

I. PROJECT IDENTIFICATION

1. PROJECT TITLE		APPENDIX ATTACHED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
MANPOWER TRAINING PROGRAM FOR MATERNAL AND CHILD HEALTH AIDES		2. PROJECT NO. (M.O. 1095.2) 621-11-580-121	
3. RECIPIENT (specify)		4. LIFE OF PROJECT	
<input checked="" type="checkbox"/> COUNTRY UNITED REPUBLIC OF TANZANIA		BEGINS FY 1973	
<input type="checkbox"/> REGIONAL <input type="checkbox"/> INTERREGIONAL		ENDS FY 1979	
		5. SUBMISSION <input checked="" type="checkbox"/> ORIGINAL June 6, 1973 <input type="checkbox"/> REV. NO. _____ DATE _____ CONTR./PASA NO. _____	

II. FUNDING (\$000) AND MAN MONTHS (MM) REQUIREMENTS

A. FUNDING BY FISCAL YEAR	B. TOTAL \$	C. PERSONNEL		D. PARTICIPANTS		E. COMMODITIES \$	F. OTHER COSTS \$	G. PASA/CONTR.		H. LOCAL EXCHANGE CURRENCY RATE: \$ US (U.S. OWNED)		
		(1) \$	(2) MM	(1) \$	(2) MM			(1) \$	(2) MM	(1) U.S. GRANT LOAN	(2) COOP COUNTRY (A) JOINT (B) BUDGET	
1. PRIOR THRU ACTUAL FY												
2. OPRN FY 73	3123.8	180	36	-	-	1514.8	1429	120	24			
3. BUDGET FY 74	296.6	227.6	63	55	48	14	-	150	39			
4. BUDGET 11 FY 75	480.5	307.6	87	60	54	7	105.9	230	63			
5. BUDGET 12 FY 76	594.2	307.6	87	55	48	-	231.5	230	63			21,190
6. BUDGET 13 FY 77	329.3	77.6	24	30	24	-	221.7	-	-			63,140
7. ALL SUBQ. FY	374.0	77.6	24	-	-	-	297.3	-	-			772,110
8. GRAND TOTAL	5199.2	1178.0	321	200	174	1535.8	2285.4	730	189			856,440

9. OTHER DONOR CONTRIBUTIONS

(A) NAME OF DONOR	(B) KIND OF GOODS/SERVICES	(C) AMOUNT
(SEE PART I-D)		

III. ORIGINATING OFFICE CLEARANCE

1. REQUESTER Rearney Powell/Larry Saiers James Wedberg/RMacDonald/Bodell	Regional Population Officers Assistant Program Off./REDSO	DATE June 8, 1973
2. CLEARANCE OFFICER William D. Green	TITLE Director, USAID/Tanzania	DATE June 6, 1973

IV. PROJECT AUTHORIZATION

1. CONDITIONS OF APPROVAL

- Within one year of arrival at post, the project manager will prepare an evaluation plan and methodology, mutually agreeable to the Government of Tanzania, periodically to collect and analyze data to measure progress toward achievement of the project purpose and goals. This will be undertaken in collaboration with GOT and preferably with other donors.
- Prior to additional obligations for technical services and initial obligation for participant training, the Mission will submit, as amendment to the PROP, details of

2. CLEARANCES

BUR/OFF.	SIGNATURE	DATE	BUR/OFF.	SIGNATURE	DATE
PHA/POP	R. Ravenholt	16-6-73	AA/PPC	P. Bif...	6/20/73
AA/PHA	J. Kieffer	4/18/73			
AA/AFR	S. Adams	6/18/73			

3. APPROVAL AAS OR OFFICE DIRECTORS

SIGNATURE: 15/ J. A. Kieffer (on action mem) DATE: 6-19-73

4. APPROVAL A/AID (See M.O. 1025.4 VI C)

SIGNATURE: John A. Hannah DATE: 6-20-73

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TABLE OF CONTENTS (continued)

	<u>PAGE</u>
C. Financial and Manpower Implications	20
1. Capital Development: Construction	20
2. Recurrent Budget Costs	22
3. Staffing Pattern of Rural Health Facilities	23
4. MCHA Manpower Development	24
5. Manpower Requirements for MCHA Tutors	24
6. USAID Support Requirements	25
7. Statement of Impact on the Environment	25
8. Income Distribution Effects of Project	26
Part III. Course of Action	26
1. The Project Agreement	26
2. Expenditure	26
3. Progress to Date	26
4. Method of Construction	27
5. Preparation for Construction in January 1974	27
6. Construction Schedule	27
7. Phasing of Construction with Occupancy	28
8. U.S. Capital Development Requirements	28
9. Technical Assistance Schedule	29
10. Participant Training	29
11. Curriculum Development	29
12. Procurement Schedule	30
13. Participant Schedule	30
14. Implementation Plans	30
Part IV. Education Requirements Analysis	30
A. The Project and Training of MCHAs in Tanzania	30
1. Project Description	30
2. Education's Role in Tanzania	31
B. Qualitative Considerations	32
C. Quantitative Analysis	32
1. Input - Supply of Students	32
2. Input - Supply of Teaching Staff	33
3. Output - Utilization of Graduates	34

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	<u>PAGE</u>
Part I Summary of Logical Framework	1
A. The Program Goal	
1. Statement of Goal	1
2. Measurement of Goal Achievement	1
3. Basic Assumptions of Goal Achievement	2
B. Project Purpose	2
1. Purpose Statement	
2. Conditions Expected at End of Project	3
3. Important Assumptions for Achievement of Purpose	
C. Outputs	4
D. Inputs	
GOT	6
Summary of GOT Inputs	7
Other GOT Inputs	8
U.S. Inputs	8
Other Donor Inputs	10
Summary of Obligations & Expenditures	
Part II Project Rationale	14
A. Background	14
B. Government Policy	15
1. Rural Health Emphasis	15
2. Conceptual Model	16
a. Location of MCHA Training Centers	16
b. Proposed Training Program	17
c. MCHA Service Outputs	18
d. Demographic Data Availability	19

Continuation Sheet
 Manpower Training Program for Maternal and Child Health Aides

Section IV. 1 Conditions of Approval (cont'd.)

the technical assistance component of project, including participant training and personnel requirements.

3. Since the project includes both technical and capital assistance elements, 611(d) determination for the capital assistance components will be satisfied prior to obligation of FY 1973 funds for the construction phase of the project.

4. Waiver of certain A.I.D. source and origin procurement requirements and/or approval of certain procedures as outlined below and as explained in the Action Memorandum, page 4. The signature by the Administrator, of the Project Authorization among other things, certifies that exclusion of procurement of the nature outlined herein would seriously impede the attainment of U.S. foreign policy objectives and the objectives of the Foreign Assistance Program and that waiver of A.I.D. regulation requiring such exclusion serves the best interest.

