

PL - (H. H. - 3 - 7) 118923

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D.C. 20523

P R O J E C T P A P E R

EGYPT: CHILD SURVIVAL  
263-0203

July 1985

P 177-516

AGENCY FOR INTERNATIONAL DEVELOPMENT  
**PROJECT DATA SHEET**

1. TRANSACTION CODE: **A** (A = Add, C = Change, D = Delete)  
Amendment Number: \_\_\_\_\_  
DOCUMENT CODE: **3**

COUNTRY/ENTITY: **EGYPT**

2. PROJECT NUMBER: **263-0203**

3. PROJECT TITLE (maximum 40 characters): **CHILD SURVIVAL**

4. BUREAU/OFFICE: **ANE**

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM DD YY **01 9 30 93**

7. ESTIMATED DATE OF OBLIGATION (Under "B" below, enter 1, 2, 3, or 4)  
A. Initial FY **85** B. Quarter **3** C. Final FY **90**

8. COSTS (\$000 OR EQUIVALENT \$1 = 0.83168)

A. FUNDING SOURCE	FIRST FY 85			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total						
(Grant)	(1,500)	(1,500)	(3,000)	(29,542)	(43,400)	(72,942)
(Loan)	(-)	(-)	(-)	(-)	(-)	(-)
Other U.S.						
1.						
2.						
Host Country	-	2,000	2,000	-	51,500	51,500
Other Donor(s)						
<b>TOTALS</b>		<b>3,500</b>	<b>5,000</b>	<b>29,542</b>	<b>94,900</b>	<b>124,442</b>

9. SCHEDULE OF AID FUNDING (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH CODE	D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
			1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) ESF	533	510			3,000		72,942	
(2)								
(3)								
(4)								
<b>TOTALS</b>					<b>3,000</b>		<b>72,942</b>	

10. SECONDARY TECHNICAL CODES (maximum 5 codes of 3 positions each)  
563 | 580 | 530 | 440 | 560

11. SECONDARY PURPOSE CODES (maximum 7 codes of 4 positions each)

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)  
A. Code: **TECH** | **TRN**  
B. Amount: \_\_\_\_\_

15. PROJECT PURPOSE (maximum 480 characters)

To reduce morbidity and mortality in infants, children and women of childbearing age.

14. SCHEDULED EVALUATIONS  
Interim: MM YY **01 8 8 8** | Final: MM YY **01 8 9 3**

15. SOURCE/ORIGIN OF GOODS AND SERVICES  
 000  961  Local  Other (Specify) \_\_\_\_\_

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a \_\_\_\_\_ page PP Amendment.)

Methods of Implementation and financing are included in the Financial Plan in this document.

Concurrence *Homi Jamshed*  
Homi Jamshed  
Acting Controller

*Frank B. Kimball*  
Signature

17. APPROVED BY: **Frank B. Kimball**  
Mission Director  
Date Signed: **17 3 10 85**

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION  
MM DD YY **10 18 2 17 85**

PROJECT AUTHORIZATION

Name of Country: Arab Republic of  
Egypt

Name of Project: Child Survival

Number of Project: 263-0203

1. Pursuant to Section 531 of the Foreign Assistance Act of 1961, as amended (the "Act"), I hereby authorize the Child Survival project (the "Project") for the Arab Republic of Egypt ("Grantee") involving planned obligations not to exceed Seventy-Two Million, Nine Hundred and Forty-Two Thousand United States Dollars (\$72,942,000) in grant funds over six years from the date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing the foreign-exchange and local-currency costs of goods and services required for the Project. The estimated life of Project is eight years from the date of initial obligation.

2. The Project will consist of the provision of technical assistance, training, commodities and other support in furtherance of the Grantee's program to reduce morbidity and mortality in infants, children and women of childbearing age. Project interventions will emphasize the areas of: (a) immunization against major childhood diseases; (b) early diagnosis and treatment of acute respiratory infections; (c) child nutrition; and (d) child spacing.

3. The Project will be subject to the following terms and conditions, together with such others as A.I.D. shall consider appropriate:

a. Source and Origin of Goods and Services

Goods financed by A.I.D. under the Project shall have their source and origin in the Arab Republic of Egypt or in the United States, except as A.I.D. may otherwise agree in writing. Services financed by A.I.D. under the Project shall, except for ocean shipping, be of Egyptian or American nationality, except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the Project shall, except as A.I.D. may otherwise agree in writing, be financed on flag vessels of the United States.

b. Conditions Precedent to Disbursement

1) First Disbursement

Prior to any disbursement or to the issuance by A.I.D. of any commitment documents under the Agreement, the Grantee shall, except as the Parties may otherwise agree in writing, furnish to A.I.D., in satisfactory form and substance, a statement of the names and titles of the persons authorized to act as the representatives of the Grantee, together with a specimen signature of each person specified in such statement.

2) Additional Disbursements for Other Project Costs

Prior to disbursement or the issuance by A.I.D. of commitment documents for any Project costs other than for short-term procurement assistance in the Project's early stage, the Grantee will, except as the parties may otherwise agree in writing, furnish in form and substance satisfactory to A.I.D.;

- (a) evidence of the establishment of a Child Survival Steering Committee with such defined authorities and responsibilities as are necessary for coordination of the activities financed under the Project along with a statement of the names and affiliations of initial appointees to that Committee; and
- (b) evidence of the establishment of a Project Secretariat which will function under the policy guidance of the Child Survival Steering Committee with such defined authorities and responsibilities as are necessary to implement the Project along with a statement of the functions and responsibilities of the Secretariat and the names of appointees to the positions of Executive Director and unit chiefs.

3) Additional Disbursement for A.I.D. - Funded Contracts

Prior to any disbursement, or to the issuance of documents pursuant to which disbursement will be made, for goods or services to be funded by A.I.D. under the Grant, the Grantee shall, except as the parties may otherwise agree writing, either: (a) furnish to A.I.D. in form and substance satisfactory to A.I.D., executed contracts for such procurements; or (b) agree with A.I.D. on documentation permitting direct A.I.D. procurement of such goods and/or services.

c. Covenants

The Grant Agreement shall contain in substance, the following covenants by the Grantee:

- 1) Annual Implementation Plans The Grantee agrees to develop and present for consultation and agreement with A.I.D., annually, a proposed implementation plan identifying how, over the coming year, the Project's activities, program and training will be carried out on a nationwide basis and made available to the appropriate public and private organizations.
- 2) Staff. The Grantee agrees to provide adequate staff, to implement necessary staff training and to effect necessary actions to ensure that Project objectives are accomplished.

- 3) Incentive Payments. The Parties agree that A.I.D. Grant funds may not be used to pay incentives, i.e., payments above regular salaries and allowances paid to employees for the implementation of the Project.
- 4) Project Support. The Grantee agrees to provide adequate transport and other administrative support to accomplish the objectives of the Project from local currency other than that provided by the A.I.D. Grant.
- 5) Maintenance. The Grantee agrees to provide adequate budget support for maintenance of equipment and vehicles for the Project.
- 6) Commodity Support. The Grantee agrees to continue to provide those vaccines, pharmaceuticals, and other supplies now being provided by the Grantee through the Ministry of Health.

Approved: Frank B. Kimball  
Frank B. Kimball  
Director  
USAID/Egypt

DATE: 7/30/85

Clearances: AD/HRDC: Bwilder, BCW  
HRDC/H: Woldham, C. C. Woldham / 1/28  
A-AD/FM: HJamshed, HJ  
DPPE: JConly, JMC  
DD: AMHandly, AMH

KFM

14

Cover Sheet  
Data Sheet  
Project Authorization  
(including CP's & Covenants)

TABLE OF CONTENTS

	Pages
I. Summary and Recommendation (Executive Summary)	1
II. Project Rationale and Description	4
A. Background and Rationale	4
B. Relationship to CDSS and the GOE's Development Plan	7
C. Goal and Purpose	7
D. General Project Description	7
E. Outputs and Inputs	9
III. Sub-Project Activity Descriptions	10
A. Immunization	10
1. Problem	10
2. Sub-Project Description	13
B. Acute Respiratory Infections	18
1. Problem	18
2. Sub-Project Description	19
C. Child Nutrition	23
1. Problem	23
2. Sub-Project Description	24
D. Child Spacing	31
1. Problem	31
2. Sub-Project Description	36
IV. Cost Estimate and Financial Plan	42
V. Implementation Plan	52
A. Administrative Arrangements	52
B. Results under CDD Project Administrative Arrangements	53
C. Contractor Support	53
D. USAID Monitoring	54
E. Implementation Steps	54
F. Implementation Schedule	55
G. Evaluation Plan	59
H. Procurement Plan	60

V

Annexes:

	<u>Annex #</u>
Logical Framework	1
Project Analyses	
A. Administrative Analysis	2-A
B. Technical Analysis	2-B
C. Social Soundness Analysis	2-C
E. Economic Analysis	2-D
NEAC PID Approval Cable	3
Statutory Checklist	4
Section 611 (a) Statement	5
Environment Impact	6
GOE Request for Assistance	7

doc. no. 2357H

vi

I. Summary and Recommendation (Executive Summary)

- A. Project Title: Child Survival
- B. Project Number: 263-0203
- C. Grantee: The Government of Egypt (GOE)
- D. Coordinating Agency: Child Survival Steering Committee chaired by the Ministry of Health.
- E. Implementing Agency: Ministry of Health.
- F. Amount: \$ 72.942 million
- G. Terms: Grant to the Government of Egypt
- H. Life of Project: 8 years.
- I. Goal and Purpose:

The goal of this project is to improve the health of the Egyptian people.

The Project purpose is to reduce morbidity and mortality in infants, children and women of childbearing age.

J. Strategy and Description

The Child Survival Project is focused on four interventions that deal with the major causes of illness and death of infants and young children: immunization for six major childhood diseases, early diagnosis and treatment of acute respiratory infections, child nutrition, and child spacing.

The Child Survival Project emphasizes practical, cost-effective interventions which address childhood health problems and practical field testing of interventions such as vaccines that prevent major childhood diseases. The interventions include a focus on improved and expanded services in the private sector through use of mass media to create demand for preventive health services, training of private sector providers such as the daya and development of private sector products such as weaning food supplements, disposable syringes, or locally manufactured medical equipment.

The Project presents a mechanism through which the Government of Egypt (GOE) and USAID can undertake a program to dramatically increase the chances of child survival in Egypt. The project builds upon the base of collaborative experience in the health sector which has been developed by GOE and USAID over a number of years. The program is designed to complement and supplement health activities which are already in place and to augment and accelerate efforts to address recognized and interrelated needs and priorities.

1. Immunization (EPI)

The Expanded Immunization Program in coordination with UNICEF and WHO will undertake to reduce both infant/child mortality and the incidence of the six most serious, preventable childhood diseases through an expanded effective immunization program reaching newborns and pregnant women. An 80% coverage rate of immunization for the six targeted diseases in the cohort of children born during the eight years of USAID assistance to the Expanded Program for Immunization and a 60% coverage of pregnant mothers with tetanus toxoid immunization during the same period is projected.

2. Acute Respiratory Infections (ARI)

The program to deal with acute respiratory infections will improve health services focusing on early diagnosis and treatment of ARI. The services will initially be supported by an epidemiological assessment that will provide the data for the targeting of more effective regimens for the treatment and prevention of specific acute respiratory diseases. The best of existing knowledge for the diagnosis and treatment must be practiced throughout the extensive Egyptian health care system.

3. Child Nutrition

The Child Nutrition Program will concentrate on improving the knowledge, practices, availability, promotion and utilization of weaning foods, in the weaning age group (6-24 months); and improving the diagnosis, treatment, monitoring and prevention of iron deficiency anemia in the weaning age group and among pregnant and lactating mothers. Reductions in child mortality and morbidity rates are expected from these interventions.

4. Child Spacing

The Child Spacing Program will reduce neonatal mortality through improved maternal health care during pregnancy, delivery, and the postpartum period, and through the use of child spacing methods to prevent high risk births. The improvement of neonatal health will also impact positively on the effectiveness of other Child Survival interventions in later infancy and young childhood.

K. Project Implementation

The Child Survival Project interventions will be implemented through both the public and private sectors in highly focused vertical programs that emphasize prevention and can be delivered by primary care personnel in both sectors. These interventions will be supported by mass media public education programs which emphasize the use of preventive services for Child Survival.

The project will be implemented under the policy guidance of the Child Survival Steering Committee chaired by the Ministry of Health. A secretariat will be established to assist the committee in coordinating the management of all project activities. Technical assistance and training activities for the project components will be planned and administered to maximize complementarity and efficiency of project interventions.

The project provides selective assistance to the secretariat through full time and short term US technicians with specialized skills that can aid MOH project personnel in expediting the implementation of the Child Survival interventions. This technical assistance has been requested by the MOH in the program descriptions prepared for the project paper and in discussions with the MOH First Undersecretary and Program Directors.

The precedent of the CDD project shows both the administrative/managerial approach required for success and the role of US specialists can and must play to maximize the efficacy of the combined Egyptian U.S. inputs.

Successful interventions by the Child Survival Secretariat, which can be accomplished efficiently and quickly, are the key to the success of the project. The technical assistance in training, program design and evaluation, and clinical areas supplements the expertise now available in Egypt, and will expedite the MOH's efforts. Long term and short term training plan for the project will strengthen the MOH's expertise in management of child survival interventions and negate the need for technical assistance in the future.

Technical assistance and training are crucial USAID contributions to the project. Without them the project can not accomplish it's objectives. The secretariat will be trying to do a job without the required support the MOH must have to accomplish the tasks that will save the lives of thousands of Egyptian children over the next decade.

#### L. Recommendation

Because the project directly and positively supports the development objectives of both the GOE and AID and is technically feasible, it is recommended that a dollar grant in the amount of \$72.942 million be authorized with an initial FY 85 obligation of \$3 million.

### II. Project Rationale and Description

#### A. Background and Rationale

There are approximately 7 million children under 5 years of age in Egypt who account for 15% of the total population. Each year there are 1.8 million births and 174,000 of these infants will die before their first birthday. Another 98,000 children will die before age 5, with most of these deaths occurring before three years of age.

Deaths in infants and children under age five account for 50% of the total deaths occurring in Egypt each year. The causes of morbidity and mortality in the under fives are well established. The high incidence of communicable childhood diseases, diarrhea and acute respiratory infections is compounded by high birth rates with short birth intervals, poor care during delivery and the first few weeks of life, and malnutrition because of poor weaning practices and iron deficiency anemia.

Maternal mortality is a leading cause of death of women of reproductive age in Egypt. This mortality is related to poor care during pregnancy and delivery, inadequate spacing of pregnancies and excess fertility. All of these conditions also directly affect child health and survival. An attack on the causes of child survival must also include attention to the health of the mother.

Egypt's Infant Mortality Rate (infants twelve months and under) was reported to be 96.7/1000 live births in 1984. This is a drop from 151.0/1000 in 1964, but still very high when compared to 16.7 for Cyprus, 31.8 for Kuwait and 38.7 for Lebanon, countries with similar levels of development and investment in health infrastructure. Equally distressing is the extremely high child mortality rate of 15 per 1000 in children 1 through 4 years of age. As noted above, deaths in these two age groups account for 50% of deaths in Egypt, an unacceptably high rate for a country with such a high level of development .

Egypt has one of the most extensive health infrastructures in the developing world. Health facilities are well staffed with physicians and easily accessible to the bulk of the population. Ninety five percent of the population lives within 3 kilometers of a well staffed health facility. Obviously this system has helped to reduce the Infant Mortality Rate. However, it has the capacity to make a much more significant impact on infant and child mortality than is now being demonstrated.

This lack of impact is attributable to a number of factors. Medical education in Egypt remains curative oriented, and, while this emphasis is beginning to change mainly through the inputs provided by A.I.D. in the Suez Area Medical Education and Health Services Development Project (263-0136), most young physicians enter service without adequate knowledge of public health and preventive medicine. The new physicians are also frequently unskilled in treating common pediatric problems and in providing maternal care because crowded conditions in medical schools limit clinical experiences. Other factors contributing to poor performance of the system are the low salaries of the MOH personnel, (with the system unable to reward excellence or discipline poor performance), poor supervision, inadequate training, and a civil service used primarily as a social security mechanism.

These conditions erode public confidence in Ministry of Health (MOH) services. Consequently, health facilities are underutilized in many areas, as Egyptians prefer to use their limited resources for private curative care and are not aware of the benefits of preventive care. This creates a situation in which there is no strong public demand for MOH curative or preventive services ,and MOH practitioners are not motivated to provide more effective services.

Health education to promote preventive services has also not been emphasized as a means to reach the public.

MOH services are particularly underutilized for prenatal care, delivery, and postpartum services. For cultural reasons Egyptian women prefer to use the traditional birth attendant, or *daya*, for home deliveries. Over 80% of all births in Egypt are attended by *dayas*, many of whom are untrained. Much of the maternal and newborn mortality and morbidity is attributable to unsafe *daya* practices and failure to refer complicated deliveries to the health system.

While the MOH attempts to provide supervision during pregnancy and delivery, many women have no long term contact with the health facility during their pregnancy. These sporadic contacts do not encourage a continuity of services that could significantly impact on maternal/child mortality such as prenatal tetanus immunizations, identification of complications of pregnancy, timely initiation of infant immunization programs, and child spacing.

Although the problems facing Egypt's health sector in the area of child survival are numerous, USAID has gained confidence through implementing our existing projects that they are correctable and that the proposed Child Survival Project has a high probability of success. The Rural Health (263-0015) and Urban Health (263-0065) projects have been addressing these problems through improvement of the delivery of health services and in stressing the importance of public health activities (vs. curative care) in improving health status. Many of the innovations developed by these projects have gained wide acceptance by the government health services. Our project with the Faculty of Medicine of the Suez Canal University (263-0136) is successfully developing a community physician trained to deal with the realities of Egypt and primary health care. The Control of Diarrheal Diseases Project (263-0137) has demonstrated Egypt's concern with child survival programs and shown the vigor and enthusiasm that can be generated in the health sector by such programs.

Despite the fact that improvement in the delivery of primary health care services is urgently needed and deserves the project assistance being provided by AID, the probability of these projects having an early impact on Egypt's unacceptably high infant and child mortality rates is not great; the improvement of services delivery will have its impact much further down the road. In the Control of Diarrheal Diseases (CDD) Program, the simple intervention of oral rehydration, delivered through the primary health care system of the MOH, the university hospitals, and the private sector is having an immediate impact on the child mortality rate. The CDD Project will end in 1987. Further activities in childhood diarrheal disease control will be carried out either through an amendment to the present CDD project or to the Child Survival Project.

The Child Survival Project will focus on four additional interventions that will address the major causes of illness and death of infants and young children: immunization for six major childhood diseases, early diagnosis and treatment of acute respiratory infections, child nutrition, and child spacing. Again, the rationale for moving ahead with these specific

interventions is pragmatic; Egypt cannot afford to wait for the general improvement of the delivery of health services in the face of such high infant and child morbidity and mortality rates and must address the four areas on a vertical basis. This decision is dictated not only by humanitarian considerations but also by the desperate problem of population growth and the huge economic burden of children (and their mothers) disabled and intellectually impaired by preventable or easily treated childhood illness, malnutrition and unregulated fertility. These interventions will be implemented through both the public and private sectors in highly focused vertical programs emphasizing preventive health care.

The programs included in the Child Survival Project were developed in close collaboration with the senior leadership of the Ministry Health. Each component of the Project has been specifically requested by the Ministry and extensive written contributions to the project design were made by a panel of the top managers of the Ministry. The chairman of this panel is the First Undersecretary of the Ministry.

The Child Survival Project emphasizes practical, cost-effective interventions which address childhood health problems and practical field testing of interventions such as vaccines that prevent major childhood diseases. The interventions include a focus on improved and expanded services in the private sector through use of mass media to create demand for preventive health services, training of private sector providers such as the daya and development of private sector products such as weaning food supplements, disposable syringes, or locally manufactured medical equipment.

The Project presents a mechanism through which the Government of Egypt (GOE) and USAID can undertake a program to dramatically increase the chances of child survival in Egypt. The project builds upon the base of collaborative experience in the health sector which has been developed by the GOE and USAID over a number of years. The program is designed to complement and supplement health activities which are already in place and to augment and accelerate efforts to address recognized and interrelated needs and priorities.

In the description which follows, it is important to recognize that not all elements of the program will be supported by USAID alone. The GOE is being assisted by a variety of bilateral and multilateral donors, including a number of other programs of the U.S. Government. Active collaboration with UNICEF, WHO and bilateral donors has been sought during the design of the project and encouraged by the Ministry of Health. Every effort will be made to continue this collaboration throughout the implementation of the project so that our various inputs will complement each other, not compete or displace long term commitments, particularly in the case of WHO and UNICEF.

#### B. Relationship to CDSS and GOE's Development Plan

The FY 1986 CDSS Health and Nutrition Sector Statement focuses USAID's strategy on three major activities: child survival interventions, cost-effective investment in health services that emphasize cost recovery and biomedical/operations research on major health problems of Egyptian children and their mothers. The Child Survival Project emphasizes

practical, cost-effective interventions which address childhood health problems and practical operations research and field testing of interventions such as vaccines that prevent major childhood diseases. The interventions include a focus on improved and expanded services in the private sector through use of mass media to create demand for preventive health services, training of private sector providers such as the daya and development of private sector products such as weaning food supplements, disposable syringes, or locally manufactured medical equipment.

In the current Five Year Health Plan, the Government of Egypt has strongly emphasized the importance of preventive health programs. It has clearly stated it's intention to more aggressively implement programs in diarrheal disease control, immunization and other interventions that combat major childhood diseases. The programs included in the Child Survival Project were developed in close collaboration with the senior leadership of the Ministry of Health. Each component of the Project has been specifically requested by the Ministry and extensive written contributions to the project design were made by a panel of the top managers of the Ministry. The chairman of this panel is the First Undersecretary of the Ministry.

#### C. Goal and Purpose

The goal of this project is to improve the health of the Egyptian people.

The Project purpose is to reduce morbidity and mortality in infants, children and women of childbearing age.

#### D. General Project Description

The Child Survival Project is focused on four interventions that deal with the major causes of illness and death of infants and young children: immunization for six major childhood diseases, early diagnosis and treatment of acute respiratory infections, child nutrition, and child spacing.

These interventions will be implemented through both the public and private sectors in highly focused vertical programs that emphasize prevention and can be delivered by primary care personnel in both sectors.

The Child Survival Project emphasizes practical, cost-effective interventions which address childhood health problems and practical field testing of interventions such as vaccines that prevent major childhood diseases. The interventions include a focus on improved and expanded services in the private sector through use of mass media to create demand for preventive health services, training of private sector providers such as the daya and development of private sector products such as weaning food supplements, disposable syringes, or locally manufactured medical equipment.

The Project presents a mechanism through which the Government of Egypt (GOE) and USAID can undertake a program to dramatically increase the chances of child survival in Egypt. The project builds upon the base of collaborative experience in the health sector which has been developed by GOE and USAID over a number of years. The program is designed to complement and

supplement health activities which are already in place and to augment and accelerate efforts to address recognized and interrelated needs and priorities.

1. Immunization (EPI)

The Expanded Immunization Program in coordination with UNICEF and WHO will undertake to reduce both infant/child mortality and the incidence of the six most serious, preventable childhood diseases through an expanded effective immunization program reaching newborns and pregnant women. An 80% coverage rate of immunization for the six targeted diseases in the cohort of children born during the eight years of USAID assistance to the Expanded Program for Immunization and a 60% coverage of pregnant mothers with tetanus toxoid immunization during the same period is projected.

2. Acute Respiratory Infections (ARI)

The program to deal with acute respiratory infections will improve health services focusing on early diagnosis and treatment of ARI. The services will initially be supported by special epidemiological surveys to provide the data for the targeting of more effective regimens for the treatment and prevention of specific acute respiratory diseases. The best of existing knowledge for the diagnosis and treatment must be practiced throughout the extensive Egyptian health care system.

