NUMBER (7 digits): 931-1180

6. BUREAU/OFFICE: A. SYMBOL: DSB; B. CODE: 08

7. PROJECT TITLE (Maximum 40 characters): MEDEX Phase III, Primary Health Care Sys

8. ESTIMATED FY OF PROJECT COMPLETION: FY 83

9. ESTIMATED DATE OF OBLIGATION: A. INITIAL FY 78; B. QUARTER 2 (Enter 1, 2, 3, or 4); C. FINAL FY 82

10. ESTIMATED COSTS ($000 OR EQUIVALENT $1 –)

A. FUNDING SOURCE	FIRST FY B. FX	FIRST FY C. L/C	FIRST FY D. TOTAL	LIFE OF PROJECT E. FX	LIFE OF PROJECT F. L/C	LIFE OF PROJECT G. TOTAL
AID APPROPRIATED TOTAL						
(GRANT)	(955)	( )	(955)	(5606)	( )	(5606)
(LOAN)	( )	( )	( )	( )	( )	( )
OTHER U.S. 1.						
OTHER U.S. 2.						
HOST COUNTRY						
OTHER DONOR(S)						
TOTALS	955		955	5606		5606

11. PROPOSED BUDGET APPROPRIATED FUNDS ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE C. GRANT	PRIMARY TECH. CODE D. LOAN	E. 1ST FY 78 F. GRANT	E. 1ST FY 78 G. LOAN	H. 2ND FY 79 I. GRANT	H. 2ND FY 79 J. LOAN	K. 3RD FY 80 L. GRANT	K. 3RD FY 80 M. LOAN
(1) PH	530	562		955		1121		1119	
(2)									
(3)									
(4)									
			TOTALS	955		1121		1119	

A. APPROPRIATION	N. 4TH FY 81 O. GRANT	N. 4TH FY 81 P. LOAN	Q. 5TH FY 82 R. GRANT	Q. 5TH FY 82 S. LOAN	LIFE OF PROJECT T. GRANT	LIFE OF PROJECT U. LOAN
(1) PH	1200		1211		5606	
(2)						
(3)						
(4)						
TOTALS	1200		1211		5606	

12. IN-DEPTH EVALUATION SCHEDULED: MM 04 YY 79

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

1 (1 = NO, 2 = YES)

14. ORIGINATING OFFICE CLEARANCE

SIGNATURE: Lee M. Howard, M.D.

TITLE: Director, Office of Health

DATE SIGNED: MM DD YY

15. DATE DOCUMENT RECEIVED IN AID/W OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM DD YY

AID 1330-4 (3-76)

03/21/78

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS PART I

1. TRANSACTION CODE: A (A = ADD, C = CHANGE, D = DELETE)

PAF

2. DOCUMENT CODE: 5

3. COUNTRY/ENTITY: DS/H, RDA 11, Adaptation and Application

4. DOCUMENT REVISION NUMBER:

5. PROJECT NUMBER (7 digits): 931-1180

6. BUREAU/OFFICE: A. SYMBOL: DSB; B. CODE: 08

7. PROJECT TITLE (Maximum 40 characters): MEDEX, Phase III, Primary Health Care Sys

8. PROJECT APPROVAL DECISION — ACTION TAKEN: A = APPROVED, D = DISAPPROVED, DE = DEAUTHORIZED

9. EST. PERIOD OF IMPLEMENTATION: YRS. 05 QTRS. 0

10. APPROVED BUDGET AID APPROPRIATED FUNDS ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY___		H. 2ND FY___		K. 3RD FY___	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
(1) PH	530	562		955		1,121		1,119	
(2)									
(3)									
(4)									
			TOTALS	955		1,121		1,119	

A. APPROPRIATION	N. 4TH FY 81		Q. 5TH FY 82		LIFE OF PROJECT	
	O. GRANT	P. LOAN	R. GRANT	S. LOAN	T. GRANT	U. LOAN
(1) PH	1,200		1,211		5,606	
(2)						
(3)						
(4)						
TOTALS	1,200		1,211		5,606	

11. PROJECT FUNDING AUTHORIZED (ENTER APPROPRIATE CODE(S)) 1 = LIFE OF PROJECT, 2 = INCREMENTAL, LIFE OF PROJECT

	A. GRANT	B. LOAN
	2	

C. PROJECT FUNDING AUTHORIZED THRU FY 82

12. INITIAL PROJECT FUNDING ALLOTMENT REQUESTED ($000)

A. APPROPRIATION	B. ALLOTMENT REQUEST NO. ___	
	C. GRANT	D. LOAN
(1)		
(2)		
(3)		
(4)		
TOTALS		

13. FUNDS RESERVED FOR ALLOTMENT

TYPED NAME (Chief, SER/FM/FSD)

SIGNATURE

DATE

14. SOURCE/ORIGIN OF GOODS AND SERVICES: 000 941 LOCAL OTHER ___

15. FOR AMENDMENTS, NATURE OF CHANGE PROPOSED

This is a new project based on outputs achieved in Phase I and II funded by A.I.D.

Phase I Funding: $490,000
Phase II Funding: $972,000

FOR PPC/PIAS USE ONLY	16. AUTHORIZING OFFICE SYMBOL	17. ACTION DATE (MM DD YY)	18. ACTION REFERENCE (Optional)	ACTION REFERENCE DATE (MM DD YY)

AID 1330-3 (7-79)

Project Authorization and Request for Allotment of Funds

Part II

Entity : DS Bureau

Project : MEDEX Phase III, Primary Health Care Systems

Project Number: 931-1180

This authorization provides A.I.D. funding at the level of $5,606,000 to implement the Project: MEDEX, Phase III, Primary Health Care Systems for five years from FY 1978 through FY 1982.

Administrator, A.I.D
Date:_____

Clearances:
DS/H:LMHoward_____date_____
DS/PPU:LWakefield_____date____
DS/PPU:RSimpson_____date_____
AA/DS:SLevin_____date_____
GC/TFHA:ARichstein_____date____

MEDEX PRIMARY HEALTH CARE SYSTEM

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GLOSSARY

Primary Health Care: A multisectoral concept directed towards improving well-being and consisting of "simple and effective measures, in terms of cost, technique and organization, which are easily accessible to the people requiring relief from pain and suffering and which improve the living conditions of individuals, families and communities." (Reference: Promotion of National Health Services Relating to Primary Health Care, World Health Organization, Geneva, 1976).

Primary Health Care Services: Services provided at the individual's and community's first point of contact with the health system. These may be basic health services provided by CHW's or more sophisticated curative, preventive or promotive services provided by doctors or paramedical personnel. These services also include health-related vertical program activities such as communicable disease case findings, development of safe water supplies, family planning, malaria control, food preparation and preservation, and others. Secondary-level health care services are those provided by specialists, usually in hospitals. The services provided by specialists in larger medical centers with sophisticated laboratory and rehabilitation capabilities are usually referred to as tertiary-level services.

Basic Health Services: Those primary health care services directed towards sustaining life and preventing premature death (e.g., first aid, treatment of fever and dysentery, oral rehydration). These tasks, usually provided by CHW's and paramedical workers, also include specified preventive (e.g. BCG and tetanus immunizations) and promotive (e.g., nutrition education) activities.

MEDEX (in all capital letters): An approach for designing improved and expanded health service coverage. The word is a contraction of the French and Spanish phrases for extension of the doctor (extension du medicin, un extension del medico) and was developed to describe medical/health service, extension of coverage.

Community Health Worker (CHW): The provider of basic health care services in locations most peripheral or isolated from hospitals and health centers. The community where they work is usually a rural village but may be urban or peri-urban neighborhoods.

Medex (in lower case letters): A generic term used to describe the category of intermediate or mid-level doctor extenders. The terminology varies from country to country. Such workers also are called medical assistants, mid-level health workers, physician assistants, nurse practitioners, wechakorn, assistant medical officers, etc. The work "medex" was developed as a non-pejorative term to aid in facilitating a new image for this group of health practitioners, avoiding terms such as "assistant" which connote an inferior position.

Part I: Summary and Recommendations

A. Face Sheet Data (see attached)

B. Recommendations:

1. Approval for grant funding at the level of $5,606,000 to implement this project for five years beginning June 1, 1978 through May 31, 1983, and

2. Waiver of competitive seleaction for ongoing institutional services for continuation during Phase III.

C. Description of the Project

1. "What is going to take place under the project":

The Health Manpower Development Staff of the University of Hawaii has completed Phases I and II of previous AID-funded contracts in the development of the MEDEX technology for designing and implementing rural primary health care systems in LDCs. In Phase III, this project will complete the development of the MEDEX technology and establish eight operational MEDEX primary health care programs.* The MEDEX technology will consist of:

1) a set of guidelines for planning, implementing, managing, and evaluating a low-cost, three-tiered, integrated, primary health service delivery system appropriate to the specific needs of an LDC,

2) a prototype set of competency-based training modules for
   (a) training medex and community health workers in preventive, promotive, and curative health areas,
   (b) mid-level management requirements of rural primary health care systems, and
   (c) continuing education requirements of medex and community health workers,

3) the process methodology for transfering and adapting the above to individual countries; e.g., primary health care seminars, workshops in curriculum adaptation, mid-level mangement, tutor training, training-site management, and continuing education.