The following waivers are requested:

- | | |
|--|-------------|
| a. Procurement source/origin approval Code 941 for purchase of construction equipment and materials | \$1,000,000 |
| b. Procurement source/origin approval of construction services Code 941 | \$2,000,000 |
| c. Procurement source/origin approval Code 935 for electrical lighting fixtures, window glass, etc. | \$ 150,000 |
| d. A waiver of A.I.D. Regulation 7 thus removing restriction on the employment of third-country nationals on construction financed by A.I.D. | |

PROGRAM

DEPARTMENT OF STATE

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For each address check one ACTION INFO

DATE REC'D.

DISTRIBUTION
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TO - AID/W TCAID A- 49 X

DATE SENT

June 6, 1973

FROM - USAID/Dar es Salaam

SUBJECT - Manpower Training Program for Maternal Child Health Aides
Project No. 621-11-580-121

REFERENCE -

Technical Assistance and Capital Development
Project Paper (PROP)

Manpower Training Program for Maternal Child Health
Aides

PART I. SUMMARY OF LOGICAL FRAMEWORK

A. The Program Goal:

1. Statement of Goal:

This program will assist the GOT to improve and expand a country-wide health delivery system as a component of rural development so as to increase the health, well being, and the quality of life of the rural population.

2. Measurement of Goal Achievement:

2.1 Successful implementation of the GOT rural Health Program (1973-1980).

PAGE 1 OF 36 PAGES.

DRAFTED BY JWedberg/RPowell RMacdonald/BOdell	OFFICE FRM/RPC REDCO	PHONE NO.	DATE 6/1/73	APPROVED BY: DIR:WDGreen
AID AND OTHER CLEARANCES				

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4

2.2 In addition various statistical parameters may be used as indicators of achievement of goal such as Reduced Neo-Natal Mortality (age 0-21 days); Infant Mortality (age 21 days - 1 year); Childhood Mortality (age 1 year - 4 years); Maternal Mortality; Fertility Rates (live births/1000 women aged 15-45 years); and Birth Rates (live births/1000 population); increased life expectancy at birth; and increased average age of weaning of infant.

However, it is understood that measurement of these parameters is contingent on the development of a simple but reliable record system in the rural health units and the availability of sample data on vital events. Furthermore, short of the means for developing and implementing an appropriate experimental design including the use of "control areas" the change that may be expected to occur to the parameters over time cannot be attributable solely to change in levels of health services.

3. Basic Assumptions of Goal Achievement:

3.1 The GOI will maintain its priority emphasis on rural health services development, with the concomitant necessity of constraining the growth of urban health services.

3.2 Other donors must provide assistance at the rates currently projected.

3.3 The GOI will continue to emphasize other areas such as safe water supply and sanitation, food crops, and livestock, nutrition, housing and education by 1980.

B. Project Purpose:

1. Purpose Statement

To assist the GOI in achieving an institutional capability to provide comprehensive MCH services to the rural population as an integrated part of the MCH rural health program.

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2. Conditions Expected at End of Project*

2.1 Approximately 65% of the country's rural population will be within reasonable geographic reach of MCH services (within reasonable walking distance).

2.2 An MCH capability to plan for and provide in a timely manner, drugs, expendable supplies and proper equipment for all rural MCH health installations.

2.3 An MCH capability to provide to the public, health education and demonstrations in the fields of nutrition, sanitation, personal hygiene and other subjects pertinent to MCH.

2.4 About 2,600 trained MCHAs, working in concert with trained Rural Medical Aides (RMAs), provide comprehensive MCH services to the rural population of Tanzania. The training curriculum serves as the basis of expected skills to be acquired.

2.5 Approximately 50 to 60% of women giving birth in areas served by MCH facilities deliver their children in a health facility.

2.6 Approximately 70-80% of women giving birth in areas served by MCH facilities deliver their children with the assistance of a trained health worker.

*Note: These conditions listed here are based on the following premises:

- a. Although activities taking place within this project are closely related to and dependent upon activities undertaken by other donors, as indicated in Input section of this document, the conditions listed here are generally those which follow from activities financed with AID assistance.
- b. Some end-of-project conditions listed here are not quantifiable in the strict sense of the word, but are subject to observational verification.

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6

2.7 Approximately 90% of the rural population will live within ten kilometers of a RHC or RD; or alternatively the physical dispersion of the RECs and RDs will reflect the rural population distribution of Tanzania.

2.8 Achievement of health service statistical objectives. The kind of illustrative parameters one would need to evaluate are as follows: (a) curative services, (b) pre-natal care (nutrition, general maternal health, health education, etc.), (c) obstetrical care; (d) post-natal care of the infant, nutrition, well-baby clinics, immunizations, home visiting, post-natal care of mother, etc.; (e) participation in health demonstrations, lectures, etc., and (f) health education of the public including use of mass media. However, as of this time and in the foreseeable future it is unlikely that such statistical data will be available for feasible country-wide evaluations.

3. Important Assumptions for Achievement of Purpose

3.1 The RHCs and RDs will establish sufficient outreach to ensure optimal utilization of rural health services by rural population.

3.2 The level of remuneration and professional satisfaction (psychic income) is sufficient to retain the approximately 2,160 trained MCHAs at the RHC and RDs in 1980. In addition, 440 of existing 600-700 veteran village midwives will be retained to achieve 1980 targets of 2,600 MCH practitioners.

3.3 The GOT will design and maintain adequate in-service training and continuing educational programs for MCHAs and RNAs.

C. Outputs:

- 1.0 - Trained MCHAs assigned to 300 RHCs and 2000 RDs. Course of study is 18 months in length. 2160 trained MCHAs over life of project.
- 2.0 - 440 of 600-700 village midwives retrained as MCHAs and assigned to RHCs and RDs as MCHAs over life of project. Courses are 4-6 months in length.

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- 3.0 - Trained nurse tutorial staff as Principals and assigned to administer 18 MCHA Training Centers, 18 trained Principals over life of project.
- 4.0 - The MCH public health physician to assess and refine curriculum for MCHA training. Provisional syllabus currently developed and available for use.
- 5.0 - The MCH public health physician to define and implement necessary administration/management procedures to enable central government to support an effective MCH program. This includes changes in current planning, budgeting and resource allocation sub-systems of the Ministry.
- 6.0 - The MCH public health physician to assess and provide recommendations to MOH on the functioning and utilization of MCHAs in RHC and RDs.
- 7.0 - Trained MCH staff assigned to regional offices. Training in the U.S. or 3rd country is 4 to 6 months of training (this training element will be redefined with MOH after the USAID funded MCH public health physician is on board). Up to 19 participants to be trained over life of project.
- 8.0 - Trained MOH planner, Rural Health Program organizers and other non-physician MCH staff assigned to MOH. (This training element will be redefined with MOH after USAID funded MCH public health physician is on board). Up to 10 participants to be trained over life of project.
- 9.0 - Three MCH public health nurse advisors to advise on coordination of the refresher courses and seminars for RHC and RD staff throughout country, advise on supervision and utilization of MCHAs, define and implement necessary administration/management procedures for regional health services and changes in current planning, budgeting and resource allocation sub systems. (Specific responsibilities and work-plans will be developed with MOH in FY 75).