3. Child Nutrition

The Child Nutrition Program will concentrate on improving the knowledge, practices, availability and utilization of weaning foods in the weaning age group (6-24 months); and improving the diagnosis, treatment monitoring and prevention of iron deficiency anemia in the weaning age group and among pregnant and lactating mothers. This will result in a measurable impact decreasing child mortality and morbidity.

4. Child Spacing

The Child Spacing Program will reduce neonatal mortality through improved maternal health care during pregnancy, delivery, and the postpartum period, and through the use of child spacing methods to prevent high risk births. The reduction of neonatal mortality will also impact positively on the effectiveness of other Child Survival interventions in later infancy and young childhood.

E. Outputs and Inputs

While specific outputs are difficult to predict because of common critical needs and the assessment of existing in-country programs/institutions will take place during the first twelve to eighteen months of the project, the following outputs are likely:

1. Outputs

- a. An expanded, improved, and utilized national immunization system providing full coverage of the 6 mandatory vaccines to 80% of the children under five and a 60% coverage of tetanus toxoid immunizations for pregnant women.
- b. Improved prevention diagnosis and treatment of acute respiratory illnesses in children under five through training of health personnel.
- c. An expanded child nutrition program which addresses malnutrition related to weaning and anemia through national nutrition education programs, development of a weaning food supplement, and programs for anemia detection and treatment.
- d. An expanded and improved MOH childbirth care program reaching 60% of all pregnant women ; and an expanded and improved child spacing program reaching 50% of married women of reproductive age.

2. Inputs

a. USAID

USAID will fund the U.S. dollar and Egyptian pounds costs of:

1) Technical assistance

(a) 20 person years of long-term US technical assistance. The relative distribution of the use of long-term technical assistance may vary depending upon the size, timing and nature of project activities.

(b) 51 work months of short-term US technical assistance the bulk of which will be used between years 2-5.

2) Training

Training of two types: Off-shore training to up-grade Egyptian staff and to replace technical assistance ; and short-term training in-country).

3) Commodities necessary to meet the program requirements of each individual component both from the U.S. and Egypt.

4) Funds will be provided for renovation of the offices and laboratories of the central Nutrition Institute.

The project will also supply other funds when necessary to permit adequate support for project activities, including special studies, surveys, and baseline data collections.

b. Government of Egypt

The GOE will provide the following contributions:

- 1) Office space sufficient for assuring appropriate working conditions for both project and GOE staff assigned to tasks in the Child Survival Project Secretariat.
- 2) Appropriate counterparts and support staff ; administrative, professional and secretarial. At least one counterpart for each outside technician will be appointed.
- 3) Incentive payments, transport, and maintenance required for project implementation.
- 4) Policy guidance through a Child Survival Steering Committee.
- 5) Data necessary to enhance the programs will be provided to the project by the appropriate GOE agencies.

III. SUB-PROJECT ACTIVITY DESCRIPTIONS

A. IMMUNIZATION

1. Problem Description

A recent WHO Evaluation describes the problems within the Egyptian immunization program. It points out that although immunizations have been available and widely accepted for many years, Egypt still suffers from a high incidence of childhood diseases which could be prevented by an effective immunization program.

The number of officially reported cases of paralytic poliomyelitis, for example, reflect a small, unknown and often varying proportion of the true incidence. However, it is widely acknowledged that polio is a major public health problem which, according to epidemiological data, has an inverse correlation of attack rates to socio-economic status and an unusually high incidence among infants (16 to 25 percent of cases were under 9 months of age).

Tetanus contributes to Egypt's high neonatal mortality rate with 6,000 cases reported annually. However, it appears to be heavily under-reported, with the actual number estimated to be many times higher due to the failure of parents to report tetanus deaths of newborns. The disease is one of the five leading causes of death in infants accounting for 10% of reported neonatal deaths.

In the US and other Western countries, measles is a relatively mild disease which has been controlled by effective immunization programs. However, it is a killer disease in most of the developing world and accounts for a large portion of the deaths from diarrhea and acute respiratory infections, which follow as sequela of this highly infectious viral disease. While measles has not been perceived as devastating to the children of Egypt as it has to

the children of Black Africa and other parts of the developing world, a team from the Institute of Medicine (US Academy of Sciences) found in 1979 that measles was responsible for nearly two-thirds of the deaths in Egypt due to infectious and parasitic diseases of children in the one to four year age group.

Diphtheria and pertussis (whooping cough) are also serious childhood diseases that contribute significantly to the morbidity and mortality of Egyptian children and require mandatory immunizations. BCG for the prevention of tuberculosis is also required and is generally given immediately after the birth of the child.

Egypt has a high prevalence of hepatitis. Poor sanitation accounts for the Hepatitis A, with more than 80% of the population having had the disease. In the case of the more serious Hepatitis B, unsterile injection technique accounts for a large portion of the extremely high incidence of the disease. 44% of the population are either carriers or have had the disease. It is a sad irony that parents bring their children to the clinic for life saving immunizations and are exposed to this dangerous disease because the health worker is poorly trained, inadequately supervised and lacks the disposable syringes that can effectively break the chain of infection.

Egypt has made a sincere effort to develop an effective expanded immunization program (EPI). The MOH has cooperated extensively with WHO and UNICEF in the development of its program. Immunizations are given in each of the 3000 MOH health facilities delivering primary care, in each of the nine university hospital centers, and a number of other public and private sector institutions. Despite this effort, the recent WHO Evaluation demonstrated that only 30% of infants nationwide had received all of the mandatory immunizations for the six most serious, preventable childhood diseases (measles, whooping cough, tuberculosis, diphtheria, polio, and tetanus). Just as disturbing was the finding that many of the children listed as having been immunized had received none and that many who had been immunized had contracted one of the diseases, indicating a possible breakdown of the cold chain, improper immunization technique, or defective vaccines. Mothers failed to bring their children to the clinics for immunization or just as commonly failed to return for the required second and third inoculations, usually claiming that they had not been informed of the need. There was clear indication that the client information system, both on a mass media basis and at the clinic level, is deficient. Audit of the number of doses of vaccine provided by UNICEF and the number reported used by the clinics often varied greatly in either direction, indicating poor management at all levels, (not malfeasance since, for one reason, the blackmarket for vaccines in Egypt is practically non-existent).

The findings of the WHO Evaluation and the observations of many experts familiar with the program all confirm the urgent need for improvement of the management and supervisory systems of the Ministry's immunization program. There is also an urgent need to develop an improved surveillance and health information system so that the performance of the system can be better monitored and meaningful immunization targets can be set to deal with diseases which are prevalent and threatening.

The WHO Evaluation found that, overall, the cold chain was in pretty good shape. However, they found that 7% of the refrigerators were broken, a number of thermometers were missing and some other components of the cold chain needed replacement. The status of the equipment showed an improvement over the survey taken in 1980 but the lack of maintenance was evident. UNICEF has contributed an impressive amount of cold chain equipment, providing over 20% of the Ministry's total EPI equipment requirements in the five year period between 1979 and 1984. UNICEF is committed to continuing support of the Ministry's cold chain equipment needs and now plans to replace 20% of the EPI cold chain equipment each year for an unspecified period of time. This should be adequate for the support of the proposed expanded immunization program and the Ministry has not asked for AID support of the clinic level cold chain equipment. There is a need to upgrade the distribution equipment and the Ministry has asked AID to supply refrigerator trucks.

Another major problem is the production of sufficient quantities of potent vaccine with adequate quality control, packaging, and cold room storage. The Egyptian Organization for Biological and Vaccine Production (VACSERA) is the only resource in country for the production, packing, central storage and distribution of vaccines. Most of the vaccines needed for the immunization for the six childhood diseases selected for the expanded immunization program are contributed in bulk by UNICEF and are packaged by VACSERA. This is a short term solution and the need for Egypt to produce its own vaccines is pressing, particularly since the production of vaccines by international private sector companies is rapidly drying up for lack of profitability, chiefly because of medical liability. In the US, the entry of the government into vaccine production is being considered and may well become a necessity in the near future.

The Dutch Government has contributed equipment and technical assistance for the production of DPT (diphtheria-pertussis-tetanus) vaccine and Egypt's requirements for this product will soon be supplied by VACSERA. This will meet one of the requirements to make Egypt independent of international sources for vaccines. There is still the need for VACSERA to produce its own measles and polio vaccines and to improve the quality of its BCG vaccine (antituberculosis). Also, there are still serious problems with quality control, management, and cold storage of the vaccines. Currently the Canadian Government is funding an indepth study by Connaught Laboratories, Inc. and Sotech, Inc. to determine what is required to upgrade VACSERA to a first class vaccine and biologic production center. This study will be completed in October and it is hoped that Canada will follow through with the support needed to implement the recommendations of the study. Due to the essential role VACSERA plays in Egypt's immunization program, USAID should be prepared to amend this Project contribute the support to improve the quality control and management of the current operation if Canadian or other donor assistance fails to materialize.

## 2. Sub-Project Description

The overall purpose of the Expanded Immunization Program as a subproject activity of the Child Survival Project is to reduce both infant/child mortality and the incidence of the six most serious, preventable childhood diseases through an expanded, effective immunization program reaching newborns and pregnant women. As an output of this project, we anticipate a 80% coverage rate of immunization for the six targeted diseases in the cohort of children born during the eight years of USAID assistance through this project and a 60% coverage of pregnant mothers with tetanus toxoid immunization during the same period. This is a very ambitious target since it takes a high degree of management to get 80% of the children of the country into the clinics for four separate series of immunizations, two of which each require three vaccinations a month apart. The expansion of effort and mass media campaign that will be mounted by the Project are essential to meeting this target.

As noted in the Problem Description, there are a number of areas of the immunization program which require improvement. The need for improved management and supervision is a major requirement and central to the achievement of the program's objectives. USAID will make the upgrading of management and supervision systems a principal concern of its assistance.

National immunization programs demand comprehensive and detailed management, perhaps more than any other health activity. Even the management of complex Western medical centers which draw extensively on sophisticated management tools do not present the difficulties that are encountered in the "people intensive" immunization programs of the developing world. The proper vaccine must be produced with careful quality control to ensure its potency and distributed through a carefully maintained cold chain so that potency is retained. Reliable storage at the proper temperatures must be insured all the way down the chain to and including the user level. The required equipment must be available and well maintained at the clinic level. The health worker must be trained to perform sterile immunization technique skillfully and with sensitivity. The mother should be attracted to this service for her child, not traumatized by the experience. Precise scheduling is required to have the health personnel in place at the proper time with the prerequisite vaccines and equipment, in order to mesh with the promotional activities that inform the mother of the need of specific immunizations, and of the time and place to bring her child for the service.

USAID will provide the technical assistance to assist the managers of the EPI program to develop and institutionalize the management procedures all through the system. This will entail advising top management on the development of better program planning and allocation of resources, developing procedures, manuals and training for better management of the entire cold chain, and improving the EPI management information system so that proper amounts and types of vaccines can be distributed on a timely and efficient basis. Through the US funded prime contractor, USAID will provide the long and short term technical consultants, both US and Egyptian, required to advise on the improvement of the management of the EPI service.

An effective surveillance system will be developed so that the program can measure the incidence and distribution of communicable diseases, determine the coverage being attained and feed back information for better target setting by the EPI program and better planning for health services in general. This system will be based upon the model developed by the MOH Department of Health Statistics and Evaluation and the US National Center for Health Statistics as a PL-480 funded project under the Joint Working Group for Health Cooperation agreement between the GOE and the US Department of Health & Human Services. This health information and disease surveillance system has been under test in Ismailia Governorate since 1981. The system has been designed to develop timely and policy-relevant data in priority program areas, chiefly focused on infant, child and maternal mortality, immunizations and major disease reporting. In the test governorate, health unit and district headquarters staff have been trained to operate a statistical and surveillance system which, with the aid of micro-computers, provides detailed data in major program areas on a timely basis and is particularly well suited to obtain data relevant to EPI program management and evaluation. The program uses existing personnel and facilities so that the addition of microcomputers and software at the district and governorate levels and training are the only added expense.

In the first year of the Project, this health information system will be introduced to four additional governorates and then phased in over the next five year period to the remaining governorates. Technical assistance will be provided as required for the life of the project. The US funded prime contractor will be responsible for providing the US and Egyptian specialists that will provide the required technical assistance for the development of the information and surveillance system throughout Egypt. Equipment: computers, software, and other commodities will be supplied by USAID through the prime contractor as appropriate.

Early in the implementation of the project, a series of sample surveys will be carried out to establish baseline data for program evaluation. Later, most of the data will be produced by the expanded surveillance system which will feed back information on disease incidence and vital statistics on a continuous basis. Periodically, however, sample surveys will be performed to check on the reliability of the surveillance system as it expands countrywide. Also, a series of studies and evaluations will be carried out to determine the protection given by BCG, the antituberculosis vaccine and to evaluate the potency and effectiveness of the six EPI vaccines and to field test new vaccines when available that attack Egypt specific childhood problem diseases such as acute respiratory infections, etc.

In combination with the surveillance system will be the development of an epidemiologic investigation service (EIS), a small number of well trained epidemiologists that can investigate disease outbreaks and possible epidemics. The US Center for Disease Control has specialized in the development of EIS units throughout the developing world and has offered to train and supervise the establishment of such a unit for Egypt under a PASA arrangement with AID.

Training of the managers and working personnel of the EPI program will be the major task in developing better management capacity in the EPI program. Close coordination and collaboration with WHO and UNICEF will be maintained throughout and as much collaboration as is possible will be developed in this area. WHO has developed considerable experience in the training requirements for expanded programs of immunization around the world and has trained many of the Ministry's senior and mid level personnel. The Project will use the training guidelines and materials developed by WHO and the US Centers for Disease Control to greatest extent possible. WHO will continue to provide short term training for senior level EPI personnel through, for example, funding attendance at conferences. However, WHO will not be able to provide the magnitude of technical assistance in this area that it will be possible for USAID to contribute through this project. Training of trainers and the upgrading of Governorate training centers for ongoing inservice training of physicians and clinic personnel will be undertaken in the first and second years of the project. Also assistance to these centers in the form of continued technical assistance, training, required books and instructional equipment will be contributed by AID throughout the life of the Project. An important output of the Project will be the strengthening of these training centers so that they will be able to operate independently from AID support after our assistance terminates.

Improving the curriculum and the quality of the training given newly graduated doctors assigned to the rural areas each year offers a unique chance to influence their performance before bad habits become deeply ingrained. The newly assigned physician is given a two month orientation course at the district level in preventive health and MOH procedures. The training is given by the locally assigned Ministry of Health physicians. However, they have little education in training methodology or concepts and are poorly supported by training aids and manuals. While the management of the EPI program would be featured prominently, other components of the Child Survival program will be included: the health benefits of child spacing to both mother and child, early diagnosis and treatment of acute respiratory infections, and child nutrition, particularly training in the correction of improper weaning practices.

Maintenance of the cold chain equipment and observance of good cold chain procedure are other vital training areas that will be developed in collaboration with UNICEF. Cold chain technicians have been designated at each level, e.g. central, regional, governorate and district. At the clinic level, the physician is responsible but one of the paramedical staff is put in charge of the refrigerator, cold boxes and ice packs. Constant training/retraining of the technicians and close supervision is required to ensure the integrity of the system for the protection of the vaccines.

As will be discussed in the section describing the organization and function of the Child Survival Secretariat, the Training Unit of the Secretariat will collaborate with the Director and senior managers of the EPI program in the development of the extensive training program that will be required to upgrade the performance of the EPI program. Managing project inputs for the training program will be the responsibility of the Training Unit. Technical assistance

will be the responsibility of the prime contractor but will be carried out mainly by an Egyptian subcontractor(s), specially by a consortium of universities or other skilled training entities who will support the training centers in the 137 districts in Egypt's governorates. The US and Egyptian technical assistance required will be provided through the US prime contractor.

The EPI program will require extensive promotional activities, both at the national level for mass media campaigns and at the local clinic and community level, particularly if the Ministry decides to continue with mass campaigns for polio vaccination. The Health Promotion Unit of the Secretariat, working with the EPI program managers will develop the mass media program which will be balanced with the media campaigns of the other Child Survival programs so that a well tailored mass media campaign is carried out. The mass media program will be modeled along the lines of the successful media campaign for popularizing the use of oral rehydration and closely coordinated with the Control of Diarrheal Diseases (CDD) Project. Technical assistance requirements will be provided through the US funded prime contract. Egyptian advertising agencies will be subcontracted to produce the promotional materials for radio and television and subcontracts will be made with local firms to produce the necessary printed materials, and billboard advertisements.

The Health Promotion Unit of the Secretariat will also work with the EPI managers at all levels to develop the local clinic and community promotional activities to educate mothers on the importance of immunization for the EPI diseases and inform them of time and location of immunization services. Technical assistance for these activities will be supplied by the prime contractor and by a local subcontractor for assistance to the governorate level and below EPI services.

As discussed in the Problem Description, the overall supply of cold chain equipment on hand is fairly adequate but badly needs better maintenance all the way down the line. This problem will be addressed under the management and training activities of the project. There is a need to upgrade the distribution system and AID has been asked to provide refrigerator trucks. AID will purchase 5 refrigerator trucks for transporting vaccines from the central vaccine production center, VACSERA, to the governorates and 44 small pick-up sized refrigerator vehicles for distribution to the governorates. The MOH has also requested USAID to provide funds for purchase of disposable syringes which will be obtained from a local Egyptian manufacturer.

COSTING OF EPI COMPONENT  
A.I.D.

	<u>(\$000)</u>
<u>1. Technical Assistance</u>	
U.S. LT (168wn @ \$17,400)	2,923
U.S. ST (15wn @ \$23,000)	345
FN LT (864wn @ \$2,875)	2,484
FN ST (38wn @ \$3,114)	118
Media (Subcontract to prime contract)	1,100
Health Info System (Subcontract)	1,500
<u>Total:</u>	<u>8,470</u>
<u>2. Training</u>	
LT Participant training (372mos @ \$3,450)	1,283
ST Participant training (100mos @ \$4,600)	460
Epidemiology specialty training (PASA)	575
Invitational travel	230
In service training	1,668
Workshops/seminars (8 @ \$34,500)	276
Health education for mothers	345
GOE Training Centers (26 centers @ \$57,500)	1,495
<u>Total</u>	<u>6,332</u>
<u>3. Commodities:</u>	
Local purchase of syringes (12 million/yr)	5,200
Refrigerator Trucks (5 large size)	290
Refrigerator Trucks (44 small)	1,320
Other Cold Chain Related Items	552
Computers/Software for Info & Surveillance at Governorate/District Level	1,150
Local purchases (supplies and equipment)	682
<u>Total</u>	<u>9,194</u>
<u>4. Other Support:</u>	
Epidemiological assessment	920
Surveys, e.g. baseline/follow-up	145
Miscellaneous (Secretariat/Governorate)	600
<u>Total:</u>	<u>1,665</u>
<u>5. Evaluation/Audits:</u>	200
<u>6. Contingency:</u>	4,000
<u>Total EPI Component</u>	<u>29,861</u>

## B. ACUTE RESPIRATORY INFECTIONS:

### 1. Problem Description:

Acute respiratory infections (ARI) constitute a serious threat to child survival and are considered second only to diarrhea as the leading cause of death in under-five children in Egypt. WHO and UNICEF have variously estimated that 20 to 33% of deaths in under-fives in Third World countries are from ARI, the exact rate varying according to the specific country (World Health Forum, 1985). In the Developed World, death rates due to ARI have fallen dramatically during the past century, due to socioeconomic changes, better and earlier diagnostic practices, and the widespread availability and proper use of antimicrobial therapy. In the West, mortality from ARI is high in the first year of life, falls during childhood and early adulthood, then climbs progressively during middle and old age. While most Egyptian experts believe that the death rate due to ARI is highest in the first year, a study in Alexandria in 1981 showed the highest percentage of deaths due to ARI were in the 1 through 4 year old group, which accounted for 50% of the total ARI deaths. All studies show that mortality due to ARI in the under-fives is a serious problem in Egypt.

Morbidity rates are difficult to measure since the only notifiable data is obtained from the acute infectious disease hospitals, called "Fever Hospitals" in Egypt. Unfortunately, information on patients attending primary care facilities is not reported in the present MOH health information system. This will change with the introduction of the improved health information and disease surveillance system described in the Immunization Section of this paper. Previous studies, most performed in urban areas, have shown that on the average, a child will suffer 5 to 8 ARI episodes each year during his first five years of life. One study reported in 1980 that 71.5% of the patients seen at a maternal-child health clinic were diagnosed as having respiratory infections of varying degrees of severity.

While many mothers, particularly those of better socioeconomic status in the urban areas bring their children into the clinics early in the disease, this certainly is not the case for most of those with serious infections who are admitted to the fever hospitals. They are mainly brought into the primary care facilities too late in the course of the disease for early diagnosis and treatment. Some are brought in but not recognized as potentially serious cases by the clinic staff and not put on the proper treatment early enough in the course of disease. In the first case, the mother needs to be better informed about the signs and symptoms of acute respiratory infections so that she can bring the child in early enough to be properly cared for by the primary care system. In the second case, the clinic staff, including the physicians, need the proper training and equipment for early diagnosis and treatment of acute respiratory infections.

Diagnosis and treatment of acute respiratory infections poses some very difficult problems to the development of effective control and prevention programs. There are hundreds of different bacterial and viral strains that are responsible for the infections. Pure bacterial infections account for 30% of the ARI, with another 12% occurring in mixed infections. 40% of the ARI are

viral in etiology and are less responsive to antimicrobial therapy, although eventually, infections by many of the serious strains will be preventable by immunization, e.g. measles, influenza A. 17% are of undetermined etiology and should be the subject of further study. In fact, considerable research on ARI is a high priority for Egypt as in many countries where respiratory diseases are a major problem. The research cannot be the responsibility of this project, which is confining itself to action oriented programs to deal with the problems of child survival with existing technology. Nevertheless, a great deal of Egypt specific research is needed on acute respiratory disease and should be supported by AID research projects in the University Linkages Project, the S & T in Development Project, and by other donors.

To develop and maintain an effective program dealing with ARI, there is a great need to refine the epidemiology of acute respiratory infections. The program has the constant requirement to know at any one time the infecting organisms, their prevalence and their distribution. On a continuing basis, the sensitivity of these organism to drugs must be assessed so that an effective program can target specific therapy against an identified infecting organism.

## 2. Sub-Project Description

The chief priority of the program to attack acute respiratory infections is improved health services that focus on early diagnosis and treatment of ARI. The best of existing knowledge for the diagnosis and treatment must be practiced throughout the extensive Egyptian health care system. A particular effort must be made to upgrade the knowledge and practices of the primary health care system in the early diagnosis and treatment of acute respiratory infections in children through a well developed training program that will be designed by the Training Unit of the Child Survival Secretariat in collaboration with the Communicable Diseases Control and Fever Hospital Directorates. This training program will be integrated in its implementation with the other training programs of the Child Survival Project. A standardized treatment regimen will also be developed by the Technical Services Unit of the Secretariat in collaboration with these two directorates, fully supported by technical assistance from the prime contractor. The USAID funded Strengthening Rural Health Delivery Project tested an excellent intervention in the early diagnosis and treatment of acute respiratory disease in which the visiting nurse gave oral penicillin to the sick child and made sure that the child was brought to the clinic within 24 hours if symptoms persisted. This intervention should be included in the ARI program. Also the services should initially be supported by special epidemiological surveys to provide the data for the targeting of more effective regimens for the treatment and prevention of specific acute respiratory diseases.

An adequate supply of laboratory equipment and pharmaceuticals needs to be available at every level of the health system. An assessment of the equipment and pharmaceutical needs of the primary care facilities will be carried out in harness with the survey of cold chain requirements of the EPI program and will include technical advice from the same subcontractor assisting the EPI program managers. This equipment and the special pharmaceuticals and supplies will be provided in phase with the training of the clinic staffs.