During Phase III, the draft prototype modules will be utilized in eight LDC MEDEX programs representing varying socioeconomic

* See Diagrammatic Summary Chart on following page.

DIAGRAMMATIC SUMMARY OF PROJECT BACKGROUND AND DESCRIPTION

PHASE I (1974-75)

Formulation of MEDEX design approach to primary health care in LDC's using three-tiered manpower infrastructure (doctors/medex/community health workers).

Staff recruitment and development of expertise in primary health care.

Development of competency-based training module format.

Determine demand potential for primary health care technology (assess adequacy of primary health care services available in LDC's).

Orientation of LDC's, international organizations, and USAID to MEDEX technology.

PHASE II (1976-77)

Development of draft guidelines for adaptation by LDC's of seven components of MEDEX design approach.*

Stimulation of demand for primary health care technology in LDC's using three-tiered manpower infrastructure.

TA to LDC's to assist in planning and project design of rural health systems.

TA to assist governments to alter perceptions of LDC medical establishments and develop other aspects of receptive framework.*

Develop draft prototype medex training modules.

Develop collaborative arrangements with international organizations (WHO**, IDRC, UNDP).

PHASE III (1978-83)

Publish guidelines of MEDEX design approach which includes adaptation of the technology.

TA to LDC's to assist planning and project design of rural health systems.

TA to assist governments to alter perceptions of LDC medical establishments and develop other aspects of receptive framework.*

TA to LDC's in implementation of MEDEX type primary health care programs in areas of PLANNING, MANAGEMENT, TRAINING***, EVALUATION.

Conduct field trials, revise and publish prototype medex training modules for adaptation by LDC's.

Develop, conduct field trials, revise (based upon field experience) and publish mid-level management training modules.

Develop, conduct field trials, revise and publish prototype CHW training modules for adaptation by LDC's.

Develop consortium of U.S. universities as centers of expertise to provide TA to LDC's in MEDEX technology.

Collaborate with international organizations to promote appropriate technology transfer to establish rural primary health care delivery systems.
LDC MEDEX programs working together with the U.S. consortium to spread this technology in their regions, to provide expanded primary health care coverage to their rural populations.

D E V E L O P M E N T O F T E C H N O L O G Y

DEVELOPMENT OF TECHNICAL ASSISTANCE RESPONSE CAPABILITY → TECHNOLOGY UTILIZATION AND S P R E A D

APPLICATION AND ADAPTATION OF TECHNOLOGY

(EOPS: 8 LDC's will have established MEDEX rural primary health care delivery system with technical assistance of the Health Manpower Development Staff.)

---

* For detailed description see Appendix A.

** HMDS has been asked by the World Health Organization to become their first Collaborating Center for Primary Health Care Manpower Development.

*** Curriculum adaptation; workshops on tutor training, preceptor training, continuing education, management.

settings and range of LDC conditions which will provide feedback for the refinement and publication of the training modules at the end of the five years.

During Phase III, the contractor will also establish a consortium to increase the U.S. response capability to LDCs requesting technical assistance in designing and implementing MEDEX rural primary health care systems. The consortium will gain the international experience necessary to become independent contractors for implementing MEDEX LDC programs by the end of Phase III.

2. "Who is going to organize and carry out project activities":

Project activities will be organized and carried out by the HMDS core staff at the University of Hawaii. In addition, project activities will be carried out by the personnel of the consortium of U.S. institutions with MEDEX experience under a Memorandum of Understanding with HMDS. By the end of the project, consortium members will be able to provide a full range of technical assistance necessary in the development and implementation of MEDEX programs in LDCs. The contractor will also encourage those LDC programs that have developed experience and expertise in MEDEX technology to join with the consortium in a cooperative network to assist in the spread effect and development of new LDC MEDEX primary health care systems. The combined experience and expertise of the contractor and the consortium members in the MEDEX technology will be a resource under this project to LDCs in planning, designing, and technical support for primary health care services. Contractor participation in implementation of country specific programs is expected to be

funded through arrangements with AID missions, host governments, or other donors.

3. "How inputs can reasonably be expected to produce outputs forecast and to achieve project purpose":

The inputs into this project consist of: (a) MEDEX technology developed during AID-funded Phases I and II, (b) the cumulative experience and expertise of the HMDS core staff developed during Phases I and II, (c) the domestic expertise and early international experiences of the consortium, (d) the LDC experience of MEDEX programs now operational in Thailand, Pakistan, and Guyana, and (e) the Phase III budget inputs.

The budget inputs of this project will finance the core staff and consortium personnel costs, travel costs, and per diem costs in the reconnaissance visits, primary health care seminars, and project design assistance up to PID approval for host countries and AID missions interested in implementing MEDEX primary health care systems on a national basis. After PID approval the inputs will finance the personnel costs of the core staff and consortium personnel, but not the per diem and travel costs, nor salaries and travel of short-term consultants for additional project design assistance leading to PP completion and approval. Implementation of the eight LDC MEDEX programs is expected to be funded through arrangements between the University of Hawaii and AID missions. Core staff and consortium personnel will provide technical assistance to the eight LDC MEDEX programs during implementation of the bilateral projects in the areas of planning, management, training, and evaluation. Except for personnel costs, as cited above, these activities will

be financed as part of country-funded projects. During implementation of country programs the technical assistance by the core staff and consortium will be most needed in the initial start-up of the program to augment the efforts of the in-country contract and local project personnel. It is expected that each program will be effectively operational without a requirement for resident contract technical advisors by the end of the third project year of each country MEDEX program.

4. "What will be the end of project status":

By the end of the project, the MEDEX technology will have gained operational experience and feedback in eight country programs, with expected representation in each geographic region under varying socioeconomic and political conditions. This will lead to the publication of the prototype competency-based training modules together with distribution of the published MEDEX guidelines as a tested technology available for application and adaptation on a worldwide basis. The core staff, the consortium of U.S. institutions, and the selected LDC MEDEX programs will form a network to provide a full range of technical assistance in the implementation of future bilateral country programs after the end of this project.

It will be necessary to consider minimal AID funding support for a small core staff at the University of Hawaii or at a selected member of the MEDEX network beyond the five-year life of this project for the following reasons:

1) Coordination of the consortium of U.S. universities and host- country institutions as a viable technical resource for new programs adopting MEDEX technology,

2) Promotion of other donor participation,

3) Training other public- and private-sector groups, including voluntary agencies in appropriate utilization of the MEDEX technology.

D. Summary Findings

The analyses undertaken, in Phases I and II and during the design of this project, support the premise that Phase III is essential to take advantage of the outputs met by HMDS in Phase II. The combined experience of the HMDS core staff, already in place, in concert with consortium members, will result in a necessary response capability for technical assistance to those developing countries desiring to utilize the MEDEX technology in expanding their health care delivery as a part of total economic development.

This project meets all applicable statutory criteria and the proposed contractor is ready to proceed immediately to implement the outputs of this project in accordance with the Implementation Plan described in Part 4.B. on page 42 of this paper.

E. Project Issues

1. Core Funding vs. Regional Bureau or AID Funding:

Discussion:

It is necessary to decide which activities of the project will be funded centrally and which the Regional Bureaus or AID missions will be willing to fund. Recommendations are keyed to project outputs detailed in Part 2 B, "Detailed Description," page 16

Output 1, a field services activity, but pre-PID, is recommended for central funding in the absence of any mechanism for alternative funding.

Output 2 is also recommended for central funding, as part of the technology development process. Application and utilization of these materials in a country program would be recommended for mission funding.

Output 3a is a pre-project activity and may require central funding unless Bureaus and missions have identified funding resources for project design activities. If such funding is available, then travel, per diem, and miscellaneous expenses for short-term technical assistance by centrally funded staff should be funded by the Bureau or mission utilizing the resources.

Outputs 3b through f supplement long-term technical assistance during country project implementation and funds for these services, other than salaries of core staff, should be funded in the loan or grant agreement at the mission level.

All other outputs of this project are to be centrally funded. This will include salaries for full-time equivalent positions to assure that adequate short-term technical assistance will be available from consortium universities.

2. Consideration of the role of indigenous traditional practitioners:

Discussion:

The decisions on use of traditional practitioners in a health delivery system will ultimately rest with the country which is installing the system. The responsibility of this project is to insure that the overall MEDEX design encourages and provides for their use where appropriate. The concept of using traditional practitioners will have to be considered in designing the training modules, both for the community level workers and for management training. The training modules have been and will be designed for flexibility, allowing for adaptation to different settings.

Because of the great diversity in types of traditional practitioners, it would not be desirable or prudent to specifically design training for one type of traditional practitioner into prototype modules. The modules can be designed to accommodate the use of traditional practitioners when they are adapted to settings where such use is appropriate and acceptable to the host country.

3. Are Family Planning and Nutrition Properly Addressed in the Development of MEDEX Technology?:

Discussion:

Primary health care services are those services provided by integrated health care delivery systems. These include family planning and nutrition as integral parts of the promotive, preventive, and curative services provided. The MEDEX technology which is designed to strengthen the infrastructure of a primary health care system builds family planning and nutrition into all aspects of training. In addition to the clinical MCH modules, the MEDEX

technology includes specific modules on community family planning and community nutrition. Further, the technology is geared to provide a permanent service delivery organization through which specific vertical programs such as family planning and nutrition can be implemented and maintained. This is critical to long-term impact. Permanent providers of these services are expected to be in place rendering services in all phases of primary health care long after specific vertical programs may be funded initially to stimulate program activity.