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- 10.0 - Construction and equipping 12 MCHA Training Centers for 36 students each. (See Annex C for cost estimates).
- 11.0 - Construction and equipping 6 MCHA Training Centers for 26 students each. (See Annex C for cost estimates).
- 12.0 - Construction and equipping 64 hostels. (See Annex C for cost estimates).
- 13.0 - Procurement, provision and/or installation of MCH equipment for about 500 rural dispensaries. (See Annex D for illustrative list of equipment).

D. Inputs

GOT

- 1.0 - Provide about 2,336 trainees for MCHA training program. Candidates will have 6-8 years of formal education and will be 16-20 years of age.
- 2.0 - Provide about 544 village midwives for retraining as MCHAs. Trainees will have 6-10 years of education, midwifery skills and experiences as midwives.
- 3.0 - Provide at least 18 nurse tutor candidates for training as Principals to administer 18 MCHA training centers. Candidates to be selected from cadre of about 1,000 Class A nurses currently practicing in Tanzania based on the following criteria: (1) teaching experience, (2) background in teaching in hospitals, and, (3) MCH orientation.
- 4.0 - Provide up to 19 candidates for 4 to 6 months of training in the U.S. or third country for reassignment as MCH regional officers.
- 5.0 - Provide up to 10 candidates for 4 to 6 months training in the U.S. or third country for reassignment as senior MCH/MCH planning staff.
- 6.0 - Provide housing, local transportation, office space and secretarial support for U.S. advisory and operational personnel.
- 7.0 - Provide appropriate counterpart personnel for all U.S. advisory staff.

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9.

TABLE OF CONTENTS (continued)

	<u>PAGE</u>
Part V. Project Design: Logical Framework	35
PERT NETWORK	
Exhibit I - Input/Output Flow Chart	
Exhibit II - Tanzania Education Pyramid	
ANNEX A. Got Request for MCH Assistance	
ANNEX B. Proposed MCHA Training Center Sites	
ANNEX C. Calculation of Construction Budget	
ANNEX D. Suggested List of Dispensary and Midwifery Equipment	
ANNEX E. Population and Health Facilities: Distribution by District	
ANNEX F. Draft Syllabus for MCH Aides: Curriculum	
ANNEX G. MCHA Training Intake and Output	
ANNEX H. National Health Manpower Program 1973-1980	
ANNEX I. USAID Operational Support Costs	
ANNEX J. Monitoring of Construction	

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10

- 8.0 - Provide engineering and architectural services required for construction phase of this project. Specifically the GOT shall provide plans, designs and working drawings, site surveys and supervision of construction for the training centers and the hostels financed under this project. The GOT shall provide all other technical services as may be required to prepare quantities listings, bid requests, bid packages, calls for bid, bid review and contract awards.
- 9.0 - The GOT shall provide the necessary staff required to receive, properly warehouse and deliver to site, all supplies, equipment and other materials, financed under this project for use in the construction and equipping of facilities funded by this project and otherwise providing support to advisors and other project related personnel.

Summary of GOT Inputs (Equivalent U.S. Dollars)

- | | |
|---|--------------|
| 1. Recurrent costs for 18 MCHA Training Centers (1975-80) | \$ 1,200,000 |
| 2. Recurrent costs for RDs and RECs (1973-80) | 57,000,000 |

Although at present time it is unclear what MOH budgetary requirements will be in the intervening years, the 1980-81 MOH budget projects GOT recurrent costs for RECs at \$5,500,000 and RDs recurrent budget at \$6,900,000, the total of which will be 27 percent of the MOH national health budget. This represents a six-fold increase in REC recurrent expenditure between 1971-72 and 1980-81 and a 3.5 fold increase in RD recurrent expenditures over the same period.

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Other GOT Inputs^{1/} Supportive of Rural Health Care Delivery System:

1. Capital costs for 100 RHCs	\$ 8,892,000
2. Capital costs for up to 500 RDCs	2,250,000
3. Capital costs (20 percent) for 11 RMA Training Schools	400,000
4. Training costs for 2490 EMAs (GOT to recruit 2900 candidates)	4,300,000
5. Training costs for 1180 NAs (GOT to recruit 1416 candidates)	2,300,000
6. Nurse-tutor graduates per annum - 16	

^{1/} Rough estimates to indicate order of magnitude

U.S. Inputs (\$000)

	Total	FY 73	FY 74	FY 75	FY 76	FY 77	FY 78	FY 79
1.0. Personnel	<u>1178.0</u>	<u>180.0</u>	<u>227.6</u>	<u>307.6</u>	<u>307.6</u>	<u>77.6</u>	<u>77.6</u>	<u> </u>
a. Direct hire POP Adv. Secretary to POP Adv. Support DH staff	250.0 100.0 98.0		50.0 20.0 7.6	50.0 20.0 7.6	50.0 20.0 7.6	50.0 20.0 7.6	50.0 20.0 7.6	
b. Contract MCH public health physician @ 60,000/yr.	300.0	120.0	60.0	60.0	60.0			
Nurses - PH @ 40,000/yr.	400.0		80.0	160.0	160.0			
c. Short-term consultant @ 3,000/mo.	30.0		10.0	10.0	10.0			
2.0. Participant Training	<u>200.0</u>		<u>(8)55.0</u>	<u>(9)60.0</u>	<u>(8)55.0</u>	<u>(4)30.0</u>		
a. Candidates for MCH/staff. U.S. or 3rd country, 4-6 mos. training (19)	150.0		(5)40.0	(5)40.0	(5)40.0	(4)30.0		
b. Candidates for senior MOH/MCH staff. U.S. or 3rd country, 4-6 mos. training (10)	50.0		(3)15.0	(4)20.0	(3)15.0			

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12

<u>U.S. Inputs (\$000)</u>		Total	FY 73	FY 74	FY 75	FY 76	FY 77	FY 78	FY 79	FY 80
3.0. <u>Commodities</u>		<u>1535.8</u>	<u>1514.8</u>	<u>14.0</u>	<u>7.0</u>					
a. Furniture for 18 Trng Centers		128.4	128.4							
b. Classroom equipment and visual-aids for 18 Trng Centers		116.4	116.4							
c. Vehicles for 18 Trng Centers		126.0	126.0							
d. Vehicles for contractors and POP Officer @ 7,000/vehicle		35.0	14.0	14.0	7.0					
e. Construction materials, including local, 935 and U.S. sources (See Annex C)		830.0	830.0							
f. Equipment/supplies for Rural Dispensaries and Rural Health Centers (See Annex D)		300.0	300.0							
4.0. <u>Other Costs</u>		<u>2285.4</u>	<u>1429.0</u>	<u>105.9</u>	<u>231.5</u>	<u>221.7</u>	<u>154.4</u>	<u>92.4</u>	<u>50.5</u>	
a. Capital Construction		1429.0	1429.0							
b. Operational costs for 18 Trng Centers		856.4		105.9	231.5	221.7	154.4	92.4	50.5	
GRAND TOTAL		<u>5199.2</u>	<u>3123.8</u>	<u>296.6</u>	<u>480.5</u>	<u>594.1</u>	<u>329.3</u>	<u>232.0</u>	<u>92.4</u>	<u>50.5</u>