The Fever Hospitals are the focal point for treatment of the severe cases of ARI, at least those that make it into the health system before they die from fulminating infections. There are 73 Fever Hospitals, with at least one in each governorate. Most have only marginal equipment to deal with the very sick child. Each should be surveyed and their pediatric intensive care equipment needs established and supplied by AID as early in the Project as possible. The diagnostic laboratories of the Fever Hospitals should be upgraded with equipment funded by AID so that more precise information can be obtained on the types of infections that are occurring and their sensitivity to the various drugs used in their treatment. US funded training of infectious disease specialists, pediatricians and the supporting laboratory technicians will be undertaken. This training is best achieved in association with the faculties of medicine, which will be supported by the Secretariat, on a grant basis, to provide tailored training programs and seminars on ARI.

The Health Promotion Unit of the Secretariat will design and mount a mass media program funded by AID to educate mothers on the signs and symptoms of acute respiratory infections that fall into the potentially serious group. The mass media program will concentrate on the importance of bringing the child to the health facility early in the presence of fever or the other signs of acute respiratory infection. The mass media program will be balanced with the mass media requirements of the other Child Survival programs so that the media needs of all of the programs are met effectively. The Unit will also develop the requirements of the local, clinic level informational program and will see that they are incorporated into the training program. The technical assistance, supplies and equipment needed for the clinic level campaign will be provided by AID through the prime contractor as appropriate.

As discussed in the Immunization Section, there is very little reliable data concerning the incidence and types of disease occurring in Egypt. The development of the countrywide health information and disease surveillance system will eventually supply much of this needed information. Also, the fact that the campaign to educate mothers to recognize the symptoms of acute respiratory infections earlier in its course will probably bring more children in to the clinic and will increase the percentage of respiratory disease to be reported and analyzed. An increase in utilization in response to the media program has been experienced by the Control of Diarrheal Diseases program; there was a three fold increase in the number of diarrheal patients seen in the clinics in Alexandria after the first year of the media campaign.

It is not advisable to wait for the health information and disease surveillance system to be fully developed before remedial actions are taken. An immediate activity of the ARI program will be the gathering of epidemiological data needed to increase the effectiveness of the ARI services program until the health information system is fully developed. As discussed in the problem description, respiratory diseases are immensely complex and difficult to manage due to the variety of causative agents. A continually updated data base must be developed through good disease surveillance that will identify the infecting agents, demonstrate their geographic distribution and measure the sensitivity of the various organisms, particularly bacteria, to specific antimicrobial therapy. This must be an ongoing activity to constantly remold and reshape the recommended treatment regimens. It is also important to know

the distribution of the various types of infections so that area specific treatment of the diseases can be delivered.

Therefore, a top priority during the first five years of the project is to determine the incidence, types, and severity of acute respiratory diseases in five sentinel governorates, Cairo, Menufia, Assuit, Ismailia, and Alexandria. The Evaluation Unit of the Secretariat will design and supervise the implementation of appropriate surveys with the active participation of the Communicable Disease and Fever Hospital Directorates. Long and short term technical assistance will be provided by AID through the prime contractor, who will also subcontract with local firms for a series of sample cluster surveys as the active surveillance component of the study.

Passive disease surveillance having a high degree of reliability will be carried out in selected rural and urban health centers, and Fever, University and other hospital outpatient departments and pediatric services. The health information and surveillance system described in the Immunization Section will be implemented in the sentinel governorates first and will be closely supervised to insure reliable passive surveillance by the Ministry of Health facilities. AID will supply the Central Public Health Laboratory and the critical MOH laboratories in the MOH Fever and Governorate hospitals with the equipment and technical assistance required for identification of the causative organisms and their sensitivity to antimicrobial drugs. Since the university outpatient departments see a large share of the children in the urban areas, the medical schools in the sentinel governorates will be solicited to participate and will carry out the same type of activities being performed by the MOH hospitals. Laboratory equipment and other required expenses (other than salaries) will be provided by AID through the Secretariat. A firm data base will have been developed by the fifth year of the project, which will then be updated on a continuous basis by the national surveillance system which should then be able to take over.

There is a high probability that a significant impact will be made by this program on the mortality of children and it is estimated that the death rate of under-fives will be reduced by 10% by the end of the project. Utilization of the clinical system will be increased. Also, the awareness of mothers of the need for taking their children into the health system early in the course of ARI will improve because of their satisfaction knowledge that more effective services are available.

COSTING OF ARI COMPONENT  
A.I.D.

	<u>(\$000)</u>
<u>1. Technical Assistance</u>	
US    ST (15wm @ \$23,000)	345
FN    LT (120wm @ \$2,875)	345
FN    ST (25wm @ \$3,114)	78
Media (Subcontract to prime)	1,100
Consultancies (Subcontract)	904
<u>Total:</u>	<u>2,772</u>
<u>2. Training</u>	
LT Participant (48mos x \$3,450)	166
ST Participant (75mos x \$4,600)	345
Invitational travel	133
Workshops/seminars (5 x \$34,500)	173
Health education for mothers	700
In-service training	630
<u>Total:</u>	<u>2,147</u>
<u>3. Commodities:</u>	
Lab equipment, etc. (3,000 clinics x \$1,700)	5,100
Pediatric care, fever hospitals (\$50,000 x 73)	3,650
University/Teaching hospitals, ped. (\$60,000 x 18)	1,080
Local procurement for above	578
Computers/software (40 x \$9,250)	375
<u>Total:</u>	<u>10,783</u>
<u>4. Other support:</u>	
Epidemiological assessment	1,380
Surveys, baseline/follow-up	155
Miscellaneous (Secretariat), etc.)	400
<u>Total:</u>	<u>1,935</u>
<u>5. Evaluation/Audits:</u>	100
<u>6. Contingency:</u>	1,500
<u>Total ARI Component</u>	<u>19,237</u>

## C. CHILD NUTRITION

### 1. Problem Description

Serious malnutrition among infants and young children in Egypt results from poor feeding practices due, in part, to mothers' lack of knowledge of effective feeding practices, late introduction of traditional supplementary or weaning foods, and withholding food during diarrhea and other illnesses. This is despite the fact that adequate quantities of food are available in Egypt. Also, the Government of Egypt has long recognized the basic problem of malnutrition as an important aspect of public health and has attempted to deal with it through its health programs. Health clinics have introduced elements to educate mothers in proper weaning and health practices, provide special food supplements, and treat and prevent diseases that interact to contribute to malnutrition. In spite of these efforts, however, the basic problem of malnutrition of children has persisted.

The above has been confirmed by various area specific nutrition surveys including the 1979 University of Cairo/MIT Survey and the 1980 GOE/CDC Nutrition survey. These and other studies indicated that:

- levels of malnutrition among Egyptian children aged 6 - 24 months were comparable to African and some Asian countries.
- malnutrition in infants and young children is very likely highly associated with diarrheal diseases.
- anemia, which is known to reduce children's resistance to disease, is a significant problem among infants and preschool children with the highest prevalence among the 6 - 36 month age group.
- some 25% of Egyptian mothers are anemic, contributing to the high rate of fetal loss.
- the duration of breast-feeding is considered relatively good in Egypt with approximately 92% of mothers breast feeding through 11 months, 70% through 23 months and 10% through 35 months.
- Egyptian infants grow adequately until 4 - 6 months of life at which time roughly 2/3 fail to receive adequate supplemental foods with breastmilk (even estimated that by age 12 months, approximately 1/3 are not receiving supplementary foods).

What is clear is that infants begin life with generally adequate birth weights and nutritional status throughout the first months. Bouts of diarrhea and other diseases begin to impair this status from four months on. Lack of adequate weaning diets at this age does not allow for catch up growth so that vulnerability to diarrhea is increased. As this process continues the child either dies or becomes stunted in growth.

A related problem is the fact that high fertility is integrally associated with poor food consumption and nutritional status of Egyptian infants and

young children. Children born after relatively long birth intervals have better growth. In fact the GOE/CDC Survey found that regardless of social status or residence, nutritional status of children was better when mothers spaced births through the use of contraceptives.

To attack the child survival nutrition problems in Egypt, the following objectives must be achieved:

1. Improve the knowledge, practices, availability and utilization of weaning foods in the weaning age group (6-24 months).
2. Improve diagnosis, treatment, monitoring and prevention of iron deficiency anemia, both in children and pregnant and lactating mothers.
3. Reduce morbidity and mortality from diarrhea diseases.
4. Reduce high fertility rates; and,
5. Encourage continued study and research on Egyptian nutritional problems that impact on child survival potential encouraged.

The nutritional component of the Child Survival Project will directly address activities supporting objectives 1 and 2. Objective 3 is addressed in the ongoing Control of Diarrheal Diseases Project (263-0137). Objective 4 is covered in the child spacing section of the Child Survival Project. Objective 5 is advanced by various programs including: a) the Joint Working Group (iron fortification of wheat flour); b) S & T on child health diseases (applied research - e.g. monitoring of iron status after supplements and iron fortified food); c) the Control of Diarrheal Diseases Project (development of a nutritional repletion mixture to be used in conjunction with oral rehydration salts during and after bouts of debilitating diarrheal episodes); and, d) the Collaborative Research Support Program Grant (broad range of nutrition research activities). As new knowledge and ideas develop, consideration will be given to implementation in the Child Survival Project either through project paper amendments or from the contingency line item budget of the project.

## 2. Sub-Project Description

The purpose of the Child Nutrition program is to improve the knowledge, practices, availability, promotion and utilization of weaning foods in the weaning age group (6-24 months); and to improve the diagnosis, treatment, monitoring and prevention of iron deficiency anemia in the weaning age group and among pregnant and lactating mothers. These activities will have a measurable impact on decreasing child mortality and morbidity rates.

The Child Nutrition component will be implemented through the Ministry of Health's Nutrition Institute (technical, policy, planning responsibilities) and concerned operational units in the Ministry day-to-day activities.

The Child Nutrition component will:

1. Expand and improve nutrition education (including educating mothers on the use of locally available foods for weaning) and growth monitoring at MOH clinics;
2. Promote breastfeeding and nutritionally sound supplementary feeding and weaning practices through the national media;
3. Promote private sector production of a culturally acceptable weaning food supplement for commercial distribution;
4. Provide guidelines both to the private and public sectors on the effective use of weaning food products and supplements to prevent malnutrition among infants and young children; and the use of appropriate promotional activities for commercial weaning products.
5. Train health professionals for the early recognition, testing, treatment and monitoring of iron deficiency anemia.
6. Expand nutrition education programs to increase awareness of anemia treatment and prevention techniques.
7. Promote effective distribution and use of iron supplementation tablets for the target group.

(a) Weaning foods.

The weaning food component will have two separate and distinct paths. One will lead to the private sector production of a low cost, culturally acceptable weaning food supplement to be developed under a concurrent separate project managed by the USAID/Egypt Food for Peace (FFP) Office. The second will result in the improvement and expansion of nutrition education programs throughout Egypt. Included in the latter activity are promotional campaigns for breast feeding, proper weaning food practices, the use of locally available foods for weaning children growth monitoring, and anemia recognition, treatment and prevention.

However, both activities will be mutually supporting. Weaning foods or supplements can not succeed without the educational programs that will be developed. Likewise, nutrition education programs on weaning food practices and use of local foods will create a demand for proper weaning foods. Some mothers will prefer to use only locally available items and prepare them themselves; others will prefer a premix or some form of packaged supplement; others will use only locally available items and prepare them themselves; others will use a combination. There will also be mothers who will disregard the advice given to them on using local foodstuffs for weaning for whatever reasons. These same mothers might use a premix supplement recommended to them through the media and/or by health professionals. The choices should be available to insure broad coverage.

The Secretariat, with the expertise to be provided by the Nutrition Advisor provided through the prime contractor for the Project, will be responsible for these activities and will ensure coordination with other project elements. This coordination will be especially important in the areas of media and advertising related to weaning foods and practices. We do not want to create a demand for a product, whether it is to be for better nutrition information or a commercial weaning food supplement unless adequate supplies are available.

Nutrition Education is not a new activity to the Ministry. The experience gained through the previous nutrition education activities conducted by a Grantee and other A.I.D. supported projects in Ministry clinics (in particular Maternal Child Health Clinics) provides a basis to expand the program countrywide. However, any expansion will be very closely coordinated with the new child survival goal with emphasis on weaning food practices (including home preparation of weaning foods) and growth monitoring (especially in the 6-24 month age group. A key role of the U.S. TA Nutrition advisor will be to ensure that the proper technology is used and that the program is expanded country wide in an effective and efficient fashion as soon as possible.

The food habits and attitudes of any culture are difficult to change. It is well recognized by food anthropologists as well as commercial food companies that to be successful, food behavioral change must be undertaken in a thoughtful, orderly way, taking into account fully the preferences of the target population. Over the years a systematic, market oriented approach to developing and introducing new food products has evolved. It involves a stepwise approach to creating new products for a population segment (market) that progresses from (a) generating concepts or ideas for products, to (b) creating prototypes of the products which can be experimentally evaluated and, if necessary, modified, to (c) consumer and market testing, or field tests, of the products in a realistic setting to assess potential and again, if necessary, to make adjustments in the product. The approach involves interacting closely with the consumer at each step so that the product is likely to satisfy the market. The product is defined as including not only the food material itself, but the package, the promotion, the price, and everything else the market associates with the item. The market's reactions to all these aspects effect use (or lack of use) and therefore all are dealt with to the extent possible throughout development.

Efforts to develop and introduce new weaning foods in developing countries have generally not involved the market oriented approach. More often it has involved the creation of a nutritious, relatively inexpensive product by scientists and the presentation of this product to the market with limited, often nutritionally oriented, promotional activities. Very few of these products have been commercially successful, including Egypt's own food supplement product, Supramine.

Marketing orientation does not guarantee success. However, it increases the chances for overall success and reduces chances of error on most product-related decisions, such as ingredients, texture, color, odor, package size and type, method of preparation, promotional claims and pricing. These benefits are obtained in exchange for the additional effort and time required

to carry through the market approach as compared with less systematic, "inspirational" approaches. The market approach to product development is not limited to commercial application. The approach lends itself very well to designing products for social markets as well.

There have been negative experiences in Egypt with Supramine and there is reported a lack of acceptability of the present Title II food supplement distributed in the Ministry's health clinics. For these reasons, it seems prudent to use social marketing techniques to identify the nutritious weaning food supplement to be developed so that it will be acceptable to Egyptian infants, young children and their mothers.

The FFP Weaning Food Supplement activity funded under another Project will develop appropriate weaning food products and use a social marketing approach to ensure that these products have consumer acceptability. This is expected to be accomplished approximately half way through the Child Survival Project.

The Child Survival Nutrition Component will then be responsible for coordination with the USAID Office of Industry and Support in identifying appropriate ways to fund production of the weaning food products in the private sector and for coordinating private sector advertising for the products with MOH media messages on weaning foods.

(b) Iron deficiency anemia.

Anemia, which is known to reduce children's resistance to disease, is a significant problem among infants and preschool children with the highest prevalence among the 6-24 month age group (estimated to be 38%, with 1/3 of those categorized as being severely anemic).

Also, some 25% of Egyptian mothers are anemic. Since anemia is known to contribute to high rates of fetal loss and lower resistance among children to diseases, its early diagnosis, treatment and prevention will have a positive impact on improving survival rates.

Iron fortification of wheat flour is thought by some to be an efficient and effective method of ensuring that sufficient amounts of iron are ingested to prevent iron deficiency anemia in a broad segment of the population. Such an application in Egypt would have promise since bread is a staple part of the Egyptian diet. Fortification of all wheat flour in this country could, in theory, be accomplished with known technology in a short time period.

However, there is enough doubt about the effectiveness of the iron fortified wheat flour in preventing anemia that further investigation is warranted before deciding a course of action in this regard. This will be encouraged under other A.I.D. projects and activities. For example, the Joint Working Group activity can develop the research and testing protocols and the new Science and Technology for Development Project, which has a "Critical Childhood Diseases" component, could conduct large scale testing in Egypt. Then, if indicated, a countrywide wheat flour iron fortification activity can be added to the Child Survival Project or implemented as a separate activity. (Note that iron will be one of the ingredients of the weaning food supplement;

use of high iron content foods in making weaning foods at home will also be encouraged in the media and through nutrition education classes).

There is, however, justification to move into an expanded education and training activity to improve clinical treatment, and prevention of iron deficiency anemia in the target groups. The technology for this is available and can be applied now. Again, the U.S. TA Nutrition advisor will play a key role in coordinating these educational activities with other project activities and, in particular with nutrition education for weaning food practices. The advisor must also assist the MOH in strengthening and expanding in service training for health workers related to these programs.

Iron deficiency anemia will be attacked through retraining programs for health workers at all levels and nutrition education for mothers. The retraining will be part of the overall training activities that will be organized through this project, with the expertise of the prime contractor, for Ministry staff. In other words, training in the diagnosis, treatment and prevention of iron deficiency anemia will not be done in isolation.

For example, health staff can be instructed on iron deficiency (e.g. recognition, treatments, side effects) at the same time as they are learning about improved weaning food practices and better child spacing techniques. The same is true with the health education sessions that will be held for mothers at the clinic level.

Health education and media messages will be developed and closely coordinated with other project elements by the TA advisor and counterparts. There will be a need, however, to run independent media campaigns at times related only to anemia. This will be encouraged so that the message on anemia prevention is not unduly diluted by being part of other messages. A short, single purpose message would have more impact on occasion.

It should be stressed that improved treatment of iron deficiency anemia will be carried out in Ministry clinics, such treatment is already available in the private sector. The iron preparations used for iron supplementation are currently part of the Ministry's pharmacopeia (some being provided by UNICEF). The project will not purchase additional iron preparations, as these will continue to be Ministry inputs. It is expected, however, that there will be an increased demand for the treatment regimens after training and monitoring take hold.

With increased awareness about anemia, the demand, and need, for testing and monitoring would also conceivably increase. This will be done at the lowest clinic level. Retraining programs will also stress techniques for testing, recording and follow-up on cases. The most effective, low-cost test equipment needed for this will be provided through the project.

#### d. Other Activities

The Technical backstop office in the Ministry of Health responsible for the child nutrition activity of the project is the Nutrition Institute. Actual implementation responsibilities will be limited since those responsibilities belong to the various line offices in the Ministry. However, the NI is

responsible for setting national nutrition policies (from the health aspects), developing, designing and advising on weaning food supplements, iron fortification, training programs and testing and monitoring the nutrition status of the Egyptian population. Its Director will be assisted in this by the nutrition advisor provided through the prime contract.

Some infrastructure development is needed at the NI. This will include management training and assistance, upgrading research skills and improvement to research facilities. As with other elements of the project, such infrastructure development will be coordinated, planned and managed by the Prime Contractor. Needs are similar, but not the same, among the other project elements.

COSTING OF NUTRITION COMPONENT  
A.I.D.

	<u>(\$000)</u>	
<u>1. Technical Assistance</u>		
US    LT (36wn @ \$17,400)	626	
US    ST (6wn @ \$23,000)	138	
FN    LT (144wn @ \$2,875)	414	
FN    ST (15wn @ \$3,114)	47	
Media (Subcontract to prime)	1,515	
<u>Total:</u>		<u>2,740</u>
<u>2. Training</u>		
LT Participant (240mos x \$3,450)	828	
ST Participant (84mos x \$4,600)	387	
Invitational travel	100	
Workshops (3 x \$25,000)	75	
In-service training	490	
Health education for mothers	200	
<u>Total:</u>		<u>2,080</u>
<u>3. Commodites:</u>		
Training materials, nutrition education	1,380	
Anemia test equipment (3,000 x \$173)	523	
Lab equipment/office supplies	500	
<u>Total:</u>		<u>2,403</u>
<u>4. Renovations (FAR):</u>		
To central NI - Labs/Offices	575	
<u>Total:</u>		<u>575</u>
<u>5. Other support:</u>		
Studies (5 x \$92,000)	460	
Secretariat support	378	
Surveys, baseline	210	
<u>Total:</u>		<u>1,048</u>
<u>6. Evaluation/Audits:</u>		100
<u>7. Contingency:</u>		1,000
<u>Total Nutrition Component</u>		<u>9,946</u>

## D. Child Spacing

### 1. Problem Description

Approximately one third of all infant mortality occurs in the neonatal period (the first month of life). A large proportion of this mortality results from complications of pregnancy and childbirth and poor childbirth practices which cause tetanus and other infections.

The Egyptian World Fertility Survey (WFS) which was carried out in 1980 identified five factors which are associated with high infant mortality in Egypt.

These factors are:

1. Age of mother: births to women aged 20 or below and age 35 and above have especially high neonatal and post neonatal mortality ;
2. Birth order: the first birth and after the fifth birth have higher mortality, especially during infancy ;
3. Birth interval: births following a birth interval of less than 24 months have high rates of neonatal, post neonatal and childhood mortality ;
4. Survivorship status of the previous birth: births following a birth that died have high neonatal and post neonatal mortality ;
5. Breastfeeding: births which are never breastfed or which are weaned in early infancy have especially high mortality.

In the Egyptian WFS sample, it was found that 17% of all births occurred to women under 20, and 10% to women over 35. Births of seven or more were reported by 18% of the women surveyed and 31% of all births reported in the sample occurred less than 24 months after the last birth. Using this data, it is estimated that half of all births in Egypt carry a high risk of infant mortality because of maternal factors. This risk is compounded by a lack of prenatal and delivery care, inadequate nutrition, and poor immunization coverage.

The birth interval is a major factor in child survival. Infant mortality could be reduced by an estimated 20% if all births were spaced no less than 24 months apart. Birth spacing is traditionally acknowledged in Egypt as a positive measure for child health, and breastfeeding for two years (which is supported by the Koran) has been used to lengthen birth intervals. However, urban migration and changes in traditional living patterns have had an adverse affect on the length of breastfeeding and protection from pregnancy.

Infants of a high birth order born to older mothers also contribute heavily to the infant mortality rate (IMR). Women in the Egyptian WFS indicated that many of these births are unwanted and occur after the desired number of children have survived. If Egyptian women were to limit high parity births, this would further reduce the IMR.

MOH maternal care and child spacing services although easily accessible to Egyptian women are poorly utilized. About 80% of all births take place in the home assisted by the daya (traditional birth attendant). The daya also advises on prenatal care and performs ceremonies related to female sexuality, marriage, and birth.

Dayas were trained and supervised by the MOH until the 1960's. In 1969, daya practice was declared illegal in an effort to encourage women to use MOH facilities for pregnancy care. However women continued to use the dayas and their practice became more unsafe through lack of training and supervision. In 1981, a law followed by a ministerial decree legalized daya practice once again but limited practice to certain categories of dayas who would be eligible for certification. One of the categories included dayas previously trained.

To date only 3430 dayas of the estimated 12,000 practicing have been identified or registered. UNICEF has assisted with small pilot daya training programs in four governorates and is now conducting a governorate wide program in Behaira in Lower Egypt. Experience in these programs has shown that training must be done locally and involve health center personnel in the daya's area.

Numerous studies have been done on daya practice in Egypt. Most of the dayas interviewed want to be recognized and would seek training if available and given without any censure of their previous practice. These studies also show that informal links exist between the formal health sector and the daya. Dayas do refer clients to clinics for prenatal problems and seek assistance for complicated births. Dayas are also a major source of birth reporting. However the daya's relationship with the MOH services is highly dependent on the way she is treated by the local medical personnel.

The daya will remain the main provider of childbirth care in Egypt for the foreseeable future and her role must be considered in a Child Survival program. Properly trained dayas can encourage prenatal care, provide safer deliveries, and encourage breastfeeding, immunizations, and child spacing. Dayas are often suspicious of contraceptive methods but recognize that short birth intervals are dangerous. A better understanding of contraceptive methods by the daya could result in a higher level of postpartum contraception.

About 25% of Egyptian married women of reproductive age (MWRA) use contraception on a regular basis. About half of these women obtain contraceptives through pharmacies or the private sector, while another one third use free standing family planning services. MOH services deliver about 19% of these services which represent about 330,000 women out of an estimated 7.5 million MWRA. Orals are the most prevalent method with many clinics inserting only one IUD per month.