4. Can Funding Support Other than AID be Anticipated for this Project?

Discussion:

It is not anticipated that the University of Hawaii will receive funding support from any source outside of AID for HMDS core staff during the life of this project.

One of the long-term objectives of the project is to have non-USAID resources promulgating, developing, and providing assistance to MEDEX programs. This has already started: (1) WHO and UNDP have each funded a position in the Basic Health Service Program in Pakistan to complement the four MEDEX/Pakistan staff in that country, (2) The Asia Foundation has sent a communications intern from Davao City to spend a year with HMDS and the East-West Center in preparation for planning a MEDEX-type program in the Philippines. The Asia Foundation is also sending a Pakistani audio-visual technician to HMDS to be trained in the kinds of A-V technology to be used to develop materials in the training of medex and CHW's in Pakistan, (3) WHO has sent a health administration consultant to HMDS for a month to help conceptualize the management aspects of the MEDEX design approach, (4) The International Development

Research Centre has funded the MEDEX/Guyana project, (5) Faculty from the disciplines of education, communications, and psychology at the University of Hawaii have contributed non-reimbursed consultant time to MEDEX projects, (6) The Rockefeller Foundation has expressed interest in funding a MEDEX-type program in Brazil. It is anticpated that there will be an increasing demand for the utilization of this technology, as more countries become aware of it and see how it is an implementing tool for WHO's guidelines in this field.* This phenomenon is part of the spread effect, as are regional communications and collaboration that are to occur as part of the cooperation network, an output of this final phase of technology development.

5. What is the Viability of the Consortium?:

Discussion:

The conceptualization and early development of the consortium is an output of Phase III activities. The purpose of the consortium is to:

a) Increase the technical assistance response capability to LDCs in the design and operation of integrated MEDEX primary health care systems,

b) Complete the development and publication of the MEDEX technology,

---

*HMDS participated in the development of these guidelines, which are due to be released in June 1978.

c) Provide a technical assistance resource for AID missions in bilateral MEDEX program planning are implementation after the Phase III project.

The members of the consortium are U.S. institutions with expertise in competency-based training methodology and the MEDEX design approach to the delivery of rural primary health care services. These institutions are:

1) MEDEX/Northwest, School of Public Health and Community Medicine, University of Washington, Seattle, Washington;
2) MEDEX/Intermountain, School of Medicine, University of Utah, Salt Lake City, Utah;
3) MEDEX Program, School of Medicine, Howard University, Washington, D.C.;
4) Nurse Practitioner Program, Schools of Nursing and Medicine, University of North Dakota, Grand Forks, North Dakota;
5) Family Nurse Practitioner Program, School of Medicine, University of California at Davis, Sacramento, California;
6) School of Public Health and Tropical Medicine, Tulane University, New Orleans, Louisiana.

Attached in Annex B are copies of the "Memorandum of Understanding" reached in preparation for Phase III. This memorandum sets the terms of reference for the University of Hawaii's Health Manpower Development Staff and for the consortium members. It has been the expressed intent and at the specific request of consortium members that the University of Hawaii's HMDS function as the prime contractor during Phase III activities. After they gain international

experience, it is expected that three of the consortium members will be able to provide a full range of technical assistance to AID to carry out bilateral MEDEX programs.

The working document "International MEDEX Consortium" shown in Annex C is the first draft at programming the FTE's in the consortium. This initial draft conceptualizes developing technical assistance components in the MEDEX programs areas: (a) planning, (b) management, (c) learning, and (d) evaluation. Although emphasis is placed initially on developing each program area in two consortium universities, it is intended that each of the consortium members will have sufficient expertise to provide short-term consultation in all four program areas and three will be able to carry out bilateral program design and implementation by the end of Phase III.

PART 2: PROJECT BACKGROUND AND DETAILED DESCRIPTION

A. Historical Background

In 1974, when developing countries and the World Health Organization were beginning to seriously talk about the dearth of primary health care services available to predominantly rural populations, DS/H (in conjunction with the AID Regional Bureaus) initiated development of an LDC-oriented health systems design approach that could be used to rapidly expand LDC health services. The Health Manpower Development Staff (HMDS) was formed at the University of Hawaii School of Medicine at that time. It was supported by an AID-funded RSSA with the Department of Health, Education, and Welfare, which contracted with the University of Hawaii to develop the MEDEX technology and to create a U.S. response capability to developing countries seeking technical assistance/collaboration in (a) planning and implementing primary health care programs, (b) curriculum design and training of middle-level and village-level health workers, (c) management and logistical support, and (d) operational evaluation and management systems.

From 1969-72, the MEDEX program in the USA developed the initial concepts and tools for receptive framework preparation, needs assessment, task analysis, and competency-based curriculum design. In 1972, the MEDEX/Micronesia program was established, representing the first adaptation of the American MEDEX model to the needs of a developing country setting. There, for the first time, trained medex initiated training of community health workers for isolated villages on Micronesia's scattered islands. Thus, a multiplier effect was created as was a three-tiered health manpower

infrastructure (physicians/medex/community health workers) for delivering primary health care services. This initial work was funded by DHEW; however, since the development of the MEDEX technology for LDC's is an international undertaking it does not come under the continuing purview of that domestic agency.

Following the creation of HMDS in 1974 and utilizing the experiences of the MEDEX concept in conditions spanning the extremes of socio-economic development (USA and Micronesia), the AID-funded DEIDS project in Thailand became the next developing country setting to adapt the MEDEX technology in its earliest stage of development.

In 1976, HMDS participated in establishing the MEDEX/Guyana program with the Ministry of Health in that South American country. (That country program is funded by the International Development Research Centre of Canada.

In 1975-76, HMDS provided consultation services for the health sector analysis and planning leading to the AID-funded Pakistan Basic Health Services Loan. The project began in June 1977. The Government of Pakistan contracted with the University of Hawaii's HMDS to assist in implementing the project. This project represents a significant opportunity for field trials of the various components of the MEDEX technology and operational assessments that can help finalize the technology in the third and final phase of its development.

In February 1977, Phase II of the MEDEX project was evaluated by AID, DHEW, and WHO. That evaluation supported continuation of the next phase of the project. Recommendations of the Evaluation panel included a firm action to authorize, fund and facilitate field trials and adaptation of the training modules by planning to

link MEDEX with LDC national efforts to strengthen organizational structures for health services delivery, with special emphasis on management. Action was also recommended to bring into being a consortium of three to six U.S. universities where competency-based health manpower training capacities were being developed. There was recognition of the need for a management specialist on the HMDS staff to ensure that the management aspect is included at each level of the MEDEX process. The MEDEX design approach and the technical assistance to implement primary health care systems will be available to individual governments, bilateral aid agencies, and international organizations through the network that will result from activities proposed in this project.

See Annex A for a detailed discussion of the history and development of the MEDEX design approach.

B. Detailed Description

1. Sector Goal

AID proposes funding for the next five years for a core staff at the University of Hawaii's Health Manpower Development Staff and for one full-time equivalent staff member from each of its consortium members to provide a means for assuring the transfer of the MEDEX technology into at least eight LDC's. This is in support of the sector goal "to extend the delivery of integrated health systems to the majority of populations of LDC's at a cost which developing countries can support without prolonged external assistance."

The MEDEX approach encompasses the planning, implementation, management and evaluation of primary health care systems as well as

training manpower for them. At the end of this project, it is expected that at least eight LDC's will have established rural primary integrated health delivery systems utilizing the MEDEX technology, and that as a result the technology will have been tested, evaluated, and ready for application in a variety of developing country situations.

The process leading to the development of a MEDEX country program typically begins with a country reconnaissance visit. See Chart 1, next page. This visit leads to the identification of professional/technical and political leaders and concerned AID mission staff. This is followed by a primary health care seminar usually held in-country, but occasionally in Hawaii. The primary health care seminar often involves all the groups involved in health care (broad base of support) and specific country problem areas are addressed and the MEDEX design technology explained.

PID development with the Mission follows an expression of national and mission interest in the adaptable MEDEX design approach. Project design focuses on in-country resources available to address the support of a national primary health care program which will improve rural health service coverage.

At the onset of the project, in-country resources have been readied and the various components of the project begin to work toward meeting objectives and goals. These may include development and maintenance of a receptive framework, development of a planning/evaluation capacity, training, management infrastructure development, and facility development.