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13

Other Donor Inputs

1.0.	<u>Sweden (SIDA)</u>	\$ <u>7,710,000</u>
	90 Rural Health Centers (90 percent of construction costs)	(6,123,000)
	Paramedical student hostels, classrooms (construction)	(694,000)
	Cost of paramedical courses/seminars, textbooks	(143,000)
	Radio-communication pilot project	(100,000)
	MOH Planning Unit (1 Health Economist, 1 Physician, 2 Planning Assistants)	(220,000)
	6-8 Physicians	(353,000)
	Short-term consultant services	(77,000)
2.0.	<u>Norway (NORAD)</u>	\$ <u>2,572,000</u>
	400 Rural Dispensaries (total construction)	(1,800,000)
	Public Health Institute (construction)	(629,000)
	1-3 Public Health Advisors	(143,000)
3.0.	<u>Finland (FINAID)</u>	\$ <u>2,072,000</u>
	11 RMA Training Centers (80 percent of construction costs)	(2,072,000)
4.0.	<u>Denmark (DANIDA)</u>	\$ <u>2,214,000</u>
	2 Health Auxiliary Training Centers (construction)	(257,000)
	1 MA Training Center (construction)	(314,000)
	2 District Hospitals (construction)	(486,000)
	Laboratory for River Blindness (construction, TA)	(100,000)
	MOH equipment workshops (TA)	(200,000)
	Prototype Regional Specialist Services	(857,000)

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Additional assistance for health baseline studies and regrouping rural consultative hospitals to total \$1.8 - 2.0 million will probably be committed in FY 1974.

5.0. <u>Switzerland</u>	\$ <u>400,000</u>
1 MA Training Center (construction and recurrent costs)	(<u>400,000</u>)
6.0. <u>Japan</u>	<u>1,500,000*</u>
Rural Environmental Sanitation program (TA, equipment, recurrent costs)	(1,000,000)
Tuberculosis Control program (TA, equipment)	(500,000)
7.0. <u>Canada (CIDA)</u>	<u>1,000,000*</u>
Rural Mental Health Units	<u>(1,000,000)</u>
TOTAL	\$17,468,000

*Highly tentative projects and figures still under negotiation.

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15

Summary of Obligations and Expenditures (\$000)^{1/}

ITEM	FY 73		FY 74		FY 75		FY 76		FY 77		FY 78		FY 79		FY 80	
	OBL	EXP	OBL	EXP	OBL	EXP	OBL	EXP	OBL	EXP	OBL	EXP	OBL	EXP	OBL	EXP
TOTAL	3123		279	2079	481	1390	594	848	329	457	232	302	93	93	51	51
1.0. Personnel (incl. support for DH staff)	180		228	238	308	317	307	295	78	191	78	138				
a. Direct Hire																
(1) POP Officer			50	50	50	50	50	50	50	50	50	50				
(2) Secretary support for DH staff 60			20	20	20	20	20	20	20	20	20	20				
b. Contract																
(1) MCH PH Phys. 120			60	60	60	60	60	60		60		60				
(2) 3 PH Nurses			80	40	160	120	160	120		20						
(3) Consultants			10	8	10	9	10	8		5						
2.0. Participants			55	30	60	60	55	55	30	45		10				
a. U.S./3rd country MCH staff			40	20	40	40	40	40	30	40		10				
b. U.S./3rd country MOH staff			15	10	20	20	15	15		5						

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ITEM	ITEM	FY 73		FY 74		FY 75		FY 76		FY 77		FY 78		FY 79		FY 80	
		OBL	EXP	OBL	EXP	OBL	EXP	OBL	EXP	OBL	EXP	OBL	EXP	OBL	EXP	OBL	EXP
3.0.	Commodities	1514		14	1191	7	207		137								
a.	Furniture for 18 Trng Centers	128			128												
b.	Classroom furn.	116			116												
c.	Vehicles for Trng Centers	126			126												
d.	Vehicles for personnel	14		14	21	7	7		7								
e.	Construction materials	830			600	100			130								
f.	Equip./supplies	300			200	100											
4.0.	Other Costs	1429			600	806	232	361	221	221	154	154	93	93	51	51	
a.	Capital Const.	1429			600	700		129									
b.	Operational costs for Trng. Centers/Hostels					106	106	232	232	221	221	154	154	93	93	51	51

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1/ Figures are rounded for expediency in reviewing the table and may not coincide precisely with those in table on U.S. Inputs.

PART II. PROJECT RATIONALE**A. Background**

The population of Tanzania is subjected to the same major health problems as other developing countries. Illustrative of the magnitude of poor health status of the rural population is the estimated infant mortality rate (IMR), 160 infant (0-1 year) deaths per 1000 live births and 120 deaths per 1000 children aged 1-5. In addition one estimate has it that 120 per 1000 conceptions result in other than a live birth. Based upon 660,000 total births per year, the IMR indicates that approximately 110,000 children die annually before reaching the age of one year.

The population of Tanzania is overwhelmingly rural: over 90 percent of the population lives outside towns. GOF policy stresses that future expansion of health services must be predicated upon reaching that segment of population not currently possessing ready access to basic health care services (including public health and preventive services as well as simple diagnostic and treatment services).

In addition, and most importantly, the GOF has, in the past year, decentralized the entire structure of government with the result that the rural governmental units (Regions) have been given authority as well as responsibility to run their own local governmental affairs. The country is divided into 18 Regional Units and each one has been given authority to establish its financial and administrative machinery within general terms of reference set by the central government. In effect this will mean that each Regional Health Officer will be able to set up his own planning, programming, budgetive and other systems. Such a state of affairs is intended among other purposes, to provide the best possible support to development of a truly decentralized system for delivering generalized health services and, as far as can be determined, is unique in Africa. Under these circumstances the decision, by President Nyerere, that small rural health facilities will receive priority over urban facilities, seems particularly sound and practical.

Within these rural facilities the educational aspects of health care, such as nutrition, environmental sanitation, child spacing, etc., will be particularly stressed before mass curative services quickly become prohibitive in cost. It is the intention of the GOF to provide an RHC for every 50,000 rural population, and an RD per 7,000 rural population by 1980. It is these centers, staffed primarily by MAs, RNAs, and MCHAs, that will form the backbone of the rural health care delivery system of Tanzania.