The MOH's poor performance in contraceptive services is attributed to factors such as lack of training and motivated personnel and lack of public

demand. The low rate of maternal services almost certainly has a negative effect on delivery of contraceptive services especially for child spacing. In addition, child spacing has not been a priority in MOH services or given a strong emphasis among the vertical programs.

Public education developed by the GOE Family Planning Program has touched on the health aspects of contraception but the main focus has been on limiting family size for economic reasons. There is a need for more education on maternal childbirth related care and the health benefits of spacing for the infant.

Egypt's IMR of 96.7/1000 represents 174,000 deaths of infants under one year of age each year. Some 58,000 of these deaths occur in neonates under one month of age and are related to the maternal factors of age, parity, and birth intervals coupled with poor prenatal and delivery care. Neonatal tetanus, which is preventable, accounts for a reported 6000 neonate deaths each year.

Clearly more vital childbirth and child spacing services could impact on this mortality. The lengthening of birth intervals and reduction of high parity excess fertility has the potential to reduce the IMR by at least 25% with no other interventions.

The delivery of MOH services is complicated by the existence of a strong traditional system of maternal care. Frequently the MOH system, only interfaces actively with the traditional system when there are life threatening problems with labor and delivery, and this has created a negative view toward the role of the *daya*.

Egyptian women have chosen the *daya* because she is a woman and provides social and psychological support, as well as delivery services. The legalization of *daya* practice has now opened the way to coordinate the two systems and to provide more adequate maternal care.

MOH services are not currently prepared to cope with an increase in delivery services either in health facilities or homes. The *daya*, if taught better techniques for clean deliveries and provided with a positive medical support system, can manage the majority of deliveries in a safe manner.

MOH services, in addition to training *dayas*, must increase their contacts with pregnant and postpartum women to deliver preventive services. Any strengthening of clinic services through training and equipment must include innovative ways to reach women in the community. Otherwise, the quality of clinic services will be improved but the system will still not reach larger numbers of women.

Interventions such as wider registration of pregnant women and identification of high risk mothers for special care could begin to target services to these women. Tetanus toxoid immunizations should be included as a

special intervention for all pregnant women to benefit the child. Postpartum programs which are currently very weak should also be strengthened and again focus on reaching women who are at highest risk for another pregnancy.

Both childbirth care and child spacing need a priority emphasis as vertical programs. They form the basis for all other Child Survival interventions as well as impact on the effectiveness of these interventions. Infants born under more optimum conditions have a better chance of surviving beyond infancy. Early more positive maternal contacts with the health system can increase the system's effectiveness in preventing and controlling the diseases and health problems that contribute to mortality of older infants and young children.

The Newborn Care Project, funded under the Joint Working Group to develop regional intensive care units for prematures and other newborns at serious risk, has looked at the problems of delivery services in the governorates in an effort to find interventions to improve survival rates of the neonates referred to regional centers.

The project found that complicated labors were generally referred very late by the dayas and district hospitals were not equipped nor personnel trained for managing difficult deliveries. For example, hypothermia is a major contributing factor to mortality in low birth weight or premature neonates. A simple incubator or at home measures to keep the infant warm could save many lives, if incubators were available in the districts and dayas taught these home measures. The conclusion of the project investigators was that:

- (a) dayas urgently require training in hygienic delivery techniques and neonate care ;
- (b) district hospital personnel require training for management of problem deliveries and neonates at risk ;
- (c) district hospitals need basic equipment such as incubators to care for neonates at risk ;
- (d) a minimum of two prenatal visits are needed to provide tetanus toxoid and to identify potential problems of labor and delivery.

The project suggested that the daya should be encouraged to bring her clients for prenatal care and registration. As an incentive dayas (or mothers) could receive birth packs with cotton, soap, razor blades, cord ties etc), to maintain clean delivery techniques.

The project also advised that child spacing services through postpartum programs be expanded and strengthened, and again perceived the daya as the mechanism for encouraging the mother to come to the clinic.

To conduct effective postpartum programs, clinic personnel must be prepared to deliver a wider range of child spacing services. The use of orals immediately postpartum is highly debated because the hormones pass through the breastmilk and orals can reduce the quantity of breastmilk. Barrier methods (foam and condoms) can be promoted, however the use of foam is

sometimes difficult for poor urban or rural women with limited privacy. The IUD is the most practical method for most of these women but it requires training and equipment.

The IUD is the least used method in MOH services at present with only about 10% of the women receiving IUD insertions. An increased use of IUDs is a requirement for Child Spacing programs linked with postpartum services and for other women as well, since orals have some medical contraindications. Women should also have a choice of contraceptive methods for personal satisfaction.

Factors linked to poor delivery of contraceptive services by the MOH have been discussed. Another factor concerns the incentive system which exists now. Personnel receive minimal amounts of cash incentives from the Family Planning Program. These payments also take months to clear the systems and are too small (at the present rate of service delivery) to serve as effective motivation. A higher volume of service would increase the amount of payments collected and more immediate payment of incentives could in turn help to stimulate service delivery.

The most important element in child care and child spacing is of course the mother/client. Egyptian women need to gain more confidence in the health system and to view child care and child spacing as positive measures for their child/infant's health.

The media can serve as an important support for these messages. Television is providing the major source of entertainment and information for poor urban and rural women in Egypt. Messages on child care and child spacing can be delivered through TV spots and socio-dramas. Surveys from the Control of Diarrheal Diseases Project (263-0137) found that Arabic dramas are watched more frequently by Egyptian women than any other TV shows. These dramas frequently focus on family problems caused by changes in traditional living patterns and urbanization, and this format could be used for childbirth care and child spacing messages.

The development of such media messages and innovative service delivery methods needs to approach the problems of communication with mothers. Social and cultural differences can block communication between physicians and women clients ; and physicians frequently underestimate the ability of illiterate women to respond to programs that can improve their unborn and newly born children's survival prospects.

Careful examination is required to determine what would attract women to clinics, especially for Child Spacing. Factors such as preference for women physicians, clinic hours, waiting time for services, privacy for consultations, and attitudes of clinic staff need to be explored for their effect on the delivery or non delivery of services

Child spacing for both women clientele and clinic personnel also needs to be looked at carefully. The desire for more children is frequently cited by women as a reason for not contracepting. Data from the 1980 Egyptian Rural Contraceptive Prevalence Survey found large gaps between knowledge

and practice of contraception. About 90% of the rural health women knew of at least one contraceptive method and where to obtain methods or services ; however, only 17% were currently using a method and another 19% had previously used a method. Of the nonusers, 59% said they planned to use a method in the future.

While the reasons for delayed contraception were not fully explored in that survey, it appears that women view contraception as a means to end fertility when desired family size is reached. It may also be that Egyptian women do not associate the traditional means of spacing with the use of modern contraceptive methods. This in turn could be reinforced by the reluctance of clinical personnel to prescribe methods before total desired family size is reached. These subjects should be investigated more fully early in the course of the project.

## 2. Sub Project Description

The purpose of the Child Spacing Program as a sub project activity of the Child Survival Project is to reduce neonatal mortality through improved maternal health care during pregnancy, delivery, and the postpartum period, and through the use of child spacing methods to prevent high risk births. The reduction of neonatal mortality will also impact positively on the effectiveness of other Child Survival interventions in later infancy and young childhood.

The Child Spacing component will:

1. Train approximately 9000 dayas in 22 governorates.
2. Develop complementary linkages between the daya and the MOH system.
3. Develop more effective prenatal and postpartum services in the MOH system through daya contacts that reach 60% of pregnant women.
4. Strengthen MOH Child Spacing services through training which emphasizes health benefits of child spacing and implementation of programs reaching 50% of married women of reproductive age.
5. Coordinate MOH Child Spacing Programs with activities of the National Population Council.
6. Develop media messages that promote childbirth care and child spacing for the health of the child to publicize MOH services and encourage wide usage.

Interventions will be supported by training, equipment, design and evaluation for service delivery programs, and media for public education.

As discussed in the Problem Description, the daya will continue to be the major provider of child delivery care, and a first step is to register and train those categories of dayas eligible for certification. UNICEF has conducted district pilot daya training in four governorates - Beharia, Gharbia, Sohag and Aswan ; and based on the success of these programs, a governorate wide program is underway in Beharia. UNICEF lacks funding to expand beyond pilot governorates but has indicated a desire to cooperate with the USAID/MOH Child Survival Project by sharing the daya curriculum and experience with the training.

The Child Survival Project will use this experience to support daya training in the 22 other governorates. This support will include training of governorate district training teams, training of dayas, training materials and equipment including midwifery kits for dayas and district nurses and midwives. It is estimated that at least 9000 dayas will require training in the 22 governorates.

Technical assistance will be provided to the governorate for planning, implementation, and evaluation of training. A pre condition for this training will be a governorate proposal which identifies the number of dayas registered, and outlines plans for implementation of training and MOH supervision of certified dayas. Planning for daya training must be done on a governorate basis because local conditions will be important factors in successful implementation.

Daya training must also be coordinated with orientation of clinic personnel to the role of the daya and the role of the health facility in promoting positive contacts and supervision. This orientation will be given prior to local daya training programs and local staff will be utilized in the daya training programs.

The training programs will also include longer range plans for daya refresher sessions and surveillance of daya practice to ensure that dayas are following safe techniques.

The establishment of more effective postpartum programs is essential if the health services are going to reach high risk mothers with child spacing services. Postpartum visits also provide an opportunity to begin infant growth monitoring and DPT/Polio immunizations on a timely basis.

Training for postpartum programs for both physicians and nurses will be linked to refresher didactic and clinic training in child spacing. Health benefits of more optimum birth intervals and the physiological effects of the various contraceptives need review. Pre service training for physicians also needs to include this information and emphasize Child Spacing as a means to reduce infant mortality.

Maternal Health and Child Spacing programs are well established in a static clinic delivery pattern. The more than one decade of daya practice without links to the MOH system has had an enervating effect on maternal health programs and a negative effect on child spacing services.

While the MOH system in general is used by less than half the population, service delivery can be increased. The publicizing of oral rehydration services has steadily increased clinic attendance for treatment of diarrhea and attendance in urban clinics in Cairo and Alexandria has improved through better services and convenient locations. Women, then, can be attracted to clinics when they perceive there are services that meet their needs and, problems of access to services are not a major barrier to utilization in Egypt.

The improved links with the *daya* can expand contacts with mothers if exploited in a positive manner. At present the MOH requires some innovative schemes to attract women to clinics for prenatal and postpartum/child spacing services. One suggestion has been to encourage *dayas* to bring their clients in for prenatal registration and to provide birth packs for clean delivery as an incentive. This scheme would also provide a system for the *daya* to resupply her kit. Mothers who register on their own could also be given a pack for their delivery. These packs could be produced locally at low cost. The *daya* was also identified as a link to postpartum/child spacing visits, and other incentives need to be explored to encourage her to bring her client back after delivery. The issuing of birth certificates, which are important documents in Egypt, could be linked to a postpartum program.

The decentralized governorate health services have the ability to develop innovative schemes for delivery and progressive governorates could serve as pilot programs for the sub-project. The Child Spacing Sub Project will encourage the development of innovations through small grants to governorates that submit proposals. These grants would average about LE 25,000.

These proposals will develop a plan for practical, low cost delivery. The governorates will receive assistance from the evaluation unit in designing implementation and evaluation. Criteria and guidelines for these proposals will be developed as part of the sub project activities. The proposals will be evaluated and approved by a Technical Committee established in the Project Secretariat.

One innovation external to this project which will be introduced during the life of the project is the addition of a Secondary Technical Nurse (STN) Midwife. STNs are trained in 137 schools all over Egypt and work in hospitals and rural clinics. The STN curriculum is currently undergoing revision through a USAID funded activity to make the training more relevant to health problems in Egypt.

The revised curriculum focuses on Maternal/Child care, child spacing and preventive health. The MOH has made the decision that basic midwifery will be added to the curriculum and the first graduates should be available for service about 1987. STN schools, many of which are attached to district hospitals will need home deliveries for teaching, and the STN Midwife must be used effectively in delivery services to maintain her skills.

Project activities and innovative schemes will consider the STN's expanded role and her functions in relation to the *daya* when the STN/Midwives are trained and assigned. The midwifery training also will prepare the STN for a more active role in child spacing and training for IUD insertions could be provided if approved by the MOH.

Media will play an important role in informing women of the need for child care and child spacing. Because immunizations for tetanus, anemia programs and breastfeeding are also Child Survival interventions, messages must be

coordinated to provide clear non conflicting information that is paced to maximize synergistic impact. Messages need to be tested and evaluated on a regular basis to determine their effectiveness.

Child Spacing messages need new approaches to emphasize benefits for mother and child. The Egyptian actress who has been successful in promoting the ORT message to mothers has established a credible image which could be used for Child Spacing messages.

Media messages should be based on careful social analysis. Numerous studies which relate to daya practice, cultural maternal practices, and the use of contraception have been carried out in Egypt. This information should be reviewed early in the project to identify gaps in knowledge and to develop new approaches to support project activities and media messages for child survival.

The attitudes of physicians and nurses toward the use of contraceptives by women who have not completed their fertility requires further exploration. More information is also needed about the client's perception of child spacing services and what would make them more attractive. These issues and questions will be investigated to identify areas for strengthening clinical services.

The incentive payment system for Child Spacing services needs evaluation as does the low insertion rate of IUDs. Incentives are not only low but take months to collect. It has been suggested that a more rapid payment method could stimulate services and increase the volume of incentives. For IUDs it is important, to know who selects the method--client or physician--and how (or why) this decision is made. More information is also needed on dropouts from contraceptive services and if this is related to dissatisfaction with the method.

Coordination of interventions in the sub projects must be established from the beginning for maximum effectiveness. For example a tetanus toxoid campaign could be coordinated with a prenatal registration effort and identification of mothers with iron deficiency anemia. Child spacing activities will be coordinated with The National Population Council and the USAID Population Program for maximum impact.

Evaluation will be built in early during in the project through collection of baseline data for the governorates, followed by the development of improved reporting systems and epidemiological surveys of maternal and neonatal mortality, and national sample surveys to verify the accuracy of the data.

Inputs will be developed with Maternal Health and Family Planning Programs in the MOH, and Governorate Coordinators with technical assistance from the contractor. Egyptian technicians will be used extensively in this component due to the need for Arabic language capability at the local level and the cultural factors involved.

The MOH project personnel will also be assisted by an expatriate Training Specialist and an Evaluation Specialist. These specialists will assist in the design of training programs and in program development, implementation and evaluation. Media messages will be developed through the media support unit of the Secretariat and coordinated with project activities.

Other expatriate assistance identified by the MOH program proposals for childbirth care and child spacing include short term experts in community obstetrics and child spacing. The expatriate technicians will work in counterpart relationships with the MOH personnel charged with implementing the project.

COSTING OF CHILD SPACING COMPONENT  
A.I.D.

	<u>(\$000)</u>
1. <u>Technical Assistance</u>	
US    LT (36wn @ \$17,400)	626
US    ST (15wn @ \$23,000)	345
FN    LT (364wn @ \$2,875)	1,047
FN    ST (35wn @ \$3,114)	109
Media (Subcontract to prime)	1,100
<u>Total:</u>	<u>3,227</u>
2. <u>Training</u>	
LT Participant (48 mos x \$3,450)	166
ST Participant (80 mos x \$4,600)	368
Workshops (6 X \$25,000)	150
In-service	2,033
Invitational travel	120
<u>Total:</u>	<u>2,837</u>
3. <u>Commodities:</u>	
Vehicles (for Secretariat - 8 @ \$20,000)	160
Daya Kits (10,000 @ \$73)	750
Clinic Equipment (3,000 @ \$500)	1,500
Incubators for districts (234 @ \$2,000)	468
Computers/software (25 x \$2,000)	50
Training equipment/supplies	234
Daya packs	500
<u>Total:</u>	<u>3,662</u>
4. <u>Other Support:</u>	
Surveys/assessments	1,130
Governorate Grants	1,000
Miscellaneous (Secretariat support)	442
<u>Total:</u>	<u>2,572</u>
5. <u>Evaluation/Audits:</u>	100
6. <u>Contingency:</u>	1,500
<u>Total Child Spacing Component</u>	<u>13,898</u>

IV. COST ESTIMATES AND FINANCIAL PLAN

The total estimated cost of the Child Survival Project is \$124,442,000 composed of the following:

		(\$000)	
	FX	LC	TOTAL
AID	31,238	41,704	72,942
GOE/Other Donors*	-	51,500	51,500
	<u>31,238</u>	<u>93,204</u>	<u>124,442</u>

The other donors include UNICEF which, as part of their regular grant to the MOH, will contribute at least \$15 million over the life of the project for supplies and equipment directly related to immunizations and anemia programs. WHO will grant at least \$1.6 million to the Ministry to support related training programs. Since both of these contributions are outside the direct control of the project and are given to the MOH as program support grants, they are considered to be part of the GOE contribution to the project, i.e. included is the \$51.5 million noted above.

AID's share of the project budget includes a large LC component. This is because the thrust of the project will make maximum use of Egyptian expertise and local products available in the private sector, from Universities and other entities to support child survival activities. This will be true in all the major input areas as summarized below:

	(\$000)	
	FX	LC
TA	6,848	10,361
Training	5,058	8,338
Commodities	14,032	12,010
Renovations	-	575
Other Support	-	7,220
Evaluation	300	200
Contingency	5,000	3,000
	<u>31,238</u>	<u>41,704</u>
		TOTAL: <u>72,942</u>

\* In other tables and analyses, "Other Donors" is not listed again. However, it should be understood that their inputs are included in the GOE input.

In deriving the costs for the Child Survival Project, individual components were specified in detail and costed on the basis of experience and guidelines available (see Tables 1-4). Fifteen percent (15%) inflation has been added to all costs. The component costs are:

<u>COMPONENT</u>	<u>AID</u>	<u>(\$000)</u> <u>GOE</u>	<u>TOTAL</u>
1. Expanded Immunizations	25,661	21,150	46,811
2. Acute Respiratory	17,637	13,875	31,512
3. Child Nutrition	8,846	7,875	16,721
4. Child Spacing	12,298	8,600	20,898
5. Evaluation/Audit	500	-	500
6. Contingency	8,000	-	8,000
	<u>72,942</u>	<u>51,500</u>	<u>124,442</u>

There will be one major prime contractor which will be assisting in the implementation and coordination of all subcomponents of the Project. It is estimated that the prime contract will consist of 240 worker months (6 persons) of long-term U.S. advisors, 51 worker months of short-term U.S. advisors, and 1,605 worker months of long and short term Egyptian professionals and support staff.

The size of the prime contract group is large. However, it is felt that by having one major prime contractor coordinating the four major activities of the project, that implementation will proceed more smoothly. This will result in a more efficient and timely disbursement record for the project as a whole.

AID's total contribution of \$72,942,000 will be used as follows:

	<u>Amount %</u> <u>(\$000)</u>	<u>of Total</u>
<u>Technical Assistance</u>	<u>17,209</u>	<u>23.6</u>
1. Long-term U.S. (240wm)	4,175	5.7
2. Short-term U.S. (51wm)	1,173	1.6
3. Long-term FN (1,492wm)	4,290	5.9
4. Short-term FN (113wm)	352	0.5
5. Media subcontract	4,815	6.6
6. Health Info System subcontract	1,500	2.0
7. Miscellaneous consultants	904	1.2
<u>Training</u>	<u>13,396</u>	<u>18.4</u>
1. LT Participant (708m)	2,443	3.3
2. ST Participant (339m)	1,560	2.1
3. Invitational	583	0.8
4. Workshops/Seminars (22)	674	0.9
5. Inservice/other	8,136	11.2
<u>Commodities</u>	<u>26,042</u>	<u>35.7</u>
1. Syringes (disposable/local)	5,200	7.1
2. Large refer trucks (5)	290	0.4
4. Small refer trucks (44)	1,320	1.8
5. Vans (8)	160	0.2
6. Computers/software/support equip.	1,575	2.2
7. Day kits, supplies x 20,000	1,200	1.6
8. Lab equipment, 3500 clinics	5,100	7.0
9. Pediatric care, 73 sets	3,650	5.0
10. University/Teaching, 18	1,080	1.5
11. Training materials	1,614	2.2
12. Anemia test equipment x 3000	523	0.7
13. Nutrition Lab equipment	500	0.7
14. Incubators (3245)	468	0.6
15. Cold chain related items	552	0.8
16. Local financed, other	2,810	3.9
<u>Renovations</u>	<u>575</u>	<u>0.8</u>
<u>Other Support</u>	<u>7,220</u>	<u>9.9</u>
1. Assessments/studies	2,760	3.8
3. Governorate Grants	1,000	1.4
4. Surveys, baseline, follow-ups	1,640	2.2
5. Miscellaneous	1,820	2.5
<u>Evaluation/Audits</u>	<u>500</u>	<u>0.7</u>
<u>Contingency</u>	<u>8,000</u>	<u>11.0</u>
<u>TOTAL:</u>	<u>72,942</u>	<u>100.0</u>

Disbursements to the prime host country contractor will be by direct letter of commitment. This is being done since the Ministry of Health does not have the foreign exchange necessary to pay the contractor (approximately \$15 million) over the life of the contract and be reimbursed by AID. From previous experience in other AID projects it has been determined that the Ministry of Health has the ability to (a) advertise, award and negotiate contracts; (b) monitor contract implementation; (c) examine invoices; and, (d) audit contractor books and records.

All participant training will be direct via PIO/ps (approximately \$4 million). Invitational travel for the most part will be by A.I.D. travel orders. However, a limited number of Egyptians will go on invitational travel through the prime contract. In these cases, this travel will be a reimbursable expense to the prime contractor in accordance with the provisions of their direct letter of commitment.

In-service training, workshops/seminars and other support costs will be funded by PILs to the implementing agency. Specific activity programs and budgets will be prepared prior to this and submitted to A.I.D. for review and approval. Disbursements will be through periodic advances to the project Secretariat which will liquidate the advances through monthly expenditure invoices. It has been determined from previous experience in other A.I.D. projects that the Ministry of Health has the ability to receive advances, invoice for liquidation and maintain proper books and records in the use of A.I.D. funds.

It is anticipated that a host country procurement services agent (PSA) contract will be obtained for procurement activities. The contract will include funds for the agent's negotiated fee which will be paid through a direct letter of commitment. Payment for the commodities to be purchased by the PSA will be reimbursed through bank letters of commitment. Use of a direct letter of commitment for this purpose is again because the Ministry of Health does not have the foreign exchange necessary to pay the contractor over the life of the contract and be reimbursed by A.I.D. The use of bank letters of commitment is justified because of the anticipated use of a number of different vendors in supplying the proposed commodities for all components.

Lastly, renovation work is planned for the Nutrition Institute in Cairo. A&E services up to and including drawings, plans, specifications and detailed costs will be reimbursed through a PIL approval and subsequent grant to the implementing agency to reimburse the A & E contractor on a fixed price basis. The cost of this A & E work is estimated to be less than \$100,000. Following review and acceptance of the plans, specifications and cost estimates, A.I.D. will prepare a modified fixed amount reimbursement agreement with the implementing agency for the work. It will be modified to the extent that a mobilization payment to the implementing agency will be allowed, with subsequent periodic payments as agreed to in the FAR.

Audits and evaluations (\$0.5 million) are included in the budget. The audits envisioned are for independent audits. Contracts for this will be direct A.I.D. contracts for a fixed price or through A.I.D. purchase orders. Evaluation work will be handled in a similar fashion.

Lastly, the recurrent cost implications of this project for the Ministry have been reviewed. A.I.D. inputs to the project are not meant to build a whole new infrastructure faced with hiring additional staff, locating new offices, setting up new training centers or building health clinics. On the contrary, maximum use will be made of staff, facilities and commodities that are part of on-going Ministry activities. The Child Survival Project will focus the use of these inputs in a more effective and efficient manner so that there will not be a large increase in recurrent costs for the GOE. The Secretariat itself will be costly. However, the Secretariat is not meant to be a permanent organization and will disband at the end of the project.