TYPICAL PROCESS FOR DEVELOPING COUNTRY PROGRAMS

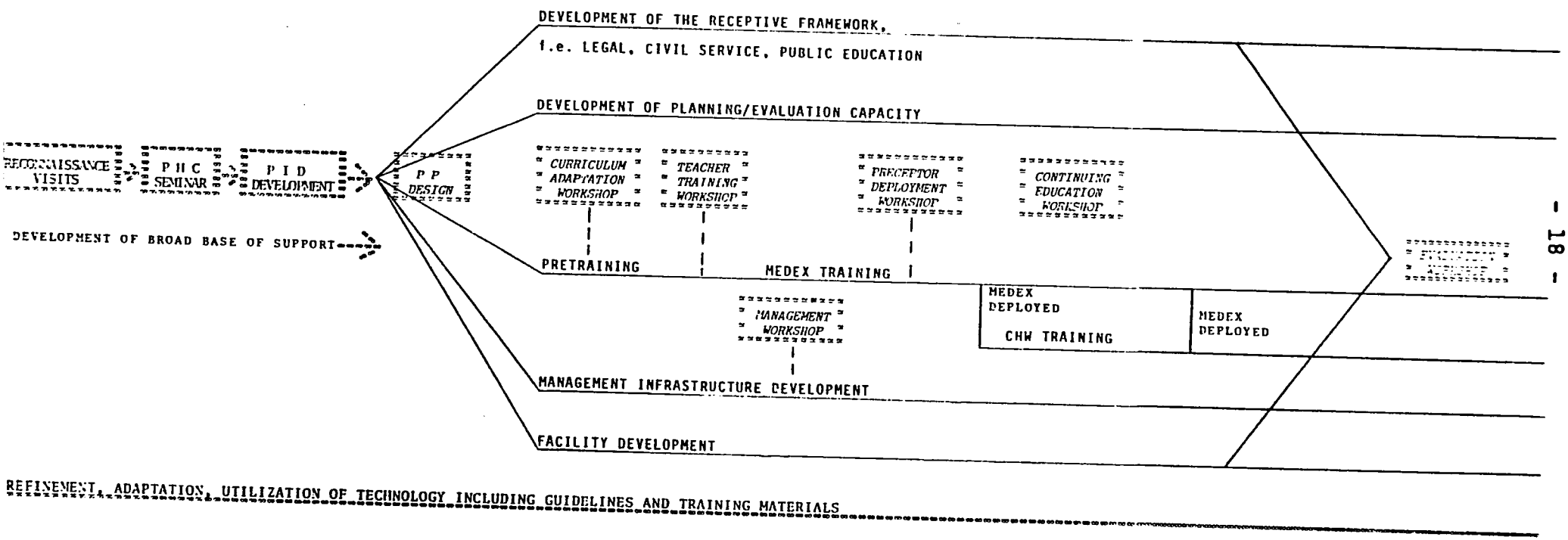

Chart 1.

In a national program most activities are performed by the host country, aided by the resident contract advisors. Certain workshops require HMDS core staff participation; i.e., curriculum adaptation, teacher training, preceptor deployment, continuing education, management, and evaluation. Thus, additional technical assistance (TA) is provided at critical periods in the program. This involvement of the core staff allows for practical "on-the-job" inputs into the refinement of the technology including the guidelines and training materials while providing an opportunity for professional exchange between HMDS and resident host country project staff.

It is important to select a specific number of country programs to accomplish the purpose of this project.

These country experiences are necessary to:

1) Demonstrate that a successful program is not an accident in a particular part of the world and that a program failure does not represent total failure of the technology for application in a region. At least two country programs in each region of the world is a number that would be useful for this purpose.

2) Conduct field trials of the components of the MEDEX technology (guidelines, training materials, process methodology in such a way as to confirm regional successes and failures of specific aspects of the components as they are adapted. Again, two countries in distinguishable regions of the world would provide multiple field sites for refinement.

3) Provide support in the form of political and technical acceptance for other countries of the region who want to expand

health service with this technology.

A number of ways of dividing the world into regions, from two (above and below the equator) to 102 (racial/ethnic distribution) could be envisioned, but AID's Regional Bureaus' structure lends itself to division into a minimum but representative number of regions. Multiplying those four regions by two, one ends up with eight as an acceptable number to use to develop the technology and stimulate its utilization and spread. Regional bureaus should not feel limited by this number, since more than two programs may occur in any one region.

Based on HMDS experience in Phases I and II, the following AID-assisted countries have been identified as interested in MEDEX technology: in addition to Thailand, these are Pakistan, Cameroon, Liberia, Jordan, Guyana, Philippines, Lesotho, Ghana and Panama.

Non-AID assisted countries, specifically Algeria, Brazil and Taiwan also are known to be interested.

During Phase III, eight country programs with MEDEX technology adaptation in process appears to be a logical assumption.

In order to function as a technical assistance resource for programs being planned as well as after they become operational, the contractor will develop a consortium of U.S. institutions which

have had MEDEX-type experience.* In addition to the consortium, the technical assistance capabilities developed in those countries which have institutionalized this approach to health services will be available to other LDC's through a network linking MEDEX programs.

The planned inputs into this project include the outputs of the MEDEX Phase II project. These include the accumulated experience and expertise of the HMDS core staff at the University of Hawaii in rendering MEDEX technical assistance to LDC's, consultative experience from selected U.S. institutions, published MEDEX guidelines and the MEDEX technology developed during Phases I and II.

Additional inputs include the LDC experience of MEDEX programs now operational in Thailand, Pakistan, and Guyana and the Phase III budget inputs.

The budget inputs of this project will finance the core staff and consortium personnel costs, travel costs and per diem costs in the reconnaissance visits, primary health care seminars, and project design assistance up to PID approval for host countries and USAID Missions interested in implementing MEDEX primary health care systems on a national basis. After PID approval the inputs will finance the personnel costs of the core staff and consortium personnel, but not the per diem and travel costs, nor salaries and travel of short-term consultants for additional project design assistance leading to PP completion and approval. Implementation of the eight LDC MEDEX programs is expected to be funded through arrangements

between the University of Hawaii and USAID Missions. Core staff and consortium personnel will provide technical assistance to the eight LDC MEDEX programs during implementation of the bilateral projects in the areas of planning, management, training, and evaluation. Except for personnel costs as cited above, these activities will be financed as part of country-funded projects.

The contractor is expected to achieve the following outputs subject to funding arrangements described above.

1) Reconnaissance visits to LDC's:

a) A series of visits to requesting LDC's will utilize two-man specialist teams to conduct informational briefings for host country officials and USAID Missions on the concepts and systems that are involved in MEDEX technology. *Log Frame Magnitude of Outputs ("LFMO") 1.a)*

b) Primary Health Care seminars will be held for Ministry of Health officials, health planners, and other leaders within the medical community on all or specialized aspects of MEDEX methodology with the intent to assist LDC governments to pursue a program for improving health delivery utilizing MEDEX approaches and technology. *LFMO 1.b)*

2) Develop, adapt, evaluate and publish a completency-based training methodology, including training modules (student/teacher texts, tests and audio-visual aids) and related materials for four specific categories of training in countries where a decision is made to pursue a MEDEX-type program:

a) MEDEX Training Modules: Conduct field trials to refine 15 existing draft MEDEX modules, and draft and refine at least

five new MEDEX modules. *LFMO 2.*

b) Management Training Modules: draft and conduct field trials to refine five training modules pertaining to management and logistic operations. Focus of training will be toward: (1) the needs of medex and mid-level Ministry of Health personnel (80%); and (2) the formulation of policy and operating regulations to be promulgated by high level MOH planners and decision makers (20%). *LFMO 4.*

c) Community Health Worker (CHW) Training Modules: draft, conduct field trials and refine eight CHW modules. Module will be designed and organized for the use of medex as teachers of CHW trainees. *LFMO 3.*

d) Continuing Education Materials: design, draft and test two modules to be used in a structured program geared to convey refresher information or higher levels of competency to graduate medex and graduate CHW personnel. Modules are to be experience rated by LDC MEDEX graduates with field experience and evaluated in problem solving design seminars convened for this purpose. The modules that are developed are in turn to be used and tested in the continuing education workshops. *LFMO 5.*

3) Project planning, design and training are to be provided as follows:

a) Technical guidance in project planning and design to USAID Missions and/or host governments in those LDC's where a decision has been made to pursue a MEDEX-type program. *LFMO 8.*

b) Training will require core staff and consortium participation to augment in-country contract and local personnel in the initial start-up in each of the following types of workshops critical to the transfer of MEDEX technology:

(1) Curriculum Adaptation Workshops: Technical assistance to adapt prototype training modules and materials to country specific primary health care needs and translation of materials into local languages where needed. *LFMO 1.c)* *

(2) Teacher Training Workshops: instruction to familiarize host country teachers in competency-based training methodology and materials. *LFMO 1.d)*

(3) Management/Logistics Workshops: training to instruct medex personnel in administrative/management requirements and logistical support needs of rural primary health care systems. In addition to trained manpower, the workshops will provide means for integrating MEDEX management technology with indigenous management practice. *LFMO 1.f)*

(4) Preceptor Deployment Workshops: a final training phase to structure clinical training experience of medex; the pre-assignment of medex to rural health centers; and to teach physician preceptors how to utilize and supervise MEDEX manpower. *LFMO 1.e)*

* Log frame magnitude output

(5) Continuing Education Workshops: a means to address the need for in-service training, and to maintain the clinical acumen of MEDEX graduates and the proficiency of graduate community health workers on a continuing basis. This program will utilize and refine the module products cited in 2) d) above. It will also serve as a feedback mechanism for medex and CHWs for improving the delivery system. *LFMO 1.g)*

(6) Evaluation Workshop: an essential process to develop and refine the operational approach involved in data collection for the end of project evaluation and to assist in a mid-project operational assessment resulting in timely feedback to assure continual progress.