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- 18 -

B. Government Policy

1. Rural Health Emphasis

The GOE has recently declared that the three highest priority development areas are rural health, rural education and rural water supply. The health emphasis is to be placed first on preventive services and, secondarily, on rudimentary (rather than conventional) curative services:

"The 1969-74 Health Plan is directed, above all, towards the development of preventive and rural health services in a positive and dynamic manner. This will be achieved through the agency of rural health centers. It is for this reason that the main proposal in the 1969-74 Health Plan is that the central government should assume full responsibility for all rural health centers in the country. There can be no services, however, without competent staff. The training of medical personnel of all categories, at both the basic and post-basic levels, must also be given a high priority."

This was not always the case:

"The strategy of the 1964-69 Health Development Plan was directed towards the extension of government hospital services mainly, although little development was achieved even in hospitals during the period concerned. There was only a small expansion from a total of 7,290 beds in government hospitals and dispensaries at the end of 1968, an increase of only 12 percent." However, even the hospital program had a rural emphasis. Presently less than 30 percent of doctors in Tanzania practice in Dar es Salaam, even counting private practitioners and medical faculty. If assistant medical officers and 80 Chinese doctors are included, only 20 percent of total doctors practice in the capital, a striking contrast to most African countries where more than half of all doctors practice in the capital city.

The emphasis on preventive services is perhaps best illustrated by the fact that in both 1970-71 and 1971-72, over 50 percent of the MOH capital budget was allocated to hospital development (70 percent of this in Dar es Salaam) but in the 1972-73 budget this percentage has been reduced to 27 percent (only 10 percent of which is for Dar es Salaam). The percentage of the recurrent health budget allocated to hospitals will fall from 70 percent in 1971-72 to 50 percent in 1980-81. The growth development of medical faculty has been frozen with an intake of 64 medical students per year.

In summary, the GOE has clearly decided that (1) development of comprehensive curative services, beyond a thin layer of urban dwellers, is far beyond the resource capability of Tanzania, (2) the only feasible approach is to build a comprehensive network of small health facilities bringing higher quality services to the mass of the population while emphasizing preventive health care modalities with their very much lower recurrent costs. The GOE has made a significant start, with over three-quarters of the Tanzanian population now residing within 10 kilometers of a health facility. The planned expansion

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of the RHCs and RDs should expand the percentage of population in proximity to basic health facilities well beyond 90 percent while significantly improving the health service outputs of all RDs and RHCs. See Annex E for population and health facilities distribution by district.

2. Conceptual Model

Rural health delivery services are organized in the following manner: At the most dispersed level are the RDs which are primarily responsible for preventive, educational, and simple curative services. Each RD is linked to a RHC which is the hub of preventive health activities for the surrounding area. (In addition the RHC has its own simple curative services.) Each RHC is in turn linked to a district hospital, and in each of the 4 districts. Eighteen of these hospitals are designated as regional hospitals which in turn are linked to three referral hospitals at Morogoro, Mwanza, and Dar es Salaam. Case referral to these three referral hospitals is not optimal at this time, as is to be expected under conditions obtaining in rural Africa: lack of transport, lack of supervision at the decentralized and generalized RDs, and RHCs, and lack of medical records, currently are being evaluated by MOH. The MOH recognizes the need for, and presently is working on, establishing an adequate system of supply information from the field to central or regional stores, and to planning units.

As can be seen from the above, and in light of the known shortage of public health trained physicians, nurses and administrators in the country it seems clear that a project of the magnitude, complexity and type envisaged here cannot be successfully prosecuted without a technical assistance component. This is, therefore, provided for (see Part III Course of Action).

a. Location of MCHA Training Centers

The eighteen MCHA Training Centers generally will be located in District towns in which nursing and other training facilities are not currently located and which enjoy a District Hospital adequate to supply lecturers/tutors in fields covered in the MCHA curriculum. In the occasional region which has more than one such town, development policy and employment considerations may help decide locations. On the above criteria, the MOH Planning Unit has recommended regional locations for fifteen of the Training Centers and alternatives for the remaining three. This month MOH will ratify or modify these recommendations, and submit them to the respective regions for approval. Those regions which take issue with MOH location decisions will be put into the second group of schools due for construction in FY 1975. Each of the Training Centers will be located on the site of an existing District Hospital so as to maximize the capability of hospital staff to contribute to the MCHA teaching load. The Training Center's demonstration Area is being designed in physical juxtaposition to the hospital's outpatient clinic. Food, laundry, services, etc., will be provided from the hospital, and the Training Center site plan will utilize existing water, sewage, power, etc., infrastructure as a net site cost saving.

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It is planned that all the skills required to adequately implement the MCHA curriculum, subject to local modifications, will be available at the adjacent hospital or at least in reasonable vehicular proximity to the Training Center. The principal/administrator will be a senior nurse-tutor with broad MCH background (see Part II-C-5), but in fields of relative professional weakness she will be supplemented by guest lecturers/clinicians from the local health community.

b. Proposed Training Program

All candidates for MCHA training will be primary school leavers recruited from, and returned to, the rural districts where they are expected to work. The MCHA training curriculum will be 18 months in duration and include didactic, clerkship, and practical field experience. Eighteen MCHA Regional Training Centers will each initially contain an average of 25 MCHA trainees, size of class depending on population size of region, for each 12-month didactic and clerkship cycle.

MCHA trainees will devote the following periods of time to specified disciplines during this 12-month training:

Nursing and hygiene	1-1/2 months
Newborn and baby care, including ailments	1 month
Under five clinic	1 month
Pre-natal & maternity care	2 months
Conduct of labor	1 month
Recognition of abnormalities of labor	1-1/2 months
Management of puerperium and child spacing	2 months
Health education	<u>2</u> months
TOTAL	12 months

For specific details of this training cycle, see the provisional first draft MCHA Training Syllabus, Annex F.

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The remaining six-month period of the 18-month course is set aside for practice in the field to be carried out at approximately 64 rural facilities ("outstations") generally attached to RHCs, one in each district, each to accommodate an average six MCHA trainees per cycle for supervised practical experience. The assignment of MCHA trainees to rural health facilities in their home district was designed to enhance the probability of MCHAs remaining in their rural milieu, as well as being properly trained for delivery of rural health services under local conditions.

c. MCHA Service Outputs

MCHAs will be assigned to RDs and RHCs to form an integral and critical component of the manpower complement of the rural health care delivery system. The dispensary unit, located at the village level, is the principal entry point in the rural health care system as well as the fundamental unit for delivery of MCH services. The MCHA is key to educating the bulk of the population to the benefits of public health and preventative programs, basic to comprehensive and integrative MCH care. Upon graduation from training, the MCHA at the least will be competent to perform the following major services at village level:

1. Organize and operate maternal health services including antenatal and postnatal care.
2. Conduct normal deliveries.
3. Dispense health education.
4. Advocate and teach, as appropriate, practical nutrition.
5. Advocate and provide, as appropriate, family planning services.
6. Organize and conduct child health clinics.