The largest anticipated recurrent cost item for the GOE related to the project will be for vaccines, immunization supplies and materials (e.g. syringes) and cold chain replacement equipment. Estimates of the total additional, annual costs of EPI items to the Ministry in 1993 (assuming no other donor support) is \$5 million - \$1 million for the cold chain, \$1 million for syringes and \$3 million for vaccines.

Another item that may have recurrent cost implications is the use of the private sector for media and advertising. This should not exceed \$0.5 million per year. A decision on this will not be needed until late in the project. The Ministry will therefore have time to budget for these additions if desired. However, depending on the success of the new interventions and products, private and public sector firms may continue this advertising without direct MOH inputs.

The total recurrent cost implications of the project, then, are approximately \$5.5 million per year (in 1985 dollars) or about 0.8% of the total estimated 85/86 Ministry budget of LE 587 million. This is not considered excessive. The Ministry should be able to meet these added costs after the conclusion of this project from allocations from the regular GOE national budget.

Table 1  
ILLUSTRATIVE FINANCIAL PLAN  
(\$ 000)  
CHILD SURVIVAL PROJECT  
No. 263-0203

A.I.D.	FIRST YEAR			ALL OTHER YEARS			COMBINED		
	<u>FX</u>	<u>LC</u>	<u>TOTAL</u>	<u>FX</u>	<u>LC</u>	<u>TOTAL</u>	<u>FX</u>	<u>LC</u>	<u>TOTAL</u>
Technical Asst.	1,300	200	1,500	5,548	10,161	15,709	6,848	10,361	17,209
Training	200	500	700	4,858	7,838	12,696	5,058	8,338	13,396
Commodities	-	400	400	14,032	11,610	25,642	14,032	12,010	26,042
Renovations	-	-	-	-	575	575	-	575	575
Other Support	-	400	400	-	6,820	6,820	-	7,220	7,220
Evaluation/Audits	-	-	-	300	200	500	300	200	500
Subtotal	<u>1,500</u>	<u>1,500</u>	<u>3,000</u>	<u>24,738</u>	<u>37,204</u>	<u>61,942</u>	<u>26,238</u>	<u>38,704</u>	<u>64,942</u>
Contingency	-	-	-	5,000	3,000	8,000	5,000	3,000	8,000
Total	<u><u>1,500</u></u>	<u><u>1,500</u></u>	<u><u>3,000</u></u>	<u><u>29,738</u></u>	<u><u>40,204</u></u>	<u><u>69,942</u></u>	<u><u>31,238</u></u>	<u><u>41,704</u></u>	<u><u>72,942</u></u>
<u>GOE</u>									
Salaries	-	1,000	1,000	-	15,000	15,000	-	16,000	16,000
Incentives	-	500	500	-	7,500	7,500	-	8,000	8,000
Commodities	-	-	-	-	12,000	12,000	-	12,000	12,000
Other Support	-	500	500	-	15,000	15,000	-	15,500	15,500
Total	<u><u>-</u></u>	<u><u>2,000</u></u>	<u><u>2,000</u></u>	<u><u>-</u></u>	<u><u>49,500</u></u>	<u><u>49,500</u></u>	<u><u>-</u></u>	<u><u>51,500</u></u>	<u><u>51,500</u></u>

- 47 -

Table 2  
SUMMARY  
 COSTING OF PROJECT COMPONENTS  
 (\$ 000)  
CHILD SURVIVAL PROJECT  
 NO. 263-0203

	<u>EPI</u>		<u>ARI</u>		<u>NUTRITION</u>		<u>CHILD SPACING</u>		<u>AID</u>	<u>TOTALS</u>	
	<u>AID</u>	<u>GOE</u>	<u>AID</u>	<u>GOE</u>	<u>AID</u>	<u>GOE</u>	<u>AID</u>	<u>GOE</u>		<u>GOE</u>	<u>COMBINED</u>
<u>PROJECT INPUTS</u>											
Technical Asst.	8,470	-	2,772	-	2,740	-	3,227	-	17,209	-	17,209
Training	6,332	-	2,147	-	2,080	-	2,837	-	13,396	-	13,396
Commodities	9,194	5,000	10,783	3,000	2,403	2,500	3,662	1,500	26,042	12,000	38,042
Renovations	-	-	-	-	575	-	-	-	575	-	575
Other Support	1,665	6,000	1,935	4,500	1,048	2,000	2,572	3,000	7,220	15,500	22,720
Salaries	-	6,750	-	4,250	-	2,250	-	2,750	-	16,000	16,000
Incentives	-	<u>3,400</u>	-	<u>2,125</u>	-	<u>1,125</u>	-	<u>1,350</u>	-	<u>8,000</u>	<u>8,000</u>
Subtotals:	25,661	21,150	17,637	13,875	8,846	7,875	12,298	8,600	64,442	51,500	115,942
Evaluation/Audit	200	-	100	-	100	-	100	-	500	-	500
Contingency	<u>4,000</u>	-	<u>1,500</u>	-	<u>1,000</u>	-	<u>1,500</u>	-	<u>8,000</u>	-	<u>8,000</u>
Totals:	<u>29,861</u>	<u>21,150</u>	<u>19,237</u>	<u>13,875</u>	<u>9,946</u>	<u>7,875</u>	<u>13,898</u>	<u>8,600</u>	<u>72,942</u>	<u>51,500</u>	<u>124,442</u>

1 48

TABLE 3  
ESTIMATED EXPENDITURES  
(\$ 000)  
BY PROGRAM INPUTS  
CHILD SURVIVAL PROJECT  
263-0203

	<u>FY 86</u>	<u>FY 87</u>	<u>FY 88</u>	<u>FY 89</u>	<u>FY 90</u>	<u>FY 91</u>	<u>FY 92</u>	<u>FY 93</u>	<u>TOTALS</u>
<u>A.I.D.</u>									
Technical Asst.	260	2,063	3,706	4,341	3,324	1,801	1,144	570	17,209
Training	891	2,835	3,600	2,609	1,842	952	453	214	13,396
Commodities	280	6,960	7,463	3,989	3,212	2,230	1,578	330	26,042
Renovations	125	450	-	-	-	-	-	-	575
Other Support	23	1,549	2,118	1,479	1,037	532	266	216	7,220
Evaluation/Audits	-	-	100	-	-	200	-	200	500
<u>Total</u>	<u>1,579</u>	<u>13,857</u>	<u>16,987</u>	<u>12,418</u>	<u>9,415</u>	<u>5,715</u>	<u>3,441</u>	<u>1,530</u>	<u>64,942</u>
							Contingency		8,000
							Total		<u>72,942</u>
<u>GOE</u>									
Salaries	1,132	1,547	1,806	2,007	2,161	2,325	2,443	2,577	16,000
Incentives	566	773	904	1,004	1,081	1,162	1,221	1,288	8,000
Commodities	849	1,160	1,355	1,507	1,623	1,744	1,832	1,932	12,000
Other Support	1,096	1,499	1,750	1,945	2,095	2,253	2,367	2,496	15,500
<u>Total</u>	<u>3,643</u>	<u>4,979</u>	<u>5,815</u>	<u>6,463</u>	<u>6,960</u>	<u>7,484</u>	<u>7,863</u>	<u>8,293</u>	<u>51,500</u>

- 49 -

Table 3a

ESTIMATED FY 86 - 93 EXPENDITURES

A.I.D.

BY PROGRAM COMPONENT  
CHILD SURVIVAL PROJECT  
NO. 263-0203

	<u>FY 86</u>	<u>FY 87</u>	<u>FY 88</u>	<u>FY 89</u>	<u>FY 90</u>	<u>FY 91</u>	<u>FY 92</u>	<u>FY 93</u>	<u>Total</u>
<u>EPI</u>	<u>918</u>	<u>4,734</u>	<u>4,992</u>	<u>5,143</u>	<u>4,071</u>	<u>2,834</u>	<u>2,296</u>	<u>873</u>	<u>25,861</u>
Technical Asst.	63	957	1,739	2,209	1,480	805	859	358	8,470
Training	834	1,172	977	1,251	1,144	550	240	164	6,332
Commodities	17	2,300	1,725	1,392	1,174	1,283	1,103	200	9,194
Other Support	4	305	511	291	273	116	94	71	1,665
Evaluation/Audits	-	-	40	-	-	80	-	80	200
<u>ARI</u>	<u>328</u>	<u>5,722</u>	<u>5,880</u>	<u>2,411</u>	<u>1,975</u>	<u>808</u>	<u>333</u>	<u>280</u>	<u>17,737</u>
Technical Asst.	51	340	568	683	778	167	100	85	2,772
Training	35	885	661	338	128	56	34	10	2,147
Commodities	235	3,916	4,096	1,011	884	452	119	70	10,783
Other Support	7	581	535	379	185	93	80	75	1,935
Evaluation/Audits	-	-	20	-	-	40	-	40	100
<u>NUTRITION</u>	<u>183</u>	<u>1,356</u>	<u>2,686</u>	<u>1,911</u>	<u>1,443</u>	<u>843</u>	<u>422</u>	<u>102</u>	<u>8,946</u>
Technical Asst.	37	178	653	812	534	409	85	32	2,740
Training	16	425	1,047	303	181	82	26	-	2,080
Commodities	5	100	722	528	537	229	272	10	2,403
Renovations	125	450	-	-	-	-	-	-	575
Other Support	-	203	244	268	191	83	39	20	1,048
Evaluation/Audits	-	-	20	-	-	40	-	40	100
<u>CHILD SPACING</u>	<u>150</u>	<u>2,045</u>	<u>3,429</u>	<u>2,953</u>	<u>1,926</u>	<u>1,230</u>	<u>390</u>	<u>275</u>	<u>12,398</u>
Technical Asst.	109	588	746	637	532	420	100	95	3,227
Training	6	353	915	717	389	264	153	40	2,837
Commodities	23	644	920	1,058	617	266	84	50	3,662
Other Support	12	460	828	541	388	240	53	50	2,572
Evaluation/Audits	-	-	20	-	-	40	-	40	100
<u>Totals:</u>	<u>1,579</u>	<u>13,857</u>	<u>16,987</u>	<u>12,418</u>	<u>9,415</u>	<u>5,715</u>	<u>3,441</u>	<u>1,530</u>	<u>64,942</u>
							Contingency:		<u>8,000</u>
									<u>72,942</u>

Table 4

OBLIGATION SCHEDULE  
(\$000)  
CHILD SURVIVAL PROJECT  
263-0203

<u>FY 85</u>	<u>FY 86</u>	<u>FY 87</u>	<u>FY 88</u>	<u>FY 89</u>	<u>FY 90</u>	<u>TOTAL</u>
3,000	14,942	15,000	17,000	10,000	13,000	72,942

## V. IMPLEMENTATION PLAN

### A. Administrative Arrangements

The components of the Child Survival Project, with the exception of ARI which is delivered through routine pediatric services, exist as vertical programs in the MOH. Program policy and planning is carried out at the central level for implementation in decentralized, integrated services at the governorate level. EPI is the strongest of the vertical programs and extends vertically to the service delivery level through nationally planned schedules for immunization. EPI has 12 teams which work with the governorates in implementing services.

The governorate director general of health is responsible for all health services and facilities in the governorate and for implementing directives from the vertical programs. The decentralized service delivery system for the Child Survival components makes it essential that the project have a direct relationship with governorate health services. This will permit coordination of interventions, prevent conflicting demands of vertical programs, and involve the governorates in the planning of Child Survival programs which respond to local conditions. This direct relationship also permits a phasing of interventions based on the current level of governorate services and testing of innovative service delivery.

However it is important that all governorates participate from the beginning and that identified basic problems of implementation be addressed early on a national basis. The concept of the Control of Diarrheal Disease (CDD) Project is based on the pilot project experience with the SRHD project's oral rehydration intervention which was used as a basis for the national program. This has resulted in the national rehydration program expanding rapidly.

Following the precedent of the Control of Diarrheal Diseases (CDD) Project as a model, the GOE has established a Child Survival Steering Committee to provide policy guidance for implementation of the Child Survival Project.

The MOH has also agreed to create a temporary semiautonomous Secretariat for implementation of the project. While the First Undersecretary for Health in the MOH will serve as Project Director, the Project Executive Director will have authority to implement the project under the policy guidance of the Steering Committee. He will have the authority to work directly with governorate health programs and to contract for personnel, services, and commodities.

Under this system, the Executive Director will have the authority to directly contract with technical personnel or for services as needed from the private sector and to second MOH personnel as required. To accelerate work in the governorates, each governorate medical director will appoint a Child Survival Project Coordinator who is responsible for implementing Child Survival Project services and who reports directly to the Secretariat. This arrangement will permit the project to go directly to the governorate and establish or expand training centers and clinics for the

Child Survival Project activities. Governorates who demonstrate more interest in these programs can move rapidly ahead and receive materials and supplies for training and services to begin a program, while project staff can concentrate efforts on less active governorates. The Executive Director also will have the authority to grant Child Survival Project supplies and equipment to university teaching hospitals interested in establishing or expanding Centers for Child Survival Project activities.

#### B. Results under similar CDD Project Administrative Arrangements

The CDD Project is now at the midpoint of implementation. ORT services have been established in every governorate and are integrated with other routine services and governorates are receiving regular supplies of ORS. In 1985, the Secretariat Staff will install ORT equipment in 1500 MOH clinics and by 1986 every MOH clinic will have the capacity to deliver ORT. Training programs are being conducted nationally and are being integrated into medical and nursing curriculum, and governorate pre service training, so that all doctors and nurses will receive ORT training on a routine basis.

The production of oral rehydration salts has been institutionalized in a public sector company with the capacity to produce the national requirements for the public and private sector.

A series of TV spots on the dangers of dehydration and the use of ORS have been used to educate the public. These TV spots have resulted in increased public awareness of ORT, increased demand for ORT services in MOH and other clinics, and increased pharmacy sales of ORS.

As a result of the increased demand for ORS in commercial outlets, the product is providing a reasonable profit margin for the public sector pharmaceutical company and the company has more interest in expanding a permanent production line.

#### C. Contractor Support

The CS Secretariat will be supported by a U.S. contractor. The GOE has requested that efforts under all four project components be implemented under the same host country contract that will be negotiated to support the overall project. The contractor will be expected to provide resident individuals who will work with the Secretariat and the receiving agencies to develop implementation plans. They will also be expected to develop the RFP statements for the Secretariat and to act, along with counterparts from the Secretariat to assist the project officer to facilitate activities under the several sub-projects. The activities for the resident individuals and 165 person months of short-term technical assistance will be provided from the appropriate component to pay for such services. Other funds for up-grading will not be included in the prime contract.

Sub-contracts/grants let will be developed in accordance with USAID and GOE procurement procedures. The prime contractor will be expected to monitor and evaluate sub-contractor/grantee performance reporting to USAID and the Secretariat at times to be determined when sub-contracts/grants are developed.

#### D. USAID Monitoring

Following the obligation of funds, USAID's Office of Health will be responsible for developing the contractor's scope of work as part of the prime contract under the project. While USAID's Office of Health will be responsible for monitoring all actions under the host country contract, the contractor and the Secretariat, in cooperation with USAID, will be responsible for monitoring contractor performance under all sub-contracts/grants.

#### E. Implementation Steps

- a time phased implementation plan will be developed for each project component and amended annually.
- the need for training in-country and assessment of existing in-country capacity will be assessed in conjunction with project efforts under the project.
- when needs are identified by the Secretariat, an implementation plan for the specific activity will be developed by the institution to be served, working in conjunction with Secretariat staff and the contractor. The plan will address current status and capacity, desired program and capacity and provide a clear statement of what is required (staff training, technical assistance, curriculum development, supplies, equipment, etc.) to achieve desired delivery capacity. In the event that the proposed recipient organization needs assistance to develop an implementation plan, it may also draw down on the short-term technical assistance provided under this project.
- when the plan is received, reviewed and approved by the Secretariat and USAID, a determination will be made as to whether any solicitation be made competitively locally, in the U.S., or both. A PIL will be written, for example, and the competitive procedures agreed upon instituted.
- a committee involving the Secretariat, the contractor and the institutions involved will be set up for such subactivity when appropriate

F. Implementation Schedule

1. All Components

<u>Date</u>	<u>Major Actions</u>
August 1985	Project Agreement executed
December 1985	Draft contract & RFTP presented to Secretariat for its review and approval
January 1986	RFTP approved; CBD Notice published.
June 1986	Contractor selected
August 1986	First contract staff member arrives in Egypt
September 1986	-- long-term participants depart -- short-term participants depart.
December 1986	Commodities ordered.
July 1987	Implementation plans presented to Secretariat and USAID for approval.
September 1987	Sub-contracts advertised.
August 1988	Interim Evaluation (USAID/ MOH/ UNICEF/WHO).
January 1990	Final participants return to Egypt.
August 1991	Second Interim Evaluation.
October 1992	Contractor Departs.
August 1993	Final External Evaluation.

2. Sub-Component  
(A) EPI

1986	Participants depart for training EPI implementation plan developed PASA with CDC for EIS signed and TA assessment made by CDC.
1987	EPI implementation plan approved. Health Information System set up in four governorates. Baseline data collection initiated. Evaluation studies for testing vaccine effectiveness developed. Cold chain requirements and maintenance evaluated for support effectiveness. In-country training of trainers for EPI managers and health personnel designed and in process.
1988	EPI training implemented nationwide in all districts. Preservice EPI training strengthened and integrated with regular training.

1989 - 1991      Media messages designed to support immunization campaigns. National campaigns implemented, strengthened by trained personnel, appropriate equipment and supported by media. Health Information System phased into other governorates. Sentinel surveys underway. Second interim evaluation.

1992              Evaluation recommendations implemented. National EPI strengthened and operational reaching 80% of children under 5 for 6 mandatory immunizations.

1993              Final evaluation Recommendations to MOH for continued coverage.

(B) ARI

1986              Participants depart for training. Fever Hospitals & Health Units surveyed for treatment and diagnosis equipment requirements.

1987              Baseline data collection initiated. ARI Implementation Plan developed and approved. Training programs designed for all levels of health personnel. Protocols established for treatment of ARIs.

1988              Training Programs implemented. Surveys designed for epidemiological information in sentinel governorates. Interim Evaluation.

1989 - 1991      MOH system for diagnosis and treatment of ARIs upgraded through training, use of appropriate treatment regimens and early diagnostic techniques. Media messages developed to support programs for early diagnosis and treatment. Surveillance system for ARIs established. Interim Evaluation.

- 1992 - 1993  
Epidemiological surveys evaluated.  
ARI Reporting systems functioning.  
Media messages evaluated for effectiveness in promoting early diagnosis and treatment.  
Appropriate pharmaceuticals being procured and distributed to MOH system for ARIs.  
Final Evaluation.
- 1993  
Final Evaluation Recommendations to MOH for continued coverage.
- (C) Nutrition
- 1986  
Participants depart for training.  
Development of WFS initiated.  
Nutrition Component.  
Implementation Plan developed.  
(Expansion of Nutrition Education activity countrywide).
- 1987  
Implementation plan approved FAR agreement between USAID and MOH for renovations of Nutrition Institution signed.  
Training developed for diagnosis and treatment of iron deficiency anemia for MOH personnel.  
Training for nutrition for MOH staff developed.  
Media messages on breastfeeding and weaning nutrition and use of available, local foods for weaning developed.  
MOH clinics evaluated for availability of sufficient quantities of iron supplementation tablets and anemia testing equipment.
- 1988 - 1989  
Training programs for nutrition and iron deficiency anemia implemented nationally.  
Media messages tested for effectiveness through surveys that ascertain knowledge and practice of weaning nutrition with available foods.  
  
Interim Evaluation.  
Media messages developed on iron deficiency anemia.  
Protocols developed for treatment of anemia.

	1989	WFS tested. Commercial producer for WFS identified and contacted for production. Social Marketing for WFS developed.
1990 -	1992	Distribution for WFS set up. WFS marketed nationwide commercially. Surveys implemented to test social marketing strategies.
	1993	WFS available through commercial sector and supported by appropriate commercial media messages.
(D) Child Spacing		
	1986	Participants depart for training. UNICEF Daya Training Program evaluated and revised for nationwide implementation. Implementation Plan for Child Spacing Component developed.
	1987	Implementation Plan approved. Training of governorate trainers for Daya programs and orientation for clinic personnel for support of daya services designed. Daya training implementation plans submitted by governorates. Child Spacing training requirements evaluated and coordinated with National Population Council (NPC). Child Spacing training designed to emphasize health benefits of child spacing and wider use of IUDs. Surveys developed to determine reasons for gaps in knowledge and practice of child spacing. STN Midwives integrated into MOH system.
	1988	Daya training and clinic orientation programs implemented nationally. Child Spacing training implemented and coordinated with NPC activities. Media messages developed for prenatal, post partum care, and child spacing emphasizing health benefits for the child.

- MOH services strengthened through orientation of personnel in prenatal and postnatal care and supervision of dayas. Daya packs developed for resupply of daya kits.  
Interim Evaluation.
- 1989 MOH system for childbirth care expanded through supervised, trained dayas and improved registration and care of pregnant women.  
Media messages through TV, radio and other sources promote childbirth care and child spacing on a national basis.  
Child Spacing programs linked with post partum services and emphasizing services for high risk mothers.
- 1990 - 1991 Governorates testing innovative schemes for childbirth care and child spacing programs.  
Interim Evaluation.
- 1992 - 1993 Innovative schemes evaluated for nationwide replication.  
Role of STN Midwife established in community obstetrics delivery.  
Effective community obstetrics program supervised by MOH and linked to post-partum child spacing program established nationally.  
Final Evaluation.

#### G. Evaluation Plan

The project's evaluation program will rely on both progress reviews by the Secretariat and periodic external evaluations of the subactivities. Annual reviews will be held between the Child Survival Secretariat and USAID to assess implementation and costs of the various components. The surveillance system for the immunization and acute respiratory infections components will generate data on the disease incidence, coverage, and feedback. This will be complemented by periodic sample surveys and epidemiological studies. Information on the nutrition and child spacing components will come from the Ministry of Health data collection activities. This information may be supplemented by user surveys of weaning foods and anemia-related information and by recipients of child spacing and nutrition education services. These various subactivities information and monitoring systems will provide a basis for the annual progress reviews.

The interim evaluations will be scheduled for 1988 & 1991, and will include WHO, UNICEF, MOH, and USAID participation. The evaluations will focus on the implementation of management development, training, and child spacing. These evaluations will also be implementation focused. The evaluation of the nutrition sub-project will assess progress on the weaning food and anemia components and evaluate the use of social marketing under the nutrition education program. The evaluation of child spacing will review training activities, services delivery programs, and media for public education. The evaluation may include a comparison of approaches used under the Child Survival and Population/Family Planning Projects.

A final evaluation is scheduled for 1993. This will be a comprehensive evaluation using appropriate outside expertise.

#### H. PROCUREMENT PLAN

The basic premise of procurement for the Child Survival Project is that host country mechanisms will be used to the maximum extent possible. All goods and services will be U.S. and/or Egyptian in source and origin and will be competed fully in accordance with U.S. and Egyptian procurement regulations unless otherwise agreed to in writing by both parties. Where dollar funding is involved, advertising and open completion in the U.S. and Egypt will be done. Local cost financed procurement will be advertised and competed as required, but only in the host country. Consideration will be given to Gray Amendment objectives in all procurement actions to the extent possible.

The Ministry of Health is currently implementing three health projects (i.e. Rural Health 263-0015, Urban Health 263-0065 and Control of Diarrheal Diseases 263-0137). Because of this experience, the USAID feels confident of the MOH's ability to advertise, award, monitor, evaluate and, audit (in accordance with Egyptian regulations) A.I.D. funded host contracts for the Child Survival Project; A.I.D. audit interests will be protected by separate A.I.D. contracts, funded under this project with qualified auditing firms. The MOH is familiar with A.I.D. policies for procurement as contained in Handbook 11 and have followed these rules in the past without difficulty. Some conflicts might arise between A.I.D. rules and regulations and Egyptian procurement law (i.e. Law 9 of 1983). They will be handled on a case by case basis as the need arises. Conflicts are expected to be minimal and to not impact adversely on the procurement plan for the project.