The workshops finalize the process of adapting the MEDEX evaluation guidelines which was begun during the design phase. HMDS core staff participation allows for external inputs sharing experiences from other operating MEDEX programs facilitating the work of the host country participants. *LFMO 1.h)*

4) MEDEX Network:

Creation of institutional arrangements with linkages designed to function after the withdrawal of AID support:

a) Mobilization of U.S. MEDEX expertise and experience through a consortium organization of U.S. universities with MEDEX experience funded through subcontracts between the prime contractor and the participating universities. (See Part 1, E. 5 Issues) *LFMO 1.b)*

b) Inclusion of those institutions within LDCs which will have become centers of MEDEX expertise. *LFMO 6.*

5) Evaluation Protocol:

a) Internal by Contractor: a specific evaluation protocol will be produced to be used to evaluate each country implementation programs that is expected to result from the work of this project.

b) External: outside evaluation is provided for in the second and fourth year of this project.

These outputs respond to the expressed decision of many LDC's to rapidly improve and expand primary health care services to their rural populations. The critical elements missing in most LDC efforts to extend rural primary health care services are:

a) Lack of suitable manpower training and deployment plans.

b) Lack of replicability of expanded primary health care services at a cost that the country can financially afford.

c) Lack of appropriate short-term, external, technical assistance to assist Ministry of Health personnel who are generally deficient in planning and management capabilities.

The specific outputs of the project provide these critical missing elements. The Logical Framework Matrix summarizes the project design and is presented in Annex E .

These considerations are set forth in the Logical Framework Matrix which follows.

PART 3: PROJECT ANALYSES

A. Technical Analysis Including Environmental Assessment

Because of the selection and utilization of nonphysician manpower, this project emphasizes labor-intensive health activities as opposed to capital-intensive; i.e., lower cost community-based health services are emphasized over high-cost institutionally based health services. The MEDEX technology is being designed and developed with specific attention to (a) host country absorptive capacity and capability for financing operation and maintenance, (b) the development of the necessary infrastructure to strengthen nutrition and family planning capacities in addition to other primary health care needs, (c) enhancement of the role of women in development, especially at the village level, as well as increased employment opportunities for women as medex and community health workers, and (d) suitability for rapid replication and diffusion.

It is not anticipated that this project will have an adverse impact on the physical environment.

This project meets all of the applicable statuatory requirements noted in Appendix 6 c(2) and (3) of AID Handbook No. 2.

B. Financial Analysis and Plan

1. Financial Effect of Project

The financial effect of this project upon contractor participation will be substantial. Because of unusually severe budgetary constraints on U.S. educational institutions, the continued existence of MEDEX technical assistance capability, as developed to apply to LDCs, depends primarily upon AID funding of this project, both for core staff and consortium members.

The financial effect of this project on host countries is quite significant in terms of the catalytic effect that the project will have on promoting better use of their existing health resources and in generating new additional resources for health services, through promotion of involvement of consumers and use of volunteers, and greater utilization of previously untapped community institutional and organizational resources.

2. Financial Plan/Budget Tables:

This plan represents total estimated costs for each of five years to finance outputs as defined for AID central funding support in this project.

SEE FOLLOWING PAGES

BUDGET

Category	Year 01 CY 1978	Year 02 CY 1979	Year 03 CY 1980	Year 04 CY 1981	Year 05 CY 1982	Total
1. PERSONNEL						
Core Staff: Salaries	376,804	415,404	439,807	463,133	488,656	2,183,804
Fringe Benefits (20%)	75,361	83,081	87,961	92,627	97,731	436,761
Sub Total	452,165	498,485	527,768	555,760	586,387	2,620,565
Consortium Manpower: Salaries	150,000	189,900	200,345	211,364	222,989	974,598
Fringe Benefits (20%)	30,000	37,980	40,069	42,273	44,598	194,920
Overhead (21%)	31,500	39,879	42,072	44,386	46,828	204,665
Sub Total	211,500	267,759	282,486	298,023	314,415	1,374,183
Total Personnel	663,665	766,244	810,254	853,783	900,802	3,994,748
2. CONSULTANTS						
@ $125/day	28,750 (230 days)	30,625 (245 days)	28,750 (230 days)	24,375 (195 days)	30,625 (245 days)	143,125
TA/II sponsored external evaluation		50,000		50,000		100,000
3. TRANSPORTATION & PER DIEM						
Domestic Travel:						
RT @ 600	9,600 (16 RT)	14,400 (24 RY)	15,600 (26 RT)	18,000 (30 RT)	16,200 (27 RT)	-----
Per Diem @ 50	10,400 (208 days)	11,350 (227 days)	13,100 (262 days)	13,350 (267 days)	11,400 (228 days)	
	20,000	25,750	28,700	31,350	27,600	133,400

BUDGET

Category	Year 01 CY 1978	Year 02 CY 1979	Year 03 CY 1980	Year 04 CY 1981	Year 05 CY 1982	Total
International Travel:						
RT @ varying amounts	56,300 (29 Trips)	55,800 (28 Trips)	55,800 (28 Trips)	42,300 (22 Trips)	44,300 (24 Trips)	
Per Diem @ 50	28,300 (566 Days)	28,300 (566 Days)	28,300 (566 Days)	22,100 (442 Days)	23,050 (461 Days)	
Sub Total	84,600	84,100	84,100	64,400	67,350	384,550
Total Transporation & Per Diem	104,600	109,850	112,800	95,750	94,950	517,950
4. OTHER DIRECT COSTS						
Recurring Costs:						
Office Rental 2,000 sq. ft. @ $800	16,000	16,000	16,000	16,000	16,000	80,000
Materials & supplies 15,000						
Communications 16,000						
Xerox, Printing, Publishing 10,000						
Repairs 2,000						
Rentals 9,000						
Freight & Delivery 1,000						
Sub Total	53,000	55,915*	58,990*	62,234*	65,657*	295,796
Non-Recurring Costs: (1st Year)						
Office Equipment						
Electric Typewriter 800						
6 desks @ $250 1,500						
6 chairs @ $125 750						
6 side chairs @ $75 450						
6 Cabinets @ $200 800						
Audio-visual Equipment 1,175						
Sub Total	5,475					
Total - Other Direct Costs	74,475	71,915	74,990	78,234	81,657	381,271

*Figures cited include 5.5% inflation factor.

BUDGET

5. SUMMARY

	Year 01 CY 1978	Year 02 CY 1979	Year 03 CY 1980	Year 04 CY 1981	Year 05 CY 1982	Total
Total	871,490	1,028,634	1,026,794	1,102,142	1,108,034	5,137,094
Overhead @21%	110,629	127,114	134,431	141,644	149,446	663,264
Less Consortium Overhead (Cited above paragraph 1)	(31,500)	(39,879)	(42,072)	(44,386)	(46,828)	(204,665)
Sub Total	950,619	1,115,869	1,119,153	1,199,400	1,210,652	5,595,693
OIII Overhead	4,313	4,551				8,864
Grand Total	954,932	1,120,420	1,119,153	1,199,400	1,210,652	5,604,557

BUDGET

PERSONNEL (Salaries & Wages)	Year 01 CY 1978	Year 02* CY 1979	Year 03* CY 1980	Year 04* CY 1981	Year 05* CY 1982
Core Staff					
Project Director	-0-	-0-	-0-	-0-	-0-
Staff Project Director	51,000	53,505	56,764	59,886	63,180
Deputy Project Director	35,422	37,370	39,425	41,594	43,881
Assoc. Dir. for Planning	45,955	48,483	51,150	53,150	56,073
Program Design Specialist (New Position)	33,333**	42,200	44,521	46,920	49,553
Assoc. Dir. for Evaluation	33,435	35,274	37,214	39,261	41,420
Assoc. Dir. for Training	33,435	35,274	37,214	39,261	41,420
Training Spec. (New Position)	20,833**	26,376	27,826	29,356	30,970
MEDEX	21,408	22,585	25,069	26,448	27,902
Educational Specialist	15,509	16,362	17,262	18,211	19,213
Audio Visual Technician	13,977	14,745	15,555	16,411	17,314
Health Systems Mgt. Spec. (New Position)	25,000**	31,650	33,390	35,226	37,163
Admin. Assistant	15,053	15,880	16,753	17,674	18,648
Clerk-Steno II	8,735	9,216	9,722	10,257	10,821
Clerk-Steno II	8,368	8,828	9,314	9,826	10,366
Clerk-Steno II	8,368	8,828	9,314	9,826	10,366
Clerk-Steno II (New Position)	6,973**	8,828	9,314	9,826	10,366
Sub Total	376,804	415,404	439,807	463,133	488,656
Fringe Benefits @ 20%	75,361	83,081	87,961	92,627	97,731
Sub Total	452,165	498,485	527,768	555,760	586,387
Consortium Manpower***					
60 person-months/year, 12/person months for each of Five (5) Consortium members @ $3000/mos. x 60 = 180,000					
Sub Total	150,000**	189,900	200,345	211,364	222,989
Fringe Benefits @ 20%	30,000	37,980	40,069	42,273	44,598
Overhead @ 21%	31,500	39,879	42,072	44,386	46,828
Sub Total	$211,500	$267,759	$282,486	$298,023	$314,415
Total Personnel	$663,665	$766,244	$810,254	$853,783	$900,802

*Figures cited include an estimated 5.5% salary inflation factor.
**Lapsed 2/12ths annual amount
***See Annex C for further analysis.