The MCHA graduate will have had 6-8 years of education and be 16-20 years old; many of the rural health cadre will not be highly specialized in medical background or academic training. MOH has decided that MCHAs commonly will not actually deliver health services requiring advanced education when more highly trained personnel are readily available to provide them, their primary function to be educational regarding desirable MCH practices, and to serve as stimulus to good preventive practice to be adopted by the rural population. The GCF wishes to have services provided by the most highly qualified in keeping with MOH ability to supply such personnel for any given level of demand. However, as demand for specific service outputs exceeds the capacity

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of the appropriate health workers to provide them, or where deemed essential by MCHAs or their supervisors, the Regional Health Officer will assign responsibility for actual delivery of health service to the MCHA.

Current demand for routine prenatal, perinatal, and postnatal services already exceeds the service capability of the existing health cadre, so such services will be a part of the responsibilities of MCHAs and equivalent level health personnel. Difficult prenatal cases, abnormal deliveries, and postnatal complications will be referred to a nurse-midwife or another appropriate professional as required and as possible. Present demand for some services in the rural areas, such as child spacing, is not so great that clients cannot be referred to more highly trained personnel. The MCHA will advocate practices, such as child spacing, as sound MCH procedure, thereby stimulating demand. As demand reaches proportions which exceed the workload capability of more highly trained personnel, the MCHAs will be assigned responsibility for delivery of such clinical services.

MOH realizes that a rural cadre large enough to ensure that at least one person with specific MCH training is within reasonable proximity to all rural population precludes providing MCHAs with as high a level of training as some of the less numerous health workers, e.g., medical assistants, others based at HHCs. When better trained service personnel are available, MCHAs will not be called upon to provide those services.

d. Demographic Data Availability

The University of Tanzania operates a demographic unit. This unit was established in CI 1971 with assistance from Africa Bureau grant to the Population Council (AFR)629. The Director of the unit, Dr. Rushdi Hemin, is a Population Council fellow and, from the outset, has been engaged in developing capability at the University to collect and analyze demographic data and to train Tanzanian demographers both in Tanzania and in the U.S. As a result there are now two fully qualified Tanzanian demographers at the University and three more in the final stages of training overseas. In addition, the unit has designed and is implementing a nationwide demographic sample survey which will be completed by October 1973.

The survey referred to above concentrates on the various parameters of differential fertility in Tanzania and the causes thereof, but it also obtains data on vital events, including infant and childhood mortality. Although the latter data are necessarily inaccurate because of factors now well known to be associated with retrospective demographic surveys in Africa, they are nevertheless better than anything else available. This is especially so because the data are gathered from 72 carefully chosen cluster samples throughout the country and because some of these "clusters" will probably be consistent with areas served by the rural health centers and/or rural dispensaries to be upgraded or established under this project. In addition, since the demographic unit at the University will continue its work, with

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qualified Tanzanian leadership, it would be possible to repeat this survey or a similar one at appropriate intervals and to make a special effort to match the survey cluster with the areas served by more of the dispensaries and health centers.

It is felt that although the above described activities leave something to be desired in terms of service to the evaluation component of this project design, there is nevertheless a meaningful relationship and one which could be further developed over time with continued interest and cooperation of the University, Population Council and USAID/AID/W.

C. Financial and Manpower Implications:

The 1973-80 MOH health budget is based upon assessment of level of funds available for national health services by 1980. This funding level, as well as proposed emphasis on rural health services, was presented in a Cabinet paper which was approved in its entirety. At this funding level, the budget was divided among categories of health services according to the priority accorded them. Hospital allocations became the residual element, with the further constraint that growth of hospital beds will not exceed population growth, approximately 3 percent per annum.

1. Capital Development: Construction

Capital development required for the implementation of the rural health care delivery system requires construction of both training and service facilities.

Construction for training will include:

- a. Eighteen Regional Training Centers and supportive facilities and equipment for training MCHAs with USAID support.
- b. Eleven new RMA Training Schools to supplement five existing schools with FINAID support.
- c. ~~Two new MA Training Centers to supplement four existing schools, with Swiss and DANIDA support.~~
- d. Two training facilities for Health Auxiliaries (sanitarians) with DANIDA support.
- e. Paramedical student hostels and classrooms, with SIDA support.

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24

Construction of service facilities will include:

- a. 200 RHCs, in addition to 100 existing, will achieve the targeted one RHC per 50,000 rural inhabitants by 1980, with SIDA support.
- b. 900 RDs will raise the GOT/MOH total to 2,000 and the national total to the 2,300 required to provide one RD per 7,000 rural inhabitants, with NORAD support.

Capital budgetary allocations for this construction:

	GOT (Dollar Equiv.)	Donors (Dollars)	
18 Regional MCHA Training Centers	-	2,259,000 ^{1/}	(USAID)
11 RMA Training Centers	400,000	2,072,000	(FINAID)
Two MA Training Centers	-	714,000	(Swiss/ DANIDA)
Two Health Auxiliary Training Centers	-	257,000	(DANIDA)
Student hostels/classrooms	-	694,000	(SIDA)
200 Rural Health Centers	8,232,000	6,123,000	(SIDA)
900 Rural Dispensaries	<u>2,250,000</u>	<u>1,800,000</u>	(NORAD)
TOTAL	10,882,000	13,919,000	

Minimum capital budget requirement for construction of the entire rural health delivery system is \$24,800,000 of which approximately \$14,000,000 will be donor provided. At present estimates, the GOT would have to provide the equivalent of approximately \$11,000,000 in capital costs 1973-80,

^{1/} Includes \$302,000 contingency.

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or approximately \$1,200,000 per annum. The 1972-73 capital budget for health, excluding hospitals and auxiliary urban services, is approximately \$1,500,000, all funded by MOH. The MOH capital budget is growing faster than that of any other ministry*

2. Recurrent Budget costs

1972-73 operational budget costs of MOH are approximately \$26,000,000. MOH projects that the recurrent budget will grow by 10 percent per annum until 1980 when it should be approximately dollars 55,000,000 or about \$3 U.S. per capita. The recurrent budget then and now will be distributed as follows:

	<u>1971-1972</u> (dollar equiv.)	Pct. of Recur Budget	<u>1980-1981</u> (dollar equiv.)	Pct. of Recur Budget
Rural Health Centers	\$ 1,300,000	6	\$ 5,500,000	12
Rural Dispensaries	1,000,000 ^{1/}	5	6,900,000	15
Spec. Preventive Programs	800,000	4	10,800,000	18
Govt. Hospitals and Grants to Voluntary Hospitals	12,000,000	70	28,000,000	50
Other (including training and administration)	<u>5,000,000^{2/}</u>	<u>15</u>	<u>5,600,000^{3/}</u>	<u>10</u>
TOTAL	\$20,000,000	100	\$56,800,000	100

*The Treasury has committed itself to a minimum MOH budget increase of 12 percent annually, the highest in the GOT, throughout the next Five-Year Plan. MOH and Treasury jointly committed that entire budget increase to the rural health sub-sector.