However, in order to prevent any difficulty and misunderstanding with procurement policy under the project, the first step of the procurement plan will be to forward a detailed Project Implementation Letter (PIL) to the Ministry spelling out the various procedures to be used. Guidance will be given about the source of A.I.D.'s procurement rules, the specific handbook references and the relationship of U.S. and Egyptian regulations to project procurement. Major procurement actions will not proceed until

the Ministry, which has already concurred informally in the project procurement plan, has formally acknowledged the PIL by signing thereon.

Host country contracting and local cost financing procedures will be the major procurement modes for the Child Survival Project. In terms of host country contracting, the Ministry of Health, represented by the Child Survival Secretariat, will be the Contracting Agency (CA) for the project.

The first major procurement action for the Contracting Agency will be to obtain the services of the prime technical assistance contractor. After all CP's and covenants are met, a request will be made by the CA to A.I.D. requesting outside assistance in the preparation of the required Request for Technical Proposal (RFTP), and especially the detailed and very specific scope of work, proposal evaluation criteria and detailed cost estimate for such a contract. Accuracy and specificity in the RFTP are very important since the contractor eventually selected will be one of the major actors in implementing the project. Their influence will be felt, so there is no room for misunderstandings concerning duties, responsibilities and specific tasks. A.I.D. will contract for RFTP preparation assistance through the Indefinite Quantity Contract (IQC) system. Prequalifications for the prime contractor will be considered at this time in order to speed up the procurement process. Expressions of interest will be invited both in the Commerce Business Daily (CBD) and Egyptian press. Work on the RFTP shall begin by November 15, 1985 and end at least by December 15, 1985. Because of the importance of this document, it is anticipated that the CA and A.I.D. will need at least 45 days to review and approve the document.

In the interests of keeping project costs down, consideration will be given to including cost as well as quality of proposals as an evaluation criteria. Approval for such procedure is within the Mission Director's authority under Redelegation of Authority 113.8

Advertising, distribution of the RFTP and proposal preparation and selection will follow (at least 60 days allowed for proposal writing, site visits and discussions with the CA and staff). The primary point of contact for all interested offerors during this phase will be the Executive Project Director of the Child Survival Secretariat in Cairo.

Proposals will be received and evaluated in Cairo using the evaluation protocol developed by the IQC team. Members of the proposal evaluation team will be appointed by the project steering committee. A.I.D. will approve the CA's proposed order-ranking for compliance with evaluation criteria.

Negotiations will be conducted between the top ranked firm and the CA. A contract, to be approved by A.I.D., will result; or, if negotiations are not successful, the CA will then invite the second ranked firm to submit a cost proposal (unless previously required) and begin negotiations and so on until a contract is awarded. Due to the scope of work, anticipated size of

the TA team and required logistical arrangements, negotiations could be protracted.

The award of the prime contract will be the accomplishment of a major milestone in the project. With the contract team's arrival, selection of Egyptian staff and start of special studies, the project will be moving into high gear.

Summary of Actions  
Procurement of Prime Contractor

<u>ACTION</u>	<u>COMPLETE BY:</u>
1. MOH signature on procurement PIL	10/15/85
2. MOH request to A.I.D. for IQC	10/30/85
3. Finalize RFTP	12/15/85
4. Complete prequalifications	12/31/85
5. Approve RFTP/send to firms	02/15/86
6. Proposals due in Cairo	05/15/86
7. Evaluation completed	06/15/86
8. Award/approve/fund contract	08/15/86
9. First contract member arrives	09/15/86
10. Contract team fully mobilized	03/15/87

The prime contractor's role in future procurement actions is a major one. For instance, they will coordinate closely with the CA on the selection of major subcontractors such as those for media, computer systems design, MIS, training and nutrition education. Subcontracting responsibilities for the prime contractor will be specified in their contract, with selection of subcontractors in accordance with contract provisions.

The prime contractor will also assist and advise the CA on the preparation of other RFTPs, both for small value procurement (i.e. under \$ 100,000, which does not require full advertising) and large value. The prime contractor will assist and follow up on these action as requested by the CA in order to shorten the contracting process. Draft contract sample formats might be prepared, for example, to meet the needs of the project.

To the extent provided in the prime contract, the contractor will also advise the CA on the purchase of supplies and equipment for the project. The contractor's involvement will be mainly to assist in the preparation of specifications and follow-up since actual commodity procurement will be the responsibility of another contractor (to be described).

A second major procurement action will be that of obtaining the services of an epidemiological training/technical assistance team. In all likelihood this will be through a Participating Agency Services Agreement (PASA) with the Center for Disease Control (CDC) in Atlanta, Georgia. CDC has developed a unique package training program to rapidly develop epidemiology activities in developing countries. There epidemiologists are key links in the disease

response and information system for the country involved. The use of CDC for this purpose will require an OMB Circular A-76 waiver. It is felt that such a waiver is justified based on CDC's unique expertise in implementation of this type of training/technical assistance package and the lack of capability in the U.S. private sector to develop such a training program. Therefore, as soon as possible after approval of the A-76 waiver, satisfaction of CPs and receipt of a request from the GOE, A.I.D. will prepare the required PIO/T to obtain the PASA. This procurement action will be independent of actions needed to obtain the prime contractor. Arrival of the PASA specialists should proceed rapidly (no full-time advisors in Egypt are contemplated through the PASA). Once the prime contractor arrives, full coordination and cooperation of programs will be required.

Summary of Action  
Procurement of PASA with CDC

<u>ACTION</u>	<u>COMPLETE BY:</u>
1. A-76 waiver	08/15/85
2. Forward PIO/T to AID/W	11/15/85
3. PASA negotiated	01/15/86
4. First specialists arrive	03/30/86
5. First full training course starts	08/01/86

Major equipment procurement will be done through a host country procurement services agent (PSA) contract obtained through advertising in the U.S. and Egypt. The selected PSA will in effect serve as the commodity procurement agent for the project as long as there is a need to purchase off-shore commodities (approximately the first 4 years of the project). The value of off-shore commodity purchases will be about \$14 million during this period. The agent selected will perform all the standard PSA duties, though the need for specification writing will be minimal since the CA and prime contractor will assume this responsibility. PSA duties include checking specifications, preparing and obtaining approvals on IFBs, advertising, receiving and evaluating bids, recommending awards, preparing and obtaining approvals on contracts, consolidating orders, arranging for shipping, followup, installation and maintenance training as requested and so on.

From past experience, we know that the interest in PSA work is widespread. Therefore, prequalifications may be counterproductive due to the large number of responses expected and the time required to evaluate them. Therefore, an RFP will be prepared by the CA for the PSA contract. Firms will, however, be required to submit qualification information with their written proposals. Proposals will be evaluated by the CA using protocols developed at the time the RFP is prepared. The resulting contract will specify a fixed fee for services relating to the procurement of a range of line items with an estimated value. Payment of the fee will be at periodic intervals as specified in the contract. The PSA will coordinate activities closely with the prime contractor. However, the selection of the PSA will be separate from

the prime contractor. The regular MOH inventory system will be used to account for all project purchased equipment. The prime contractor may, however, advise the CA on revisions to the system to better suit the project (e.g. a computer based inventory system).

Summary of Actions  
Procurement of PSA

<u>ACTION</u>	<u>COMPLETE BY:</u>
1. Complete RFTP	11/15/85
2. Advertise in CBD/AID Bulletin	12/15/85
3. Proposals due in Cairo	02/29/86
4. Award contract	03/31/86
5. Establish financial procedures	04/30/86
6. Forward first purchase order	05/15/86
7. First commodities arrive	11/01/86

Training will be an important part of the Child Survival Project. Included will be long and short term training in the United States. Also, locally organized courses for health workers, clients, and community leaders in a variety of subjects over the life of the project are to be organized. The latter will be addressed in another section of this plan. All participants will be funded directly by A.I.D. through PIO/Ps after receipt of requests from the CA and its training committee. The first group of participants to the U.S. will depart by August 1986. Most of the long term training will be completed within three years of that date; however, some short-term scholarships will be available until 1991. It is the intent of the project staff to complete most of the major overseas training early in the life of the project. Because of attrition, retirements etc., however, some training of replacements will be required. The prime contractor will have a major role in selecting the second group of participants who will be expected to begin training by August 1987.

Summary of Actions

Participant Training (First Group)

<u>ACTION</u>	<u>COMPLETE BY:</u>
1. Select first group/English testing	01/01/86
2. Develop English competency	04/15/86
3. Program/school selections	06/01/86
4. Formal PIO/Ps to AID/W	07/01/86
5. Participants depart	08/20/86

(Short term participants will also be nominated by the CA's training committee from time to time as training opportunities arise. PIO/Ps will be prepared at that time. However, no more than 5 such groups shall be selected per year in order to lessen the administrative burden on the CA and A.I.D).

Upgrading of facilities at the national Nutrition Institute in Cairo is planned. Work will involve renovations to approximately 1000 square meters of space. The facilities involved are laboratories, classrooms and offices. A fixed amount reimbursement agreement (FAR) will be used for the procurement of these services. Prior to that, however, the CA must provide A.I.D. with plans, specification, drawings and cost estimates for review. The MOH will need to contract for this Architectural and Engineering (A & E) work. Since such an A & E contract is estimated to cost less than \$100,000, the CA could use small value procurement rules to obtain the services of a local A & E firm to do the preliminary work (A & E work should not take longer than 6 months to complete). A.I.D. could then advance the CA the money necessary to pay the A & E (probably on a fixed-price basis) at specified intervals. After the A & E work is completed, reviewed and approved by AID, the FAR agreement will be negotiated. The FAR may be modified in order to authorize a mobilization payment to the CA, with subsequent periodic payments as specified in the FAR. It is anticipated that the renovation activity will be a one time event, i.e. once the FAR is over, no more renovation work will be procured under the project.

Summary of Actions  
Renovation FAR

<u>ACTION</u>	<u>COMPLETE BY:</u>
1. Begin A & E work	01/01/86
2. Submit documents to AID	03/31/86
3. Sign FAR	05/31/86
4. Complete renovations	06/01/87

Each year, the CA Secretariat will prepare implementation plans. Included with the implementation plans will be an annual estimates of "other support" budget items from the local currency project budget needed for program activities. Anticipated line items include (but are not limited to) "Consultants", "Training", "Equipment and Supplies" and "Interventions". The prime contractor will assist the CA in preparing and coordinating the budgets so that no duplication results. Once agreement is reached between the CA and A.I.D., A.I.D. shall grant the funds to the Secretariat through project implementation letters (PILs). Advances may be authorized. The CA will invoice expenditures monthly to USAID to liquidate outstanding advances. This procedure has worked well in other health projects in Egypt. (Prior to the preparation of the first complete implementation plan after the arrival of the prime contractor, A.I.D. will provide an "interim" budget following similar procedures.)

Summary of Actions  
Annual Secretariat Support Budgets

<u>ACTION</u>	<u>COMPLETED BY:</u>
1. Approve 1st "Interim" budget	11/01/85
2. Budget Allocation	11/15/85
3. Approve 1st complete budget	10/15/86

and each year thereafter according to implementation plans.

PROJECT DESIGN SUMMARY

LOGICAL FRAMEWORK

<u>NARRATIVE SUMMARY</u>	<u>OBJECTIVELY VERIFIABLE INDICATORS</u>	<u>MEANS OF VERIFICATION</u>	<u>IMPORTANT ASSUMPTIONS</u>
<p><u>PROGRAM OR SECTOR GOAL TO WHICH PROJECT CONTRIBUTES</u></p> <p>To improve the Health of the Egyptian People.</p>	<p><u>MEASURES OF GOAL ACHIEVEMENTS</u></p> <ol style="list-style-type: none"> <li>1. Progressive increase in life expectancy at birth</li> <li>2. Decrease in infant &amp; under 5 mortality</li> <li>3. Achievement of national population goals.</li> </ol>	<p>GOE Statistics</p>	<p><u>ASSUMPTIONS FOR ACHIEVING GOAL TARGETS</u></p> <p>Disease specific programs can achieve targets.</p>
<p><u>PROJECT PURPOSE</u></p> <p>To reduce morbidity and mortality in infants, children, and women of child-bearing age.</p>	<p><u>CONDITIONS THAT WILL INDICATE PURPOSE HAS BEEN ACHIEVED: END OF PROJECT STATUS</u></p> <ol style="list-style-type: none"> <li>1. 80% of children under 5 immunized under WHO schedule.</li> <li>2. 60% of pregnant women immunized for tetanus toxoid.</li> <li>3. ARI treatment program established in MOH system.</li> <li>4. Anemia detection and treatment programs for mothers &amp; children established in MOH services.</li> <li>5. A low cost popular weaning supplement available commercially.</li> <li>6. Public awareness increased re need for immunizations, childbirth care, ARI treatment, and weaning nutrition, and child spacing.</li> <li>7. Infant morbidity and mortality reduced through expanded and improved childbirth care and child spacing services.</li> </ol>	<p>MOH Records &amp; Statistics.</p> <p>GOE Vital Statistics KAP and Ethnographic Surveys.</p> <p>MOH Records.</p> <p>Production Statistics.</p> <p>Media Surveys.</p> <p>GOE Vital Statistics KAP and Ethnographic Surveys.</p>	<p><u>ASSUMPTIONS FOR ACHIEVING PURPOSE</u></p> <ol style="list-style-type: none"> <li>1. Improved immunization coverage will decrease overall incidence of childhood communicable diseases.</li> <li>2. Tetanus immunizations will reduce perinatal infant mortality.</li> <li>3. Effective ARI treatment programs can significantly reduce under 5 mortality and morbidity.</li> <li>4. Treatment of anemia will improve the overall nutritional status of mothers and children.</li> <li>5. Commercial supplements can improve weaning nutrition.</li> <li>6. Health education can be accomplished through use of national TV and Radio.</li> <li>7. Improved childbirth care and spacing of birth intervals can reduce infant mortality.</li> </ol>

64

OUTPUTS	OVER LIFE OF PROJECT MAGNITUDE OF OUTPUTS:	MEANS OF VERIFICATION	ASSUMPTIONS FOR ACHIEVING OUTPUTS.
1. An expanded, improved and utilized national immunization system.	1. Management of MOH immunizations system strengthened to provide adequate supplies of effective vaccines to 300 health units.	MOH Records	1. Adequate supplies of vaccines equipment, and an effective cold chain will increase the rate of immunizations.
2. An expanded child nutrition program which addresses malnutrition related to weaning and anemia.	2. MOH Clinics (3000) provide mandatory child immunizations on regular basis.	MOH Records.	2. Trained personnel can improve and expand delivery of MOH services.
3. Improved prevention, diagnosis and treatment of acute respiratory illness (ARI).	3. MOH personnel trained in 26 governorate programs for ARI, anemia, childbirth care and child spacing.	MOH Immunization Statistics.	3. Better weaning practices and increased intake of iron can improve maternal/child nutrition.
4. An expanded and improved MOH childbirth care and child spacing program.	4. A low cost culturally acceptable weaning food supplement developed and produced in the private sector.	Program Monitoring	4. Egyptian media can be an effective vehicle for health education.
	5. Media messages for TV & Radio on immunizations, child nutrition, Childbirth care, and child spacing care, reaching 90% of the population.	Marketing Surveys.	5. Health education programs can improve health practices and create a demand for preventive services.
	6. Dayas trained and certified by MOH in 26 governorates.	Audience Research.	6. Safer daya practice & improved MOH childbirth care can reduce maternal/neonatal mortality.
	7. Programs for childbirth care improved & expanded in 26 governorates.	DAYA certificates issued.	7. Longer birth intervals and reduction of excess fertility can reduce infant/child mortality.
	8. Improved Child Spacing Services promoting health benefits of contraception in 26 governorates.	MOH Records. Service Statistics	
		MOH service Statistics KAP Studies.	

PROJECT DESIGN SUMMARY

LOGICAL FRAMEWORK.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<u>Inputs</u>			
<u>U.S.</u> 1. TECHNICAL ASSISTANCE:			
Long Term			
Epidemiologist/MD (COP)	48 WM	Expatriate	Improved management/technical skills will strengthen the delivery of Child Survival interventions in Egypt's health sectors.
Health Management Specialist	48 WM	Expatriate	
Health Information Systems			
Specialist	36 WM	Expatriate	
Training Specialist	36 WM	Expatriate	
Evaluation Specialist	36 WM	Expatriate	
Child Nutrition Specialist	36 WM	Expatriate	
TOTAL	<hr/> 240 WM		Appropriate equipment and improved technology will increase the effectiveness of Child Survival interventions.
Short Term -		Expatriate	
EPI	15 WM		
ARI	15 WM		
NUT	6 WM		
CS	15 WM		
TOTAL	<hr/> 51 WM		
Long Term -		Egyptian	
EPI	864 WM		
ARI	120 WM		
NUT	144 WM		
CS	364 WM		
TOTAL	<hr/> 1492 WM		
Short Term -		Egyptian	
EPI	38 WM		
ARI	25 WM		
NUT	15 WM		
CS	35 WM		
TOTAL	<hr/> 113 WM		

67

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
2. PARTICIPANT TRAINING:			
EPI	372 PM LT		
	100 PM ST		
ARI	48 EM LT		
	75 PM ST		
NUT	240 PM LT		
	84 PM ST		
CS	48 PM LT		
	80 PM ST		
3. COMMODITIES & MATERIALS			
EPI			
	80 million Plastic Syringes		
	49 Refrigerator Trucks and other Cold Chain related items Computers and Software for 26 Governorates Off Shelf Supplies/Minor Equipment		
ARI			
	3,500 sets Lab Equipment		
	37 sets Pediatric Equipment/Fever Hospitals Data Processing Equipment (supplements EPI).		
NUTRITION			
	Training Materials		
	Anemia Testing Equipment		
	Weaning Food Production		
	Lab Equipment/supplies		
	Renovations (Nutrition Institute)		
Child Spacing			
	8 Vehicles for Secretariat		
	10,000 Daya Kits		
	3,000 Sets Clinical Training Equipment		
	234 Incubators		
	2 Computers and Software (Secretariat)		
	Training Equipment and supplies		
	Daya Pack Production		
Other			
	Studies/Surveys EPI, ARI, NUT, CS		
	Governorate Grants for CS		
	Media Development		
	Health Information Systems Development		

64

## ANNEX 2-A

### ADMINISTRATIVE ANALYSIS

The Child Survival Steering Committee is composed of the most senior officers of the Ministry of Health involved in the child survival programs and is chaired by the Minister of Health with the First Undersecretary serving as the Deputy Chairman, who will chair the Committee in the Minister's absence. The Steering Committee will provide policy guidance on Child Survival activities to the Minister. The Secretariat of the of the Child Survival Project will be directed by an Executive Director who reports directly to the Deputy Chairman of the Steering Committee, the First Undersecretary of Health. The Executive Director will also serve as a member of the Steering Committee.

The Secretariat will function administratively as a separate entity in a semiautonomous fashion from the line and support elements of the Ministry. The Executive Director of the Project will hold the rank of Undersecretary.

The Ministry will appoint senior personnel to staff the elements of the Secretariat and will be responsible for their compensation. Incentives and salary supplements will be provided through the Ministry's budget. USAID will approve the use of the Special Account as the source of these incentives if requested. AID will provide funds for consultants and technical services from the private sector in Egypt through local funding in the US prime contract or by direct contracting by the Executive Director with funds provided by AID.

The Secretariat will serve as the vehicle for the provision of special assistance to the four programs addressed by the Project. The Ministry will assign senior personnel from each program area, e.g. EPI, ARI, child nutrition and child spacing programs to staff the the Special Programs Unit of the Secretariat, reporting directly to the Executive Director but charged with collaboration with the managers of the of the four programs in the development of the special assistance requirements of the programs. The technical programs personnel will then work with the special support units of the Secretariat in the development and scheduling of the training, media campaigns, procurement of equipment and supplies, special studies, and evaluations needed to upgrade their individual programs. The prime contractor will provide technical assistance for the development of these interventions and to the Executive Director as required.

The staff required for the support units such as procurement, media, etc. will be in part supplied by the Ministry and in part will be contracted from the private sector for those specialists that are not available within the Ministry. This mechanism has been used successfully in the implementation of the of the Control of Diarrheal Diseases and in the Urban Health Services

Projects. This administrative arrangement has the advantage of providing the support and resources for program development in a flexible way and avoids the danger of the Secretariat becoming a continuing institution after the termination of the Project. The objective of the Secretariat is to develop the existing organizational entities currently delivering services in the four program areas. When the programs are strengthened and functioning effectively, the Secretariat with its external inputs will no longer be needed and will be disbanded. The organizations within the Ministry responsible for delivering the services that have been the focus of the Project will then be fully capable of performing their mission without the help of the Project.

The Ministry of Health has seen considerable decentralization during the past five years, with the Governorates becoming increasingly autonomous from day by day direction from the central Ministry of Health. The central Ministry maintains what clout that it does have through its control of the budget and the appointment of personnel to staff the governorate health services. In most ways, this decentralization is seen as a positive step in that it sets operational control of the system closer to the delivery point. While close coordination will be maintained with the central managers in each of the program areas, the delivery of special assistance and support by the Secretariat will often be directly with the staffs of the governorates, as is the case with the CDD Project.

The EPI program will be handled in a modified way due to the high degree of standardized management that is required throughout the system to insure the distribution of vaccines through the cold chain, setting of national targets, development of mass campaigns and so forth. Administratively, the EPI program is located in the Communicable Diseases Control Directorate, with the full time EPI manager working under the Director General of the CDC. The DG reports to the First Undersecretary who still holds the Preventive Medicine portfolio. The EPI Manager supervises twelve teams which are responsible for coordinating and advising the governorate level EPI managers on their individual EPI programs. Each team is made up of a physician and a sanatarian, both trained in EPI management and are responsible for two or more governorates each.

The teams interface with the governorate EPI Director, a physician and the sanatarian who serves as the governorate cold chain technician. The EPI staff report to the governorate Preventive Affairs Director and oversee and advise the district level EPI supervisor and cold chain technician who are on the staff of the District Health Director. The district EPI personnel supervise the EPI activities of the local health centers. The clinic physician serves as the EPI director and one of the staff is trained as the cold chain technician.

1

The EPI program is well structured but needs considerable upgrading of the performance of the service. It is judged that it is administratively feasible to improve the quality and scope of immunization services with the existing organization.

The Department of Statistics and Evaluation is directed by a Director General who currently reports directly to the Undersecretary for the Minister's Office. The Department collects all the data generated by the health system, makes assessments and studies on health statistics, and is responsible for the collection of all birth and death vital statistics throughout the country. The governorates have a full statistical staff that gathers the data forwarded from the district statistician, who in turn collected the voluminous data collected by hand at each health facility. The quantity of statistical data is enormous and except for the life and death registration information, is of questionable quality. The pilot project in Ishmailia carried out by the Ministry with the technical assistance of the US National Center for Health Statistics used the existing personnel for tabulation of data at district level on computer disks which were consolidated at governorate level and sent for immediate analysis to the central Ministry Department of Statistics and Evaluation demonstrated that the administrative structure was adequate if upgraded with training and improved supervision.

The vertical program for dealing with acute respiratory infections will fall under the Preventive Medicine Undersecretariat with the Director General of Fever Hospitals given the responsibility for the development of the program to improve the management of acute respiratory infections in children by the Ministry. The program will be carried out by the Ministry's extensive primary care system, the fever hospitals for definitive clinical hospital care and by the university hospital and other secondary and tertiary care hospital outpatient and inpatient pediatric services. The program will utilize the Child Survival Secretariat for developing the mass media programs that will be required and assistance in developing the epidemiological studies required. The training program will be developed by the Secretariat's Training Unit in collaboration with the Fever Hospital Directorate and other specialized entities such as the faculty of medicine pediatric departments.