ESTIMATED COSTS OF OUTPUTS - YEAR TOTAL

OUTPUTS	TOTAL	Core Staff Salary/Fringe		Consortium Manpower *		Consultants		Travel and Per Diem: Domestic:		International:		Overhead Salaries x 21%**	ODC PRORATED	%
		MM	$	MM	$	MM	$	Per Diem	Transprt	Per Diem	Transprt.			
1. Exploratory briefings in LDCs: a. Orientation and preplanning visits	725,443	58	171,273	45	204,893	480	60,000	5,000	9,000	97,850	122,000	29,974	25,453	12.
b. Seminars - indepth briefings	216,358	35	90,048	10	47,216	100	12,500	----	----	7,500	30,000	15,759	13,335	3.
2. Project materials development: a. Medex training modules	729,574	155	421,280	29	135,426	75	9,375	12,000	15,600	----	----	73,830	62,063	13.
b. Management training modules	372,333	73	205,400	15	73,826	100	12,500	7,500	7,800	----	----	35,946	29,361	6.
c. CHW training modules	553,168	116	321,858	18	88,223	145	18,125	7,500	4,800	3,600	6,000	56,326	46,736	9.
d. Continuing education modules	276,628	60	152,225	12	58,706	60	7,500	4,450	4,800	----	----	26,639	22,308	4.
3. LDC technical assistance & LDC project planning: a. Assistance in project design	802,909	145	405,310	57	267,520	---	----	----	----	----	----	70,814	59,265	14.
b. Curriculum adaptation workshops	226,986	48	122,267	14	65,584	---	----	----	----	----	----	21,398	17,737	4.
c. Teacher training workshops	226,084	48	121,238	14	65,883	---	----	----	----	----	----	21,218	17,745	4.0
d. Management/logistics workshops	204,168	43	118,245	10	48,226	---	----	----	----	----	----	20,694	17,003	3.6
e. Preceptor deployment workshops	177,988	32	90,408	12	58,911	---	----	----	----	----	----	15,822	12,847	3.2
f. Continuing education workshops	222,599	46	132,016	10	48,730	---	----	----	----	----	----	23,104	18,749	4.0
g. Evaluation workshops	179,908	37	103,229	9	43,763	---	----	----	----	----	----	18,065	14,851	3.2
4. Network strengthening & strategizing: a. MEDEX programs exchange network	320,810	27	72,548	17	81,304	70	8,750	7,600	9,800	21,100	96,500	12,697	10,511	5.7
b. Consortium meetings	260,737	33	93,220	18	85,972	115	14,375	15,550	22,000	----	----	16,313	13,307	4.6
5. External project evaluation conducted by AID/TA/H	100,000	---	----	---	----	---	100,000	----	----	----	----	----	----	1.8
6. OIH Overhead	8,864	---	----	---	----	---	----	----	----	----	----	----	----	.2
SUB TOTALS:		956	2,620,565	290	1,374,183	1,145	243,125	59,600	73,800	130,050	254,500	458,599	381,271	100

GRAND TOTAL: $5,604,557

* Figures cited include salaries, fringe benefits, and overhead costs.

** Figures cited pertain to core staff salaries only.

ESTIMATED COSTS OF OUTPUTS - YEAR 01

OUTPUTS	TOTAL	Core Staff Salary/Fringe		Consortium Manpower *		Consultants		Travel and Per Diem: Domestic:		Travel and Per Diem: International:		Overhead Salaries x 21%**	ODC PRORATED	%
		MM	$	MM	$	MM	$	Per Diem	Transprt	Per Diem	Transprt.			
1. Exploratory briefings in LDCs:														
a. Orientation and preplanning visits	200,935	18	49,410	15	63,450	130	16,250	1,000	1,800	22,250	30,000	8,647	8,128	21.2
b. Seminars - indepth briefings	51,274	11	24,497	2	8,460	20	2,500			1,500	6,000	4,287	4,030	5.4
2. Project materials development:														
a. Medex training modules	164,414	40	96,200	7	29,610	20	2,500	1,000	2,400			16,835	15,869	17.3
b. Management training modules	29,750	8	19,240			15	1,875	1,500	600			3,367	3,169	3.1
c. CHW training modules	75,152	22	53,130			15	1,875	1,500	600			9,298	8,749	7.9
d. Continuing education modules	49,283	15	33,630	1	4,230							5,885	5,538	5.1
3. LDC technical assistance & LDC project planning:														
a. Assistance in project design	141,469	30	74,025	10	42,300							12,954	12,190	14.8
b. Curriculum adaptation workshops	36,719	8	17,936	3	12,690							3,139	2,954	3.9
c. Teacher training workshops	49,959	11	24,662	4	16,920							4,316	4,061	5.2
d. Management/logistics workshops	20,339	5	12,025	1	4,230							2,104	1,980	2.1
e. Preceptor deployment workshops	6,444	2	4,810									842	792	.6
f. Continuing education workshops	17,119	4	9,620	1	4,230							1,684	1,585	1.8
g. Evaluation workshops	23,361	6	14,280	1	4,230							2,499	2,352	2.4
4. Network strengthening & strategizing:														
a. MEDEX programs exchange network	59,224	5	11,950	3	12,690	15	1,875	2,000	1,800	4,550	20,300	2,091	1,968	6.2
b. Consortium meetings	25,177	3	6,750	2	8,460	15	1,875	3,400	2,400			1,181	1,111	2.6
5. External project evaluation conducted by AID/TA/H														
6. OIH Overhead	4,313													.4
SUB TOTALS:		188	452,165	50	211,500	230	28,750	10,400	9,600	28,300	56,300	79,129	74,475	100

GRAND TOTAL: $954,932

* Figures cited include salaries, fringe benefits, and overhead costs.

** Figures cited pertain to core staff salaries only.

ESTIMATED COSTS OF OUTPUTS - YEAR 02

OUTPUTS	TOTAL	Core Staff Salary/Fringe		Consortium Manpower *		Consultants		Travel and Per Diem: Domestic:		Travel and Per Diem: International:		Overhead Salaries x 21%**	ODC PRORATED	%
		MM	$	MM	$	MM	$	Per Diem	Transprt	Per Diem	Transprt.			
1. Exploratory briefings in LDCs:														
a. Orientation and preplanning visits	193,332	18	52,884	12	53,535	120	15,000	1,000	1,800	22,250	30,000	9,255	7,608	17.3
b. Seminars - indepth briefings	47,652	9	21,780	2	8,926	20	2,500			1,500	6,000	3,812	3,134	4.3
2. Project materials development:														
a. Medex training modules	140,301	30	77,940	7	31,241	15	1,875	2,000	2,400			13,636	11,209	12.6
b. Management training modules	40,391	10	25,980	2	8,926	20	2,500	1,500	1,200			4,547	3,738	4.3
c. CHW training modules	88,006	20	52,160	3	13,389	25	3,125	1,500	1,200			9,128	7,504	7.9
d. Continuing education modules	60,298	15	36,525	2	8,926	10	1,250	750	1,200			6,392	5,255	5.4
3. LDC technical assistance & LDC project planning:														
a. Assistance in project design	167,302	30	79,440	14	62,482							13,902	11,628	14.9
b. Curriculum adaptation workshops	51,927	12	29,220	3	13,389							5,114	4,204	4.6
c. Teacher training workshops	47,464	12	29,220	2	8,926							5,114	4,204	4.2
d. Management/logistics workshops	43,191	10	25,980	2	8,926							4,547	3,738	3.8
e. Preceptor deployment workshops	26,058	5	12,990	2	8,926							2,273	1,869	2.3
f. Continuing education workshops	18,170	4	10,392	1	4,463							1,819	1,496	1.6
g. Evaluation workshops	21,430	5	12,865	1	4,463							2,251	1,851	1.9
4. Network strengthening & strategizing:														
a. MEDEX programs exchange network	58,729	5	12,540	3	13,389	10	1,250	1,400	1,800	4,550	19,800	2,195	1,805	5.3
b. Consortium meetings	53,468	7	18,569	4	17,852	25	3,125	3,200	4,800			3,250	2,672	4.7
5. External project evaluation conducted by AID/TA/H	50,000						50,000							4.5
6. OIH Overhead	4,551													.4
SUB TOTALS:		192	498,485	60	267,759	245	80,625	11,350	14,400	28,300	55,800	87,235	71,915	100

GRAND TOTAL: $1,120,420

* Figures cited include salaries, fringe benefits, and overhead costs.