^{1/} Only the MOH share of recurrent costs of RHC and RD. Until recently MOH primarily provided drugs and other supplies to the RHCs and RDs, salaries being financed by District Councils.

^{2/} About half for training and administration.

^{3/} Only training and administration.

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26

Estimated recurrent costs for the 300 RHCs projected in 1980 is average \$18,600 per center, or \$5,700,000 total 1980. For the 2000 rural dispensaries projected in 1980, recurrent costs will average \$3,500 per dispensary, up from the present \$2,000 due to upgrading dispensaries' personnel and supply services, for \$7,000,000 total 1980. Recurrent cost breakdown for rural health service facilities in 1980:

	<u>Rural Health Centers</u>	<u>Rural Dispensaries</u>
Salaries	\$ 11,400	\$ 1,200-1,600
Drugs, transport, and other expenditures	7,200	1,900-2,300

Total recurrent costs of training for the 1974-80 rural health delivery system:

	<u>GOT</u> (dollar equiv.)	<u>Donors</u> (dollars)
MCHA Training	\$1,200,000	\$ 856,000
RMA Training	4,300,000	-
MA Training	2,300,000	-
Health Auxiliary Training	<u>Undetermined</u>	<u>-</u>
TOTAL	\$7,800,000	\$ 856,000

3. Staffing Pattern of Rural Health Facilities:

Each RHC will include ten health personnel:

	<u>Number</u>
Medical Assistant	1
Rural Medical Aides	2
"B" Nurse	1
Maternal and Child Health Aides	2
Nursing Assistants	2
Laboratory Auxiliary	1
Health Auxiliary	1

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Six supportive staff -- drivers, janitors, etc. -- brings total RHC staff to sixteen. Each RD will usually be staffed by three personnel:

Rural Medical Aide	1
Maternal and Child Health Aide	1
Rural Dispensary Assistant	1

4. MCHA Manpower Development:

At present there are 600-700 village midwives in Tanzania who, with appropriate upgrading of skills, will form the base for the growth of the MCHA cadre. The MCHA Training Centers will have an average intake of 467 MCHAs per year 1975-79, or 2,336 total trainees. Assuming a 20 percent wastage rate, expected output per year 1976-1980 is 432, or a total of 2,160 graduate MCHAs. By 1980 MOH expects to have a functioning cadre of 2,600 MCHAs drawn from (a) present village midwives and, (b) newly trained MCHAs. (This allows for small stock wastage of current cadre of village midwives.) Projection of 1980 MCHA manpower requirements include 2000 for RDs at one per RD, and 600 for RHCs at two per RHC, or a total of 2,600 for the rural health care delivery system nationwide. With the establishment and operation of the proposed MCHA Training Centers, no shortfall is expected in projected numbers of MCHAs by 1980. See Annex G and Part IV. Education Requirements Analysis.

Some years following graduation, MCHAs will return for refresher courses aimed at upgrading of skills. This continuing education of both groups will occur at periodic intervals between courses at these MCHA Training Centers. The parameters of MCH continuing education will not be defined until MCHA training is actually underway, but it constitutes an important part of this project.

For the national manpower program to 1980, see Annex H.

5. Manpower Requirements for MCHA Tutors

The principals of the MCHA Training Centers will be selected from existing cadre of approximately 1000 senior "A" level nurses. Those selected will have had teaching experience and worked for a number of years in a teaching hospital, and will have had broad MCH experience. It is expected that they will receive a short course in pedagogy and administration prior to assuming MCHA training responsibilities. Tutors for various components of the MCHA curriculum will be drawn from the health and medical personnel of nearby district and regional health resources, e.g., hospitals, other training centers, in the proximity of the MCHA Training Center. Availability of such teaching is one of the crucial factors in selection of MCHA Training Center sites. Tanzania does not yet have the health manpower resources to place 3-4

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trained nurse-midwives as tutors in each of the eighteen schools. At the beginning, one principal must do much of the lecturing herself and recruit lecturers in fields with which she is relatively unfamiliar from nearby medical facilities. As years pass, more and better quality staff will be assigned to MCHA Training Centers. In July 1973 Tanzania's first nurse-tutor course (12-15 students) joins three Class A and 22 Class B (three year training) Nursing Schools, in part to replace expatriate tutors in nursing and midwifery (4 years) training now occurring principally in mission hospitals. Although nurse-tutors will not immediately be available for MCHA schools, Tanzania cannot wait: the MCHA training program will go forward tailored to local skills, region by region, district by district accepting current health manpower limitations.

The Regional Medical Officer bears responsibility for assuring that the requisite teaching skills are continually available to the Training Center principal/administrator, who coordinates tutors and curriculum for each cycle. Language of instruction will be Kiswahili.

6. USAID Support Requirement

USAID/Tanzania currently supports the largest population program in East and Southern Africa through AID grantees, requiring undue concentration of one Assistant Program Officer. The addition of this project, involving construction and training at 82 sites dispersed throughout the country, will require the efforts of one Population Officer and one U.S. secretary, at least for the first two construction/procurement years when identification of requirements is prime consideration. The population officer will be required to travel frequently; thus provision of one vehicle. The remainder of his time will be fully occupied with MOH/other donor liaison, documentation, Mission programming, and ongoing population programs. These personnel will be financed under this project.

7. Statement of Impact on the Environment

Virtually no adverse effects to the environment or Tanzania ecology as a whole are anticipated. The 18 MCHA training centers will all be located on existing district hospital sites. Generally, the 64 rural practical training facilities ("outstations") will be attached to and sited at existing or planned rural health centers. By virtue of the outstations very limited size, no adverse impact greater than that of a small house is anticipated. The training centers themselves have been designed in a conservative, non-wasteful manner and will blend in well with existing surroundings. Careful consideration has been given in physical planning to ensure adequate supplies of water and proper disposal of wastes. Fuel requirements will be minimal (buildings are not heated and kitchen facilities are located in the main hospital complex).

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Conversely, this project will indirectly benefit the environment by improving the health standards of rural Tanzania. The curriculum of MCH aides itself will cover the topics of domestic sanitation, waste disposal, water anticontamination, and prevention of mosquito and fly breeding. In addition, the HEALTH-assisted sanitarian training program is directly related to the AID project in dramatically improving Tanzania's rural health care delivery system and improving the quality of life in the countryside.

8. Income Distribution Effects of Project

The economic effects of the project are indirectly related to the health services provided to the population. The immediate effect is the increased employment of local, sub-professional personnel to staff local and regional health facilities. While the numbers so employed are small, the immediate group impact by this project is the elementary school graduate with 2-3 years of additional special training. This group constitutes a substantial part of the unemployed in Tanzania. Other than this modest effect, the project does not contribute significantly to a broad income distribution program in Tanzania.

PART III. COURSE OF ACTION

1. The Project Agreement

The Project Agreement (ProAg) is expected to be signed by June 30, 1973. It will include funding for the estimated cost of construction for physical facilities, building materials that require foreign exchange, and commodities. The ProAg will also include conditions precedent to any disbursements for the construction elements of the project.