The Ministry of Health's training resources are fairly extensive. The responsibility for training programs is spread over several organizational entities of the central Ministry and in the case of preservice training of doctors newly assigned to districts, highly decentralized. The Undersecretariat for Manpower Development and Research is responsible for post graduate training of physicians and nurses with BS degrees and operates the Rhoda Training Center which provides training and production of learning and audiovisual materials. In collaboration with the Ministry of Education, this Undersecretariat is also responsible for training of Secondary Technical Nurses, the high school level three year trained nurse that is the principal source of nursing manpower for the MOH. 3500 are graduated annually from 137 small schools located primarily at the district hospital.

A joint Cairo University/Ministry of Health teaching and research facility is under construction in Cairo. This Center for Social and Preventive Medicine (CSPM) will emphasize child and maternal health in its in-service training programs for health professionals and in its undergraduate and graduate training programs for medical, dental and allied health students. The CSPM activity is being developed under the Urban Health Delivery Systems Project (263-0065).

Manpower Development and Research is responsible for the training of technicians, such as the two year trained sanitariums, laboratory technicians, etc. The training is carried out in seven Technical Training Institutes which are in localities having a medical school, which jointly collaborate in providing this training.

The Undersecretariat for Basic Services and Family Health is responsible for the preservice training of personnel newly assigned to the districts for their mandatory service with the MOH. While the curriculum for their training is provided by Basic Health Services and Family Health and some monitoring of the training is done, the training itself is carried out by the professional staff at the MOH district office in some 137 district level training centers. These centers are either located in the district hospital or more often in a district health center and are spartan facilities that would benefit by some training of the trainers, some basic training equipment and materials. The training of the EPI personnel and training courses for ARI, for nutrition surveillance for weaning and anemia, and for child spacing techniques can be carried out here for the professional and paraprofessional staffs of the district facilities.

Development and testing of child nutrition interventions is the responsibility of the Nutrition Institute, a semiautonomous organization of the Ministry of Health. The Institute has a competent research and development staff and has produced some excellent work with the US funded Nutrition CRSP, the New and Better Foods Project, and a number of PL-480 funded projects. The Institute has developed the Nutrition Education Project with CRS and is now passing the operational responsibility for the project over to the Maternal/Child Health (MCH) Directorate of the Ministry of Health.

Nutrition programs implemented in the field are the responsibility of the MCH Directorate which works with the governorate health staffs for the delivery of these services in the urban and rural health clinics.

The Nutrition Institute has worked actively in the design of the Weaning Foods Supplement subactivity and has demonstrated the capacity to manage the development of this project until it is turned over to the private sector company which will produce the product.

Family planning services and maternal/child health services are the responsibility of the Undersecretary for Basic Health Services and Family Health. The Directorate for Family Planning Services has been responsible for the development of FP services in the Ministry system but in actual practice, the responsibility has been divided up on a donor funded project basis, with the World Bank funded project - Population II administered by a Project Director and the US funded family planning programs administered by another Project Director, both responsive to the Undersecretary. In the case of maternal/child health programs, relatively strong Director Generals of the MCH Directorate have been appointed over the past few years. The delivery of MCH and FP services are the direct responsibility of the director generals of each governorate and receive a varying emphasis and success, depending on the individual DG. It has been the experience of AID's projects that program development that is made directly with the responsible director general at the governorate level have the best chance of success since these directors have the greatest clout at that level in the decentralized organization of the current Ministry of Health.

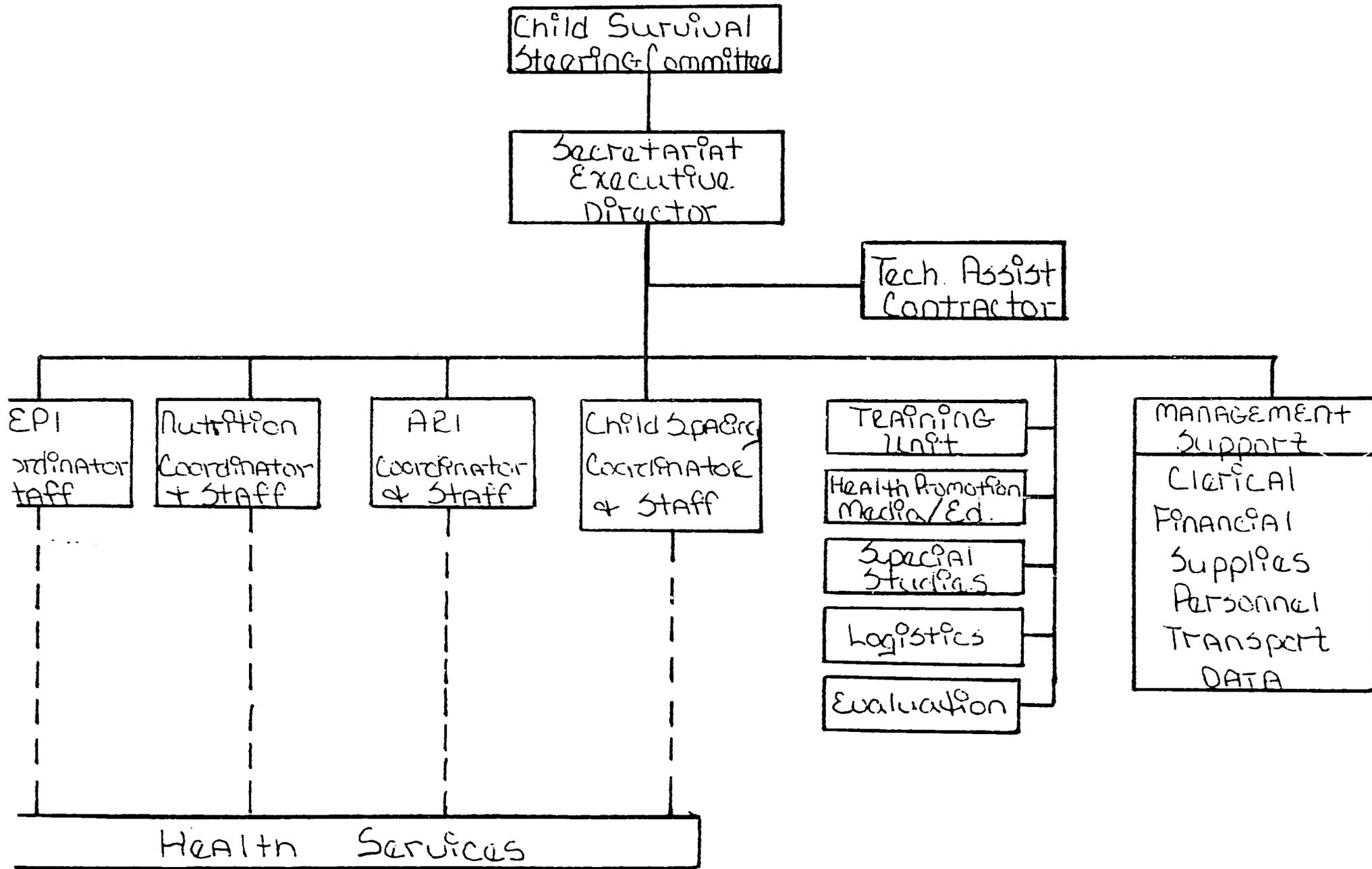
The Child Survival Project Secretariat will work with the governorates to develop implementation plans for the components based on national objectives.

These plans will include collection of baseline data (as required), training programs, logistical support, and a timed schedule for phased implementation and evaluation. Plans for the four components will be coordinated at both the Secretariat and governorate level to assure adequate technical support and reasonable implementation schedules.

Governorates will be required to prepare annual status reports on progress and problems with implementation and revised annual implementation schedules detailing yearly requirements for technical support services. Special technical support such as social studies or surveys may be requested by the governorates and funded by the Secretariat.

Governorates may also propose innovative service delivery schemes for childbirth care and child spacing which would have practical application to the local situation, and could be integrated into existing service delivery programs. The nonrecurrent development costs of implementing these schemes could be provided through Secretariat grants.

The Secretariat may also provide support mechanisms for service delivery through Egyptian universities. Interested universities may apply for grants based on proposals which support project interventions or receive grant support for activities related to Secretariat or governorate implementation programs.



15

## ANNEX 2-B

### TECHNICAL ANALYSIS

The four main components of the Child Survival Project address the major diseases and conditions that contribute directly to the high infant and child mortality rates in Egypt. Universally accepted and cost-effective medical technology and health practices are utilized in each component of the Project. The interventions carried out in this Project and the oral rehydration therapy for diarrhea being introduced by the Control of Diarrheal Diseases Project will have a major impact on the mortality and morbidity of children through these well tested technical interventions..

#### A. IMMUNIZATION

The immunization program focuses on six major childhood diseases which have been selected by the WHO Expanded Program for Immunization (EPI) in collaboration with other expert organizations such as the US Centers for Disease Control (CDC), Rockefeller Foundation and all other major international disease control programs and vaccine institutes in the annual EPI Global Advisory Group meetings which monitor world wide infectious disease problems and advise on the latest vaccines and immunization program management. Under WHO coordination working with each of its member countries and advised by its Global Advisory Group, smallpox has been eradicated worldwide. Polio, measles, diphtheria, whooping cough (pertussis) and tetanus are extremely rare in most developed countries due to successful immunization programs and practices. The effectiveness of the vaccines for these five diseases is unassailable if properly administered.

For many years, immunization of babies against tuberculosis has been a common practice throughout the world, using a vaccine called BCG made from an attenuated TB bacillus named Calmette-Guerin after its discoverers. The vaccine has been extensively tested and shown in most studies to lower the incidence of tuberculosis by as much as 80%. One recent study in South India showed a poor response in the population being surveyed and the potency of the vaccine produced for this area is being checked, as is the possibility that there was a reduced immunological response of the surveyed population due either genetic or environmental reasons. Poor management of the immunization program is not considered the cause of this failure. The WHO advisory group restudied the world experience with BCG and strongly advises that it continue as one of the inoculation given by EPI programs.

Insuring the potency of vaccines being administered to children and their mothers is one of the major technical problems in expanded immunization programs. Vaccine production must meet the high standards set by WHO and the integrity of the cold chain must be maintained throughout the distribution and storage of the vaccines. The technology exists in Egypt for the production of effective vaccines through good manufacturing practices and the dilution and packaging of imported bulk vaccines at the vaccine production center, VACSERA. VACSERA produces an acceptable BCG vaccine, but not in the quantities required. Production of DPT (diphtheria-pertussis-tetanus) will soon be underway using high level technology contributed by the Netherlands. Canada has a leading vaccine production corporation making a study of VACSERA to determine what must be done to upgrade the center and make it possible to produce all of Egypt's vaccine needs.

The cold chain needs to be upgraded somewhat through intensive training of EPI managers, the cold chain technicians and the clinic personnel in the management of the program so that the vaccines are potent at the time of administration. The technology is practical, cost-effective and replace. The introduction of disposable syringes is practical and economical, considering the the advantages that they will bring in the reduction in the incidence of Hepatitis B through more sterile injection technique. The syringes are being produced in Egypt and technically feasible to use.

The technology for the training that will have to be performed is well established. WHO, UNICEF and CDC have developed most of the manuals for the subject areas that must be covered. The CDD Project has demonstrated that the Ministry of Health is capable of carrying on a country training program effectively when supported by good technical assistance and resources.

The health information and disease surveillance system is technically feasible, based on the extensive testing carried out by the Ministry and the US National Center for Health Statistics (considered the most expert organization in the world for the development of these systems) in Cairo and Ismailia Governorate. The existing personnel lend themselves easily to running the system after a short, on site training course in the operation.

The hardware is the simplest type of microcomputer which has been operated at district level headquarters without unusual maintenance problems. Admittedly, the maintenance requirements of this equipment will take a special effort on the part of the Project to build in the training and the voltage regulators and other technical equipment that will ensure the most reliable performance by the equipment. In the more remote governorates, the data will continue to be hand tabulated at district level instead of being entered on to disks and then sent to the governorate health headquarters for transcription to disks for local analysis and posting to the central level health statistics and EPI offices.

## B. ACUTE RESPIRATORY DISEASES:

As pointed out in the project description, the technology the treatment and prevention of acute respiratory diseases is not as well developed as in diarrhea or some other childhood diseases. Even now, immunization prevents certain of the diseases that result in serious respiratory complications, e.g. measles with its attendant bronchopneumonia, diphtheria with its acute, toxic pharyngitis, and pertussis with the classic whooping cough symptoms. However, most of the childhood acute respiratory infections have no good means of prevention and require early diagnosis and treatment in order to hold down the extensive mortality caused by them. In Egypt, ARI is the second most frequent cause of death, accounting for at least 20% to 25% of deaths in the under-five year old age group and well over half of the morbidity seen in the outpatient clinics, with 6 to 8 respiratory infections per child per year.

However, acute respiratory infections that could threaten the child's life are only a fairly small percentage of the total respiratory disease picture. It is this small percentage that must be identified early in the course of the disease so that proper antibiotic therapy can be instituted in the those cases in which it is indicated or good supportive therapy initiated in those cases where it isn't. The mass media program that will educate the mother in the signs and symptoms that indicate acute infection is a well developed technology in Egypt that has proven itself in the CDD Project. The training programs for physicians and clinic personnel are certainly feasible technically.

As stated, there is no single intervention like oral rehydration therapy that can be employed in the case of ARI but it is feasible to produce a standardized regimen that gives the primary care physician the various options of supportive and pharmaceutical therapy and advises on the time for referral to higher echelon treatment facilities, such as the fever hospitals, university hospitals, etc. Since preventive measures are limited, early and adequate clinical therapy is a top priority in ARI and the technology exists that, if adequately provided at the secondary and tertiary level early enough in the course of the disease, there will be a significant drop in the mortality from ARI. This fact has been repeatedly demonstrated in the care of ARI. Early diagnosis and treatment make a decided difference in the outcome of the disease.

Good epidemiological data is required for the planning and management of the control program of ARI and the means to get this data is basically practical and technically feasible to employ in Egypt. The feasibility of the nationwide health information and disease surveillance system has already been discussed under EPI. Eventually much of the data on ARI will be reported through this medium. The Egyptians have the ability when properly supported with the necessary resources and training to carry out good epidemiologic surveys. The AID funded Arthropod Borne Diseases Project at Ein Shams University is an impressive demonstration of a focused but reliably performed epidemiologic study.

### C. CHILD NUTRITION:

The technology utilized by the Child Nutrition component is well established and well tested. Improvement of nutrition during the weaning period and combatting childhood anemia are the two problems that will be dealt with in this sub-project component. Each will require mass media campaigns to inform the public, particularly the mothers, about the problems and the interventions available for their correction. As discussed in the sections on Immunizations and ARI above, use of TV and radio have been found to be particularly successful in Egypt for reaching mothers with health messages. The response of mothers to the need for oral rehydration of their children during attacks of diarrhea has been dramatic. TV and radio is established throughout Egypt and is watched and listened to almost universally on a daily basis by Egyptian mothers. The use of mass media has been effective and technically feasible and should lend itself well to messages on weaning food practices and care of anemia.

The development of health education programs in the Ministry to impart messages on proper weaning practices, benefits of purchasing the weaning food supplement, the need for breastfeeding, and reasons for detection and correction of anemia in their child is a more difficult process, particularly on an administrative basis. Health education is an accepted technical component of any health delivery service but requires a great deal of training, supervision and motivation on the part of the health worker to be successful. The techniques for providing good health education services is well established and a nutrition specific education program has been established in 500 clinics by the Nutrition Institute and the MCH services in the Urban and Rural Health Projects and by CRS through an AID grant. The program proposed in this project to establish nutrition education and monitoring in all of the Ministry's clinics is technically feasible and is based on the experience of the above projects and worldwide experience in nutrition education. The program is cost-effective in that it utilizes existing personnel to deliver the services and when properly carried out, has a definite impact on health.

The technology for the production of either a complete weaning food or weaning food supplement has been extensively developed by AID and a number of other organizations. AID through the years has been particularly interested in food extrusion technology, a process that produces a high protein, high calorie weaning food product that has a longer shelf life and more acceptability since its taste and appearance can be more fully controlled. Simple extrusion technology will be used in the production of the weaning food product. Extensive market analysis and testing of the product will be performed to determine the most culturally accepted form in which the product should be manufactured and marketed. This testing phase has been thoroughly examined and described by a design team made up of US universities, the USDA, and Egyptian experts in nutrition, all of whom have had experience with weaning foods and the preparation of weaning food products. The feasibility of this phase has been dealt with in the Project Description section also.

The technology for detection of anemia at the primary care level has been considerably refined during the past few years. Inexpensive paper colorimetric test kits with a high degree of accuracy have been developed that can serve as a good screening mechanism for detecting children who need treatment. Inexpensive and non-toxic iron preparations are available in the Ministry of Health clinic pharmacies. The treatment of anemia is simple and effective with these iron preparations and the health education to inform the mothers of iron rich foods will be in place as a result of this Project. It is not known to just what degree the extensive anemia throughout Egypt is due to an iron deficient diet on the one hand or to parasitic infestation on the other. Most studies have blamed both but have found supplemental iron therapy to be effective in correcting the anemia, if dietary, one course of treatment lasts for a fairly long time. If due to parasitism, the anemia usually recurs much more quickly and the physician should check on the need for treatment of the child's parasites. The training of the doctors and the clinic personnel to be alert to the problem, to carry out the screening procedures, properly treat and followup on those requiring treatment will be associated with the other training programs prepared and carried out the Training Unit of the Secretariat in collaboration with the governorate-level and below training programs.

#### D. CHILD SPACING:

Contraceptive technology has been the subject of extensive research and study. The contraception that will be utilized in this project will be that which is accepted throughout the world as both safe and effective. The contraceptives are widely distributed throughout the Ministry of Health system. While an active family planning program has not been established at the clinic level as yet, MOH doctors have been trained in the medical aspects of contraception in their medical training and it is feasible for these services to be provided by them. An active training program will nevertheless be given in the two month preservice training given newly assigned doctors at the district training centers and will repeated periodically. The same will be the case during the inservice training of nurses and other clinic personnel. Particular attention will be given training for IUD insertion. All training will be carried out in close coordination and association with the training that will be provided by the National Population Council.

The training of the traditional birth attendant, the daya, is considered an all important factor to the development of a successful child spacing program. The daya has held a special and influential position in Egyptian society, with at least 80% of the births still being delivered by these individuals, despite the fact that their unsterile techniques are responsible for considerable sepsis for the mother and a very high incidence of neonatal tetanus in the babies due to unsterile techniques in dealing with the

91

umbilical cords. Training of the dayas would do much to improve their midwifery practices. The provision of simple, inexpensive kits to use in the deliveries, plastic gloves, razor blades for cutting and sterile ties for tying the umbilical cords is technically simple to supply and would have a definite impact on the incidence of neonatal tetanus and maternal sepsus. The resupply of these kits would be technically feasible and would be an incentive for the daya to associate herself with the personnel of the clinic. However, dayas will remain private practitioners deriving income for their services from their clients.

The training of the daya has been the subject of a number of studies in Egypt and has been successfully carried out by UNICEF in collaboration with the MOH in four pilots. The training program is now being implemented on a governorate-wide basis and is found to be feasible. With the support of the Project, the program to expand the training to all the dayas in Egypt during the life of the project is technically sound.

A mass media program to explain the health benefits of child spacing is planned and will be a part of the national media program developed by the Secretariat. The health benefits have never been the main focus of the promotion of family planning service, even though the clergy have always stated that they would support family planning to insure the health of the mother and child. For some reason, there has been a lack of enthusiasm on the part of the rank and file of the health system to deal with family planning, which has been felt by many to be an activity that is frowned upon for religious reasons. Such a campaign is technically feasible and has a high probability of increasing the support of family planning for purely child spacing purposes. There will be an increase in demand for services occasioned by the mass media campaign and the training and closer association of the daya with the health clinics. The increase in the child spacing services at the primary care clinic throughout Egypt can easily be absorbed by the current personnel levels of the Ministry of Health. The system is heavily staffed and underutilized and has been adequately supplied with equipment, contraceptives and other supplies.

We believe that we have identified the technical issues in the Child Survival Project and find the project to be technically sound and feasible to implement.

ANNEX - 2 C

SOCIAL SOUNDNESS ANALYSIS

This section will examine the critical assumptions necessary for project success embodied in project design that are controlled by social and cultural factors. They are stated in the form of assumptions.

1. Mothers will bring their children to the MOH health centers for treatment and preventive care;
2. Mothers will come to the health centers for prenatal, post-partum and child spacing care and services;
3. Doctors and other health clinic staff will provide new services after training and provision of necessary equipment and supplies;
4. Child spacing can be an acceptable element of MOH clinical services;
5. Dayas will participate in the program of pre and neonatal care, bring women to the health centers and endorse child spacing;
6. Mothers will change their weaning food practices.

Information used in the discussion is drawn from studies conducted over the past four years in Egypt, analyses prepared for other health projects in Egypt and the experience of the present oral rehydration project. The analysis is incomplete and all social and cultural factors cannot be accommodated in the initial project design nor in the detailed implementation plans to be formulated during the first phase of the project. Provision has been made to gather and analyze social and cultural information pertinent to the success of project interventions over the course of the activity. Such information will be used to correct and amplify project plans as the project progresses.

1. MOTHERS WILL BRING THEIR CHILDREN TO THE MOH HEALTH CENTERS FOR TREATMENT AND PREVENTIVE CARE.

The extent to which the MOH free health services are used is not precisely known. Estimates vary between 20% and 40% of the health care services being provided by these facilities. Arguments for the high percentage include the necessity to count services provided by all public hospitals. Arguments for the low estimate claim that when services provided by pharmacies and dayas are counted, the public sector percentage drops. Regardless, all observers of the scene agree that the facilities are underutilized. These considerations do not bode well for the degree of confidence project designers can place in the correctness of the first assumption.

Recent experience in the Oral Rehydration Therapy Project places a different light on this picture. An examination of the statistics concerning patients

treated for diarrhea in the trial area for the ORT project shows a remarkable increase in cases under five years of age during the May-August diarrhea season:

May-August	1982	4,537 cases	0 - 4 years of age
May-August	1983	18,754 cases	0 - 4 years of age
May-August	1984	22,296 cases	0 - 4 years of age.

This amounts to over a five fold increase over three seasons. There is no iron clad way to definitely attribute this increase to the ORT project but the only thing different in the area over these three years was the introduction of that program. The conclusion drawn is that when mothers are convinced that the clinics have something to offer that will benefit their children, they will go to these clinics for that service.

## 2. MOTHERS WILL COME TO THE HEALTH CENTERS FOR PRENATAL, POSTPARTUM AND CHILD SPACING CARE AND SERVICES.

Women make little use of clinic services in the area included in this assumption. This is according to recent studies, less true in urban areas than in rural areas. Women do not reject prenatal medical care. Pregnancy is just simply not considered a condition requiring medical attention. The attitude toward post partum care is similar. The traditional daya herself doesn't return to visit the mother until three days after birth and then doesn't routinely examine her or the child. This traditional lack of concern or, one should say, the attitude that the condition does not call for concern, augers against the mother taking advantage of preventive health care services. The past performances of MOH clinics in providing contraceptive services does not lead to encouragement concerning the possibility of a spontaneous acceptance of child spacing practices or even an easy task in promoting the use of such practices.

The same general attitudes and lack of knowledge concerning the need for pre natal and post partum care existed in the past concerning when and how mothers should treat diarrhea. A massive public education campaign and, on the exact opposite end of the scale, person to person communication made available to mothers the information needed to induce them to make the choice to go to the clinics to seek help. Once there, the clinic delivered.

The mother will act in her and her child's best interest and if the project mounts an information campaign as effective as the ORT project that can convince her that her best interest lies in seeking pre and post natal care, she has demonstrated that she will come to the clinic. While there she can be further helped to understand the benefits of child spacing.

Further, a campaign to promote contraception for the purpose of "child spacing" (rather than "limiting" the number of children) for the purpose of improving the chances of survival of both mother and child has never been tried in Egypt. We know that the concept of child spacing is understood and that there are traditional methods in use. It is not known, however, what must at the minimum be done to get mothers to accept modern methods of child spacing.