** Figures cited pertain to core staff salaries only.

ESTIMATED COSTS OF OUTPUTS - YEAR 03

OUTPUTS	TOTAL	Core Staff Salary/Fringe		Consortium Manpower *		Consultants		Travel and Per Diem: Domestic:		Travel and Per Diem: International:		Overhead Salaries x 21%**	ODC PRORATED	%
		MM	$	MM	$	MM	$	Per Diem	Transprt	Per Diem	Transprt.			
1. Exploratory briefings in LDCs:														
a. Orientation and preplanning visits	165,924	12	37,056	10	47,080	120	15,000	1,000	1,800	22,250	30,000	6,465	5,253	14.8
b. Seminars - indepth briefings	53,056	9	25,547	2	9,416	20	2,500			1,500	6,000	4,471	3,622	4.7
2. Project materials development:														
a. Medex training modules	122,003	25	68,700	5	23,540	10	1,250	3,000	3,600			12,023	9,890	10.9
b. Management training modules	78,309	15	41,220	4	18,832	20	2,500	1,500	1,200			7,214	5,843	7.0
c. CHW training modules	89,914	18	49,464	4	18,832	20	2,500	2,250	1,200			8,656	7,012	8.0
d. Continuing education modules	46,030	10	25,850	2	9,416	5	625	750	1,200			4,524	3,665	4.1
3. LDC technical assistance & LDC project planning:														
a. Assistance in project design	167,521	30	84,300	12	56,502							14,750	11,969	15.1
b. Curriculum adaptation workshops	68,585	16	41,360	3	14,124							7,238	5,863	6.2
c. Teacher training workshops	53,666	13	33,605	2	9,416							5,881	4,764	4.8
d. Management/logistics workshops	52,838	12	32,976	2	9,416							5,771	4,675	4.7
e. Preceptor deployment workshops	39,453	7	19,236	3	14,124							3,366	2,727	3.5
f. Continuing education workshops	38,364	8	21,984	2	9,416							3,847	3,117	3.4
g. Evaluation workshops	27,345	5	13,615	2	9,416							2,383	1,931	2.4
4. Network strengthening & strategizing:														
a. MEDEX programs exchange network	60,425	5	13,290	3	14,124	10	1,250	1,400	1,800	4,550	19,800	2,326	1,885	5.4
b. Consortium meetings	55,720	7	19,565	4	18,832	25	3,125	3,200	4,800			3,424	2,774	5.0
5. External project evaluation conducted by AID/TA/H														
6. OIH Overhead														
SUB TOTALS:		192	527,768	60	282,486	230	28,750	13,100	15,600	28,300	55,800	92,359	74,990	100

GRAND TOTAL: $ 1,119,153

* Figures cited include salaries, fringe benefits, and overhead costs.

** Figures cited pertain to core staff salaries only

ESTIMATED COSTS OF OUTPUTS - YEAR 04

OUTPUTS	TOTAL	Core Staff Salary/Fringe		Consortium Manpower *		Consultants		Travel and Per Diem: Domestic:		Travel and Per Diem: International:		Overhead Salaries x 21%**	ODC PRORATED	%
		MM	$	MM	$	MM	$	Per Diem	Transprt	Per Diem	Transprt.			
1. Exploratory briefings in LDCs: a. Orientation and preplanning visits	86,409	6	18,771	4	19,868	60	7,500	1,000	1,800	15,550	16,000	3,285	2,635	7.2
b. Seminars - indepth briefings	35,634	4	11,936	2	9,934	20	2,500			1,500	6,000	2,089	1,675	3.0
2. Project materials development: a. Medex training modules	146,918	30	86,820	5	24,835	10	1,250	3,000	3,600			15,190	12,223	12.2
b. Management training modules	102,401	20	57,880	4	19,868	20	2,500	1,500	2,400			10,129	8,124	8.5
c. CHW training modules	148,532	28	81,312	6	29,802	35	4,375	2,250	1,800	1,350	2,000	14,230	11,413	12.3
d. Continuing education modules	49,506	10	27,310	2	9,934	10	1,250	1,200	1,200			4,779	3,833	4.2
3. LDC technical assistance & LDC project planning: a. Assistance in project design	186,488	30	88,770	14	69,541							15,535	12,642	15.6
b. Curriculum adaptation workshops	36,457	6	16,386	3	14,901							2,868	2,302	3.0
c. Teacher training workshops	36,457	6	16,386	3	14,901							2,868	2,302	3.0
d. Management/logistics workshops	48,002	10	28,940	2	9,934							5,065	4,063	4.0
e. Preceptor deployment workshops	52,969	10	28,940	3	14,901							5,065	4,063	4.4
f. Continuing education workshops	52,969	10	28,940	3	14,901							5,065	4,063	3.7
g. Evaluation workshops	43,899	9	25,821	2	9,934							4,519	3,625	
4. Network strengthening & strategizing: a. MEDEX programs exchange network	60,819	5	14,020	3	14,901	15	1,875	1,400	2,200	3,700	18,300	2,454	1,969	5.1
b. Consortium meetings	61,940	8	23,528	4	19,868	25	3,125	3,000	5,000			4,117	3,302	5.2
5. External project evaluation conducted by AID/TA/H	50,000						50,000							4.2
6. OIH Overhead														100
SUB TOTALS:		192	555,760	60	298,023	195	74,375	13,350	18,000	22,100	42,300	97,258	78,234	100

GRAND TOTAL: $ 1,199,400

* Figures cited include salaries, fringe benefits, and overhead costs.

** Figures cited pertain to core staff salaries only.

ESTIMATED COSTS OF OUTPUTS - YEAR 05

OUTPUTS	TOTAL	Core Staff Salary/Fringe		Consortium Manpower *		Consultants		Travel and Per Diem: Domestic:		International:		Overhead Salaries x 21%**	ODC PRORATED	%
		MM	$	MM	$	MM	$	Per Diem	Transprt	Per Diem	Transprt.			
1. Exploratory briefings in LDCs:														
a. Orientation and preplanning visits	78,843	4	13,152	4	20,960	50	6,250	1,000	1,800	15,550	16,000	2,302	1,829	6.5
b. Seminars - indepth briefings	28,742	2	6,288	2	10,480	20	2,500			1,500	6,000	1,100	874	2.4
2. Project materials development:														
a. Medex training modules	155,938	30	91,620	5	26,200	20	2,500	3,000	3,600			16,146	12,872	12.8
b. Management training modules	113,482	20	61,080	5	26,200	25	3,125	1,500	2,400			10,689	8,488	9.3
c. OHW training modules	151,564	28	85,792	5	26,200	50	6,250			2,250	4,000	15,014	12,058	12.6
d. Continuing education modules	71,511	10	28,910	5	26,200	35	4,375	1,750	1,200			5,059	4,017	5.9
3. LDC technical assistance & LDC project planning:														
a. Assistance in project design	139,979	25	78,775	7	36,695							13,673	10,836	11.6
b. Curriculum adaptation workshops	33,298	6	17,365	2	10,480							3,039	2,414	2.7
c. Teacher training workshops	38,538	6	17,365	3	15,720							3,039	2,414	3.2
d. Management/logistics workshops	39,798	6	18,324	3	15,720							3,207	2,547	3.3
e. Preceptor deployment workshops	53,064	8	24,432	4	20,960							4,276	3,396	4.4
f. Continuing education workshops	95,977	20	61,080	3	15,720							10,689	8,488	7.9
g. Evaluation workshops	63,873	12	36,648	3	15,720							6,413	5,092	5.3
4. Network strengthening & strategizing:														
a. MEDEX programs exchange network	81,613	7	20,748	5	26,200	20	2,500	1,400	2,200	3,750	18,300	3,631	2,884	6.8
b. Consortium meetings	64,432	8	24,808	4	20,960	25	3,125	2,750	5,000			4,341	3,448	5.3
5. External project evaluation conducted by AID/TA/H														
6. OIH Overhead														
SUB TOTALS:		192	586,387	60	314,415	245	30,625	11,400	16,200	23,050	44,300	102,618	81,657	100

GRAND TOTAL: $1,210,652

* Figures cited include salaries, fringe benefits, and overhead costs.

** Figures cited pertain to core staff salaries only.

C. Social Analysis

Investment in the infrastructure and system to deliver primary health care services to three-fourths of the world's population is now being considered as a critical investment to maintain political stability and promote developmental growth.

The project design addresses the question of spread effect through the development of a cooperative network of LDC MEDEX programs to assist each other and encourage adoption of the MEDEX approach to rapidly improve and expand primary health care services by other LDCs. It is anticipated that the social impact of improving primary health care services will be positive.

D. Economic Analysis

This project has been specifically developed for low-cost health delivery systems. The economic feasibility is considered very favorable although economic benefits of this project in the developing world cannot be accurately forecast, measured, or illustrated in cost/benefit or even cost/effectiveness terms or ratios. This is because:

1) Technical assistance services in health have an indirect relationship to the ultimate size, quality, and impact of expanded and improved health services.
2) Accurate identification and measurement of the economic consequences of expanded and improved primary health services are not yet possible.
3) Many other major variables influence ultimate economic impact of technical assistance under this project, not the least of which will be the size and nature of the yet-to-be selected host country projects.

There is, nevertheless, a substantial economic multiplier effect in transferring and adapting MEDEX technology for use in developing countries since existing public and private expenditures for health services will undergo redistribution, becoming more compatible with recent trends in economic development objectives. There will result a shift of priorities:

1) From capital-intensive to labor-intensive spending; i.e., from less per capita expenditure on high-cost institutionally based health services to expanded lower cost community-based services,
2) From fewer high-cost maldistributed health workers in short supply to more numerous low-cost and more appropriately distributed health workers.
3) From expensive curative and rehabilitative services to less expensive curative, preventive, educative, and promotive health services,
4) From separated and fragmented programs in family planning, nutrition, sanitation, and other specialty areas into a planned integrated health services delivery system for greater effectiveness, efficiency, and lower administrative overhead costs.