#### 6. MOTHERS WILL CHANGE THEIR WEANING FOOD PRACTICES.

The eating habits of Egyptians have been changing rapidly due to food subsidies and the commercial introduction of new foods and foods in different forms. The recent nutrition sector study noted that the amount of food per capita and the types of food consumed significantly changed in the 20 year period from 1962 to 1982. It was felt that there had been no concomitant improvement in nutritional status. On the contrary, there are indications that it has deteriorated. Among the reasons for this are:

- increased intake of subsidized starches (bread and macaroni). From 1962 to 1982, the per capita consumption of wheat increased from 80 Kgs to 180 Kgs per year.
- decreased intake of vegetable protein - beans, peas and other pulses.
- increased consumption of junk foods and use of same as a convenient weaning food/pacifier.
- increased number and percentage of nuclear families where the small number of people cooked for discourages use of more nutritious traditional dishes.

What has been done (changed eating habits) through subsidies and advertising will have to be undone through counter advertising ("information"), public education and specifically in this project, to promote better weaning food practices. There are no inherent extraordinary social or cultural constraints to changing eating patterns. It will, however, require a concerted education effort and the cooperation and participation of the health delivery system.

Typically, the *daya*, is the one of the first notified after a woman becomes pregnant. The *daya* could be the key actor in assuring that assumption Number 2 is warranted. If the *daya* can be actively involved in this process, the objectives can be reached. The attitude and official position of the MOH towards the *daya* has reversed in the past two years. This, plus the incentives of training and equipment to be supplied to *dayas* as planned for in the project should ensure the *dayas'* participation.

A recent study asserted that until women doctors were available to mothers, there was little chance of success for a program to routinely treat problems with pregnancy or post partum problems. As approximately 50% of all medical students are women, the women doctors are coming. In the interim, and to help them when they arrive, the *daya* can serve as a bridge. Further, two years hence a graduate practical nurse with midwifery training will begin to enter the scene who can further bridge the gap between mothers and male doctors.

### 3. DOCTORS AND OTHER HEALTH CLINIC STAFF WILL PROVIDE NEW SERVICES AFTER TRAINING AND PROVISION OF NECESSARY EQUIPMENT AND SUPPLIES.

Three ongoing activities supported by USAID have demonstrated the willingness and capability of health care professionals to provide higher quality services of the type traditionally offered and to incorporate new services in their programs. The ORT project, the Rural Health Delivery System Project and the Urban Health Services Project all have elements that have required doctors, nurses and paraprofessionals to improve the quality of services. The ORT project required a fundamental change in the way doctors treat diarrhea. The clinical staffs readily adopted the new techniques. The rural health project developed and tested the techniques to be used to initially attack acute respiratory diseases. It also introduced an outreach program centered around an expanded set of records on health status and health condition monitoring. In the test areas the new systems have been put in operation and to date are being maintained. The Urban Health Services Project has also demonstrated that when the Ministry and USAID have committed the resources to improve the physical condition of a clinic, to equip it, and to train its personnel in newly developed and improved interventions, the staffs' morale rises, they work harder, take more care and pride in what they are doing. Hence the quality of health services improves and the case load of the clinic rises.

Another factor is that the demand for services generated by a mass media campaign of the type used by the ORT project places great external pressure on the clinics to change and to provide the services mothers learn should be available over the television. This was again demonstrated by the ORT project. Part way through the limited areas trial phase, the media campaign had to be stopped because it could not be contained to the trial area. A demand was created in geographic area not yet served by the project. Mothers were going to clinics and asking for services that could not be provided. The demand for rehydration salts initially grew faster and in a larger geographic area than the project could satisfy. Demand, will be a powerful factor in inducing the clinic staff to provide new and better services.

#### 4. CHILD SPACING CAN BE AN ACCEPTABLE ELEMENT OF MOH CLINICAL SERVICES.

To date there is no experience in Egypt that can lead one to assert that the MOH health clinics can become effective deliverers of family planning services. However, the services to be provided by this project will not be called "family planning." There is a significant distinction between the purposes for providing contraceptive services for child spacing and for limiting the size of one's family. In Egypt there has never been a systematic family planning program based on child spacing for health reasons. Programs have heretofore used economic and development considerations as the intended motivational factor. This program will attempt to motivate mothers to space children two years apart because in doing so the chances of the child surviving is greater even if no other health measures are taken.

Child spacing is not new to Egypt. The Koran specifically extolls mothers to have children no closer than two years apart. Traditional methods of contraception exist and are provided by the traditional healers. One study of women in greater Cairo found that the women often lamented the absence of "wise women" (read the traditional *daya*) to whom they could go for help in preventing pregnancy.

The spacing of children also will have an effect on the overall population growth rate, regardless of the underlying motivation. The issue is too important to ignore, even if the social constraints are considerable. The detailed implementation plan must realistically take into account and proceed along a path that promises the most chance of success.

#### 5. DAYAS WILL PARTICIPATE IN THE PROGRAM OF PRE- AND NEO-NATAL CARE, BRING WOMEN TO THE HEALTH CENTERS AND ENDORSE CHILD SPACING.

Dayas were previously trained and certified by the MOH and apparently maintained good relationships with the formal health system. The Newborn Care Study found that the trained dayas gave safer care (although they lacked adequate clean supplies) and tended to use the formal health system more for referrals than untrained dayas.

Dayas in interviews state they want to help their clients have safe deliveries and healthy babies. If training is given in a positive way and programs do not interfere with the *daya's* role as a private practitioner or in the collection of fees, there is no reason to believe that they would not cooperate in community programs. As an incentive, dayas could receive birth packs and, with media messages, these packs could become status items making the *daya* with the packs in demand.

Dayas by the nature of their profession are considered to be pronatalist, however they are not against spacing of births and are aware of the dangers of pregnancies too close together. In some studies dayas have been found to be suspicious of contraceptive methods and, as do their clients, probably perceive them as a means to end fertility. Again with training, dayas can learn how these methods work and can influence their clients to accept postpartum contraception. Dayas could be useful in follow up of their clients who are contracepting and Child Spacing services should explore incentives for these contacts.

## ANNEX 2 - D

### Economic Analysis

This a quality project. It will improve the quality of life of children through improving the quality of health services and making additional opportunities available to mothers and children to increase child survival.

Quantitative proxies for quality are notoriously faulty or misleading. The hardest to measure are changes that matter. What can be easily measured - such as increased money spent - says nothing about how well that money is spent or the result. The same is true about increasing numbers of people to accomplish a task. In fact, more people may make accomplishing the task more difficult. What you can place a brass plaque on with names of officials and builders encribed is not the key to development but is the easiest to measure in cost/benefit terms. Improvements inside people's heads and an individual's ability to perform better combined with a system of incentives for accomplishment, however, are the most difficult to measure.

Therefore, this economic analysis does not rely on mechanical multiplications or sophisticated manipulation of data of dubious origin and relevance.

The World Bank has long ago concluded that exercises in attempting to derive numerical cost benefit ratios for projects of this type is neither cost effective nor meaningful. The benefit of a human life (especially a child) saved can not and must not be measured in artificial money terms. The same is true of the benefit of a more healthy child vs. a sickly and/or dying child.

With regard to cost effectiveness, costs to the Egyptian government and economy of the wastful and largely ineffective attempts to improve child survival can be reduced in real terms per surviving healthy child vs the dead loss of abortive and costly treatment of children whose lives are impaired or lost through inadequate medical prevention and curative treatment. While not possible to quantify, the cost effectiveness of improving the efficiency and effectiveness of the ongoing system of health care for small children is evident. The efficacy of applying new resources to improve the quality of this system depends on the actual result, not a priori arbitrary assumptions and numerical calculations. To reassure those with faith in quantitative measures, the cost of this project is less than \$10 per live birth over the 8 year life of the project. The cost to AID is less than \$6 per live birth through 1993 - zero thereafter.

As explained in the PID, there are many practical points which can be made in support of the economic advantages of this project.

In general, reduction in mortality and morbidity result in savings in the cost of health care. Additional protection against disease and malnutrition will contribute both to future productivity and lower birth rates through increased child survival.

Studies over at least 10 years have shown that iron deficiency anemia results in decreased production output by field workers and increased risk of premature births and other pregnancy and birth complications. Past studies have also suggested that specific types of infections, e.g. respiratory diseases, are more frequently observed in anemic children.

It is well documented that effective immunization programs reduce the health care costs of treatment of these preventable diseases. In Egypt, faulty immunization practices have contributed to one of the highest prevalence rates of Hepatitis B in the world. Improved sterile procedures would significantly reduce the cost of the treatment of this disease. Improved packaging and storage of vaccines would further eliminate waste and duplication in the immunization system in Egypt making it more effective and efficient.

Wherever feasible, private sector production of needed health commodities and food supplement will be utilized. For example, A.I.D. inputs will develop the weaning food supplements. Private sector production and marketing will follow. ORT, health and nutrition education, and immunization programs are currently within the resources and mandate of the M.O.H. AID inputs will be utilized to make these programs more effective and efficient.

Long term recurrent costs will be minimized since newly created administrative units (e.g. the secretariat) will dissolve at the end of the project. Functions of the implementation units will be absorbed into the regular (but strengthened) bureaucracy of the government.

UNCLASSIFIED

STATE 14351  
ANNEX-3

700

ACTION: AIL-3 INFO: ICM CON SCI // NEAC PID APPROVAL CABLE

VZCZCCRO993  
PP PUPHIG  
DE RUEHC #1351 1200543  
ZNR UUUUU ZZP  
R 090542Z MAY 85  
FM SECSTATE WASHDC  
TO AMEMBASSY CAIRO 2120  
BT  
UNCLAS STATE 141351

HRID:	ACT
DATE:	9 MAY 1985
APPROVED TO:	HRDC DPPE
ACTION TAKEN:	DATE 5/15
NAME:	INITIALS JLC

LOC: 32 501  
09 MAY 85 0543  
CN: 00056  
CHRG: AID  
DIST: AIDS

LOGGED:	✓
FILE NO.:	900

AIDAC

F.O. 12356: N/A

TAGS:

SUBJECT: HEALTH: REPORT ON NEAC MEETING (APRIL 23, 1985) - CHILD SURVIVAL PROJECT (263-2203)

9 MAY 1985

REF: STATE 119628

1. BASED UPON VIEWS EXPRESSED AT SUBJECT NEAC MEETING, USAID IS TO BE CONGRATULATED FOR PRODUCING EXCELLENT PID. THE NEAC HAS APPROVED THE PID. COMMENTS AND RECOMMENDATIONS MADE BY THE PPC TO THE NEAC INVOLVED ISSUES AND CONCERNS ALREADY TRANSMITTED TO MISSION FOR REFTEL. THE FOLLOWING TEXT PROVIDES A FEW ADDITIONAL COMMENTS AGREED TO AT THE NEAC.

2. THE PROGRAM/POLICY ISSUES RECOMMENDED IN REFTEL FOR MISSION'S CONSIDERATION WERE AGREED BY THE NEAC TO BE LARGELY STANDARD CONCERNS INTRINSIC TO ANALYTIC PROCESS OF NORMAL PP DESIGN. SOME SPECIFIC RECOMMENDATIONS AS FOLLOWS:

A. AN ADDITIONAL SUGGESTION WAS MADE TO CONSIDER DURING PP DESIGN POSSIBLE LINKAGES WITH DESIGN OF PRIVATE SECTOR IN HEALTH PROJECT AND OTHER PRIVATE SECTOR INITIATIVES AS APPROPRIATE. LINKAGES WITH AND POSSIBLE

REINFORCEMENT OF OBJECTIVES IN WATER AND SANITATION SHOULD ALSO BE CONSIDERED.

B. GIVEN THE CRUCIAL ROLE OF PHARMACEUTICALS AND BIOLOGICS IN EFFECTING REDUCED MORTALITY OF INFANTS AND CHILDREN, THE MISSION IS URGED TO ADDRESS MEANINGFULLY THE COMPLEX OF ISSUES RELATING TO THE RATIONAL SELECTION, PROCUREMENT, DISTRIBUTION AND USE OF QUOTE CHILD SURVIVAL PHARMACEUTICALS UNQUOTE.

C. THE NEAC RECOGNIZED BOARD CERTIFICATION FOR PHYSICIANS AS BEING BEYOND THE SCOPE OF THE PROJECT, BUT SUPPORTED THE NEED TO FOCUS CLEARLY ON TRAINING WITH SOME FORM OF INFORMAL CERTIFICATION, SUCH AS CERTIFICATES, TO BE USED AS A MEANS TO RECOGNIZE THE ATTAINMENT OF CHILD SURVIVAL KNOWLEDGE, ATTITUDES AND PRACTICAL COMPETENCE FOR PHYSICIANS, PHARMACISTS AND DAYAS.

29

UNCLASSIFIED

SIATL 141351

F. WITH REFERENCE TO ISSUES IDENTIFIED IN THE POC ISSUES CAPLE, THE NHAC PROVIDED THE FOLLOWING COMMENTS TO BE CONSIDERED DURING UP DELIBERATIONS:

A. WE REMAIN CONCERNED ABOUT THE NEED FOR RECURRENT COST ANALYSIS MENTIONED IN REPT'L PARA 1(1) AND PARA 4(1)A.

E. THE CHILD SURVIVAL PROJECT BUDGET SHOULD INCLUDE A PROVISION FOR PUBLIC COMMUNICATIONS CONCERNING THIS, THE AGENCY'S LARGEST DISCRETE CHILD SURVIVAL INITIATIVE.

4. IN WISHING THE MISSION EVERY SUCCESS WITH THE CONTINUED DESIGN OF THIS EXCITING INITIATIVE, WE AWAIT YOUR FURTHER ADVICE ON THE MPIC APPROVAL OF FUNDS TO ENABLE THE CONTRACTING OF THE DESIGN TEAM. DAN

BT  
#1351

NNNN

UNCLASSIFIED

SIATL 141351



3. FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

No further legislative action required except formal approval of Grant Agreement. Anticipate no difficulty.
4. FAA Sec. 611(b); FY 1985 Continuing Resolution Sec. 501. If for water or water-related land resource construction, has project met the standards and criteria as set forth in the Principles and Standards for Planning Water and Related Land Resources, dated October 25, 1973, or the Water Resources Planning Act (42 U.S.C. 1962, et seq.)? (See AID Handbook 3 for new guidelines.)

N/A
5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project?

N/A; capital works less than \$1 million.
6. FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.

No

7. FAA Sec. 601(a). Information and conclusions whether projects will encourage efforts of the country to:
- (a) increase the flow of international trade;
  - (b) foster private initiative and competition;
  - (c) encourage development and use of cooperatives, and credit unions, and savings and loan associations;
  - (d) discourage monopolistic practices;
  - (e) improve technical efficiency of industry, agriculture and commerce;
  - (f) strengthen free labor unions.
- (b). Private sector participation to be encouraged, especially on media and weaning food usage.
- (a) and (c)-(f) N/A
8. FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).
- Competition for A.I.D. inputs will be open to U.S. firms.
9. FAA Sec. 612(b), 636(h); FY 1985 Continuing Resolution Sec. 507. Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars.
- The Grant Agreement will so provide. A 612 (A) determination will be part of the Project Paper. No U.S. owned local currencies available.
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?
- N/A

97

11. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise? Yes
12. FY 1985 Continuing Resolution Sec. 522. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity? N/A
13. FAA 118(c) and (d). Does the project comply with the environmental procedures set forth in AID Regulation 16. Does the project or program take into consideration the problem of the destruction of tropical forests? Yes; and N/A
14. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (dollars or local currency generated therefrom)? N/A

94

15. FY 1985 Continuing Resolution Sec. 536. Is disbursement of the assistance conditioned solely on the basis of the policies of any multilateral institution?

No

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

- a. FAA Sec. 102(b), 111, 113, 281(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment cut from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote

See Project Paper. Poor will be major recipients of project. Appropriate technology to be used; women encouraged to participate.

the participation of women in the national economies of developing countries and the improvement of women's status, (e) utilize and encourage regional cooperation by developing countries?

- b. FAA Sec. 103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used? Yes
  
- c. FAA Sec. 107. Is emphasis on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)? Yes; major emphasis is known technology.
  
- d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed country)? Yes
  
- e. FAA Sec. 110(b). Will grant capital assistance be disbursed for project for more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing, or is the recipient country No

9/6

"relatively least developed"? (M.O.) 1232.1 defined a capital project as "the construction, expansion, equipping or alteration of a physical facility or facilities financed by AID dollar assistance of not less than \$100,000; including related advisory, managerial and training services, and not undertaken as part of a project of a predominantly technical assistance character."

- f. FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth?

Yes

- g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental processes essential to self-government.

Details in Project Paper. Addresses desire for healthy life. Egyptians providing major inputs for technology.

67

2. Development Assistance Project  
Criteria (Loans Only)

- a. FAA Sec. 122(b). Information and conclusion on capacity of the country to repay the loan, at a reasonable rate of interest. N/A
- b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an agreement by the recipient country to prevent export to the U.S. of more than 20% of the enterprise's annual production during the life of the loan? N/A

3. Economic Support Fund Project  
Criteria

- a. FAA Sec. 531(a). Will this assistance promote economic and political stability? To the extent possible, does it reflect the policy directions of FAA Section 102? Yes
- b. FAA Sec. 531(c). Will assistance under this chapter be used for military, or paramilitary activities? No
- c. FAA Sec. 534. Will ESF funds be used to finance the construction of, or the operation or maintenance of, or the supplying of fuel for, a nuclear facility? If so, has the President certified that such use of funds is indispensable to nonproliferation objectives? No

98

d. FAA Sec. 609. If  
commodities are to be  
granted so that sale  
proceeds will accrue to the  
recipient country, have  
Special Account  
(counterpart) arrangements  
been made?

Yes

### 5C(3) - STANDARD ITEM CHECKLIST

Listed below are the statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by imposing limits on certain uses of funds.

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

#### A. Procurement

1. FAA Sec. 602. Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed? Yes
  
2. FAA Sec. 604(a). Will all procurement be from the U.S. except as otherwise determined by the President or under delegation from him? Yes
  
3. FAA Sec. 604(d). If the cooperating country discriminates against marine insurance companies authorized to do business in the U.S., will commodities be insured in the United States against marine risk with such a company? Yes

166

4. FAA Sec. 604(e); ISDCA of 1980 Sec. 705(a). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.) N/A
5. FAA Sec. 604(g). Will construction or engineering services be procured from firms of countries which are direct aid recipients and which are otherwise eligible under Code 941, but which have attained a competitive capability in international markets in one of these areas? Do these countries permit United States firms to compete for construction or engineering services financed from assistance programs of these countries? Yes
6. FAA Sec. 503. Is the shipping excluded from compliance with requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent such vessels are available at fair and reasonable rates? No

7. FAA Sec. 621. If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs?

Prime contractor and major subcontractors will be competed. A PASA with CDC is being considered. The CDC is particularly suited for the EPI/EIS training and some of the technology transfer.

8. International Air Transportation Fair Competitive Practices Act, 1974. If air transportation of persons or property is financed on grant basis, will U.S. carriers be used to the extent such service is available?

Yes

9. FY 1985 Continuing Resolution Sec. 504. If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States?

Yes

B. Construction

1. FAA Sec. 601(d). If capital (e.g., construction) project, will U.S. engineering and professional services be used?

Only renovation work is planned. A&E for this minor work will be Egyptian.

2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable?

Renovation work will be via FAR mechanism.

102

3. FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed \$100 million (except for productive enterprises in Egypt that were described in the CP)?
- N/A

C. Other Restrictions

1. FAA Sec. 122(b). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter?
- N/A
2. FAA Sec. 301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights?
- N/A
3. FAA Sec. 620(h). Do arrangements exist to insure that United States foreign aid is not used in a manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of the Communist-bloc countries?
- Yes
4. Will arrangements preclude use of financing:
- a. FAA Sec. 104(f); FY 1985 Continuing Resolution Sec. 527. (1) To pay for performance of abortions as a method of family planning or to motivate or coerce persons to practice
- No

- abortions; (2) to pay for performance of involuntary sterilization as method of family planning, or to coerce or provide financial incentive to any person to undergo sterilization; (3) to pay for any biomedical research which relates, in whole or part, to methods or the performance of abortions or involuntary sterilizations as a means of family planning; (4) to lobby for abortion? No
- b. FAA Sec. 620(g). To compensate owners for expropriated nationalized property? No
- c. FAA Sec. 660. To provide training or advice or provide any financial support for police, prisons, or other law enforcement forces, except for narcotics programs? No
- d. FAA Sec. 662. For CIA activities? No
- e. FAA Sec. 636(i). For purchase, sale, long-term lease, exchange or guaranty of the sale of motor vehicles manufactured outside U.S., unless a waiver is obtained? No
- f. FY 1985 Continuing Resolution, Sec. 503. To pay pensions, annuities, retirement pay, or adjusted service compensation for military personnel? No

101

- g. FY 1985 Continuing Resolution, Sec. 505.  
To pay U.N. assessments, arrearages or dues? No
- h. FY 1985 Continuing Resolution, Sec. 506.  
To carry out provisions of FAA section 209(d) (Transfer of FAA funds to multilateral organizations for lending)? No
- i. FY 1985 Continuing Resolution, Sec. 510.  
To finance the export of nuclear equipment, fuel, or technology or to train foreign nationals in nuclear fields? No
- j. FY 1985 Continuing Resolution, Sec. 511.  
Will assistance be provided for the purpose of aiding the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights? No
- k. FY 1985 Continuing Resolution, Sec. 516.  
To be used for publicity or propaganda purposes within U.S. not authorized by Congress? No

100

ANNEX - 5

611 (a) Statement

A. Cost estimates used in developing the project are reasonably firm and may be expected to hold for the life of the project taking into account the contingency factor:

1. Estimates of costs for participants was provided by AID/Washington (Notice 85-6 dated 4/10/85: 1985 Monthly Budget Planning Figures for U.S. Participant Training). The AID/W figures provide 1985 base line information for academic and non-academic training as well as standard inflation factors to be used in estimating for future years. Estimates for in-country training are derived from training records.
2. Estimates of costs for long-term and short-term technical assistance were provided by the Office of Financial Services, USAID/C. They are based on 1985 average costs for such services derived from averaging such costs from all the Mission's project that include technical assistance as an input.
3. In some cases the costs of particular kinds of commodities are known for the base year 1985. Costs for other commodities have been estimated.
4. In addition, plans necessary to carry out the assistance are considered completed for 611 (a) purposes.
5. Finally, there is no need for host country legislation to be enacted to permit the project to be carried out.

B. Local currency requirements are based on the GOE mandated rate of 0.83168.

ANNEX 6

Environmental Impact

This activity is categorically excluded on the basis that it fits under Section 216.2(c) (viii) of AID Regulation 16, "Programs involving nutrition, health care or population and family planning services." There will be no activities directly affecting the environment (such as construction of facilities, water supplies systems, waste water treatment, etc.) However, environmental aspects of the renovation activities (one building) will be considered at the time of the A & E survey.



000465

GOE REQUEST FOR ASSISTANCE

MINISTRY OF Planning AND  
INTERNATIONAL COOPERATION

157  
VICC

July 28 , 1985

Mr. Frank B. Kimball  
Mission Director  
USAID/Cairo  
Egypt

ACTION TO	HRDC	DD DIK EM DPPS
ACTION TAKEN		OUR DATE 8/6
NAS		INITIALS

Dear Mr. Kimball:

This is to request USAID funding in the amount of US Dollars 72.9 million for the Child Survival Project 263-0203 of which \$3.0 million would be funded in FY 1985. The Government of Egypt contribution of in kind assistance to the Child Survival Project will be 42.8 million Egyptian Pounds over the eight years of the project.

We envision this new project as a joint effort to reduce morbidity and mortality in infants, children and women of child bearing age by focussing on four major interventions including immunization, early diagnosis and treatment of childhood diseases, nutrition and child care and spacing.

Sincerely,

*Ahmad Abdel Salam*  
Ahmad Abdel Salam Zaki  
Administrator

HRDC  
DATE REC'D  
30 JUL 1985

Received  
7/29/85

108