This technical assistance project will also serve to promote the mobilization of additional resources for support of host country health services.

When health services coverage of population is expanded, the impact of such coverage on improvements in health status, human vitality, and productivity have consistently shown a very positive correlation. Moreover, broader access to health services promotes the climate for overall developmental growth and political stability, essential to the achievement of national economic development objectives.

PART 4: IMPLEMENTATION ARRANGEMENTS

A. Analysis of AID's Administrative Arrangements

1. Recipient

This project is to be carried out through a direct AID-funded contract with the University. (See Annex F for Request for Predominant Capability for Contractor selection). This will include provision for salaries of a core staff (see Annex G for analysis of staffing requirements for the life of this project). In addition, funding will be included to permit the University to sub-contract for full-time equivalent staff salaries of consortium members in accordance with Memoranda of Understanding between the University and each member institution of the consortium.

A RSSA Agreement with DHEW/OIH will be required to cover the services of the HMDS Staff Director at the University of Hawaii until his retirement from the U.S. Public Health Service in 1979. Minimal administrative support will also be provided from OIH through the RSSA Agreement, thus reducing DSB/H staff support requirements.

2. A.I.D.

As this project generates requests from host countries and AID missions for services beyond the funding provided in this project, alternative mechanisms are suggested for procuring assistance from the University of Hawaii and its consortium members. These are:

a. Collaborative Assistance Selection Procedure as defined in AIDPR Appendix H and also in Chapter 7-4.58 of AID Handbook.

b. Competitive Procurement.

c. Noncompetitive Procurement for predominant capability as provided for in AID Handbook Chapter 7-3.102-50. Resulting contracts for country programs are expected to be funded and monitored by AID Regional Bureaus and missions.

It is not anticipated that this project will require additional AID staff for administration and monitoring during its implementation. Regular quarterly reports will be required of the contractor with annual internal PES Reviews, funding is provided for external evaluations during the second and fourth years of the project.

It is expected that the project will be funded on an annual basis subject to availability of funds.

B. Implementation Plan

It is planned that a direct AID contract will be negotiated with the University of Hawaii for this Phase III MEDEX project beginning no later than June 1, 1978. Approval is being requested for five years to assure reaching the outputs as stated. This approval will be subject to availability of funds on an annual basis.

In accordance with the PPT (Annex H) the following implementation schedule is projected for the life of the project:

1. Year I

a. Conduct approximately eight reconnaissance visits to LDCs utilizing two-man briefing teams. (Centrally funded)

b. Conduct three Primary Health Care seminars. (Centrally funded)

c. Draft five new MEDEX Training Modules. (Centrally funded)

d. Draft eight Community Health Worker modules. (Centrally funded)

e. Provide technical guidance in the design of one LDC MEDEX country program. (Regional Bureau/USAID mission funded)

f. Conduct one Curriculum Adaptation Workshop. (Regional Bureau/USAID mission funded)

g. Conduct one Teacher Training Workshop. (Regional Bureau/USAID mission funded)

h. Negotiate arrangements with four U.S. Universities to form a MEDEX Consortium. (Centrally funded)

i. Conduct one Consortium meeting. (Centrally funded)

j. Conduct one LDC MEDEX network conference. (Centrally funded)

k. Develop an Evaluation Protocol for country program and forward to AID for review prior to the sixth month of the contract, and begin Evaluation programs. (Centrally funded)

l. Participate in AID-sponsored Evaluation review as requested. (Centrally funded)

m. Produce four quarterly reports. (Centrally funded)

2. Year II

a. Conduct approximately eight reconnaissance visits to LDCs utilizing two-man briefing teams. (Centrally funded)

b. Conduct three Primary Health Care seminars. (Centrally funded)

c. Draft one Management Training Module. (Centrally funded)

d. Convene one Continuing Education Design Development Conference and draft one Continuing Education Module. (Centrally funded)

e. Provide technical guidance in the design of two new LDC MEDEX programs, and continue follow-up guidance to the one country program started in the first year, utilizing MEDEX training technology. (Regional Bureau/USAID mission funded)

f. Conduct two Curriculum Adaptation Workshops. (Regional Bureau/USAID mission funded)

g. Conduct two Teacher Training Workshops. (Regional Bureau/USAID mission funded)

h. Conduct two Management Logistics Workshops. (Regional Bureau/USAID mission funded)

i. Conduct one preceptor deployment workshop. (Regional Bureau/USAID mission funded)

j. Conduct two Consortium meetings. (Centrally funded)

k. Conduct one LDC MEDEX network conference. (Centrally funded)

l. Participate in AID-Sponsored External Project Evaluation review as requested. (Centrally funded)

m. Produce four quaterly reports.

3. Year III

a. Conduct approximately six reconnaissance visits to LDCs. (Centrally funded)

b. Conduct four Primary Health Care seminars. (Centrally funded)

c. Draft two new Management Training Modules. (Centrally funded)

d. Provide technical guidance in the design of three new LDC MEDEX programs, and continue follow-up guidance to three such programs begun earlier utilizing MEDEX training technology. (Regional Bureau/USAID mission funded)

e. Conduct three Curriculum Adaptation Workshops. (Regional Bureau/USAID mission funded)

f. Conduct three Teacher Training Workshops. (Regional Bureau/USAID mission funded)

g. Conduct three Management Logistics Workshops. (Regional Bureau/USAID mission funded)

h. Conduct three preceptor Deployment Workshops. (Regional Bureau/USAID mission funded)

i. Conduct two Continuing Education Workshops. (Regional Bureau/USAID mission funded)

j. Conduct two Consortium meetings. (Centrally funded)

k. Conduct one LDC MEDEX network conference. (Centrally funded)

l. Conduct one Evaluation Workshop. (Regional Bureau/USAID mission funded)

m. Produce four quarterly reports. (Centrally funded)

4. Year IV

a. Conduct four reconnaissance visits to LDCs. (Centrally funded)

b. Conduct three Primary Health Care seminars. (Centrally funded)

c. Draft one new Management Training Module. (Centrally funded)

d. Convene one Continuing Education conference and draft one new Continuing Education Module. (Regional Bureau/USAID mission funded)

e. Provide technical guidance in the design of two new LDC MEDEX programs, and continue follow-up guidance to six such programs begun earlier, utilizing MEDEX training technology. (Regional Bureau/USAID mission funded)

f. Conduct two Curriculum Adaptation Workshop. (Regional Bureau/USAID mission funded)

g. Conduct two Teacher Training Workshops. (Regional Bureau/ USAID mission funded)

h. Conduct three Management and Logistics Workshops. (Regional Bureau/USAID mission funded)

i. Conduct two Preceptor Deployment Workshops. (Regional Bureau/USAID mission funded)

j. Conduct two Continuing Education Workshops. (Regional Bureau/USAID mission funded)

k. Conduct two Consortium meetings. (Centrally funded)

l. Conduct one LDC MEDEX network conference. (Centrally funded)

m. Conduct two Evaluation Workshops. (Regional Bureau/USAID mission funded)

n. Participate in AID-sponsored External Project Evaluation review as requested. (Centrally funded)

o. Produce four quarterly reports. (Centrally funded)

5. Year V

a. Conduct four reconnaissance visits to LDCs. (Centrally funded)

b. Conduct two Primary Health Care seminars. (Centrally funded)

c. Draft one new Management Training Module. (Centrally funded)

d. Provide technical follow-up guidance to eight LDC MEDEX programs begun earlier, utilizing MEDEX training technology. (Regional Bureau/USAID mission funded)

e. Conduct two Preceptor Deployment Workshops. (Regional Bureau/USAID mission funded)

f. Conduct four Continuing Education Workshops. (Regional Bureau/USAID mission funded)

g. Conduct two Consortium meetings. (Centrally funded)

h. Conduct one LDC MEDEX network conference. (Centrally funded)

i. Conduct five Evaluation Workshops. (Regional Bureau/USAID mission funded)

j. Produce four quarterly reports. (Centrally funded)

k. Produce final report

C. Evaluation Arrangements for the Project

Two separate types of evaluation are discussed below. First, evaluation of the country activities supported by this project and secondly, the evaluation of the core project itself.

(1) Evaluation of Country Activities

One of the outputs from the core contract will be an evaluation protocol for country activities. This will be produced by the contractor and submitted to AID for approval within six months of signing the core contract. The protocol will cover such issues as (a) Effectiveness: Did the project achieve its planned targets as articulated in the logical framework? (b) Significance: Did the project make a substantial contribution to development? (c) Efficiency: Was the cost/effectiveness satisfactory?

The protocol will include methods for assessing improvements in distribution of primary care providers and the increase in accessability of primary health care services to rural people. Maximum effort will be made to assess and describe costs of improved services in a way that will be useful to other governments which are considering adoption of similar programs.

(2) Evaluation of the Core Project

The evaluation of the core contractors' performance will be conducted by AID with external assistance. The project

budget provides for external evaluation in the second and fourth years. Evaluation of the core contractors' effectiveness will, of course, need to consider the performance and effectiveness of the individual country projects.