2. Expenditure

Approximately \$3,100,000 is planned for obligation in FY 1973 of which about \$2,250,000 is for construction. It is estimated that almost \$2.5 million will be expended in FY 74. The pipeline by June 30, 1974 will include a significant amount of the unliquidated portion of construction contracts. A second important element will include unliquidated elements of the large commodity component of this project.

3. Progress to Date

At this writing, MOH had determined (1) the intake distribution of MCHA candidates by district. See Annex G. ComWorks had designed, and MOH had approved, schematic drawings for the eighteen MCHA Training Centers.

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30

Detailed drawings, expected to be completed by the end of May 1973, are underway. KESDO is scrutinizing the commodity content of the designs to ascertain type and volume of foreign-made materials required with an eye to U.S.-source procurement. The tentative location of Training Center sites shown in Annex B is under discussion with the Minister of Health. When official, MOH site decisions will be forwarded to the Regions for approval. Regions which wish to discuss the location further will join the group of schools to be built during the second construction year. When agreement is reached, land acquisition will begin.

4. Method of Construction

Each of the eighteen Regions will take responsibility for construction of its own MCHA Training Center and outstations. Each of the Regional Engineers will decide which of the several construction alternatives is the most efficient/inexpensive, e.g., ComWorks capability, contract, national service. Should the Regional ComWorks workload be light at the time of this job the Regional Engineer may opt for ComWorks resources. However, by far the most likely construction method is likely to be contract through Central Tender Board. The awards would then be made on the lowest total construction bids.

5. Preparation for Construction in January 1974

Bills of Quantity are required, consequently contracting is delayed until about mid-September following completion of detailed drawings. (Precise dates for site surveys are unknown at this time, site surveys being subject to several factors over which MOH wields no control.) Since MCHA Training Centers will be sited on grounds of existing medical facilities with water, sewage, power, etc. already in place, site surveys should be briefer and less rigorous than is usually the case.

On completion of final design, individual site surveys, and bills of quantities in September 1973, bid documents are sent to prospective bidders authorizing three weeks to submit bids. Selection of contractor takes another three weeks. Contractor mobilization on-site will take 3-5 weeks depending on accessibility of Region. Total estimated period from advertisement of bids to commencement of construction is three months. Above schedule is based on the assumption that construction will be undertaken by locally-based contractor. Under this scenario, construction in some regions could conceivably begin before January 1974.

6. Construction Schedule

Construction of thirteen of the MCHA Training Centers -- nine larger 36-student schools and four smaller 26-student schools -- is planned to begin in January 1974. Conditional on several factors, GOT expects turnkey construction to take about 12 months. Construction of the remaining five Training Centers -- four large schools and one small school will begin Jan. 1975. Schedule above is contingent upon expeditious US procurement and

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movement of imported materials, and upon the ability of contractors to perform. Delays in these areas could result in deferral of completion by 3-6 months, thus extending construction up to 18 months.

7. Phasing of Construction with Occupancy

Work will be so phased that dormitories and classrooms are completed first, thereby permitting classes to get underway in event of delay, e.g., equipment. Therefore, first MCHA classes will begin January 1975 at the first thirteen schools scheduled for completion in early 1975. With similar programming of construction, classes in the remaining five schools scheduled for early 1976 completion will open in January 1976.

All imported construction materials will be purchased through G.S.A. to cut back leadtime. These commodities would be shelf items which could be quickly packaged for shipment.

8. U.S. Capital Development Requirements

Title X-funded capital assistance is required to conform with the provisions of Section 611 of the Foreign Assistance Act (FAA).

Representatives of REDSO and USAID have visited the ConWorks architects and engineers, and MDH planners working on this project, and viewed relevant plans and designs completed to date. The REDSO engineer believes that the professional competence of those architects/engineers and the designs to date inspire confidence in Tanzanian and expatriate capability to meet both Tanzanian and U.S. construction standards and reasonable expectations of meeting time and financial targets. Current plans conform to design criteria required for U.S.-financed overseas school (educational institution) construction. With each region drawing upon its own stocks, U.S. sole source procurement requirements are more difficult to meet. At this time the foreign/domestic origin of (1) construction materials, (2) installed equipment and fixtures, and (3) base equipment, currently in stock is being determined. Conclusions therefrom in terms of U.S. source procurement may require a marginal increase in construction time. Construction cost estimates Annex C were rounded to err on the high side to accommodate such an eventuality. In any event, provisions of FAA Section 611(a) (1) (firm cost estimates and substantial completion of first designs), Section 611(c) (competitive procurement to the extent practicable), and Section 611 (e) (cooperating country ability to monitor and operate) will be met prior to disbursement of project funds obligated under the Project Agreement.

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32

9. Technical Assistance Schedule

Since the first class of MCHA's will begin about January 1975 and since much work in curriculum development etc. must be done prior to that time, it is important for necessary technical assistance to be provided at the earliest possible date. Since the system of decentralized generalized health services and training within which the rural dispensaries, health centers and Regional Health Offices will function must depend on availability of sound technical and administrative support at all levels of the system and since personnel to provide this support are presently in very short supply it is estimated that this project will require the following minimum technical assistance inputs:

One MCH RH physician assigned to MOH as a staff member of appropriate department in MOH.

Three PH nurse/midwives working at local level (i.e. several regions together).

The job descriptions for these technicians will be developed before recruitment by a contractor.

10. Participant Training

As can be seen by perusal of the Inputs section of this PROP the project provides for phasing-in of qualified GOF personnel at all levels well before the end of project. Such personnel includes the counterparts for all US contract technical assistance staff as well as MOH staff which will be required for teaching service, administrative and logistic components of the project from MOH headquarters down through the rural dispensaries. The GOF wishes to emphasize in-country training as much as possible but feels that some training, mostly in short non-academic courses or study tours either in the U.S. or other African countries, will be required to achieve the objective set forth above. This is provided for in U.S. Inputs section.

11. Curriculum Development

Preparation of an appropriate MCHA curriculum Annex E began in December 1972 and is proceeding apace. Preparation and production of additional MCH teaching materials in Kiswahili is under discussion. It is important that development of curriculum and selection of materials be successfully concluded before commencement of the training program.

12. Procurement Schedule

Of great urgency is the expedient determination of equipment needs of the MCHA Training Centers, for which U.S. procurement of teaching materials, vehicles, etc., must be commenced in July and shipped in September if its arrival in-country and into-region is to coincide with completion of construction and commencement of classes. Of less urgency with regard to project implementation is the determination of equipment needs of the RDCs and RHCs where MCHA graduates will work. Yet if such equipment is to ensure prompt upgrading of rural health delivery systems as envisioned, it must be obtained as soon as possible.

13. Participant Schedule

MOH expects to identify its overseas training requirements by December 1973 with the aid of the MCH advisor funded hereunder. It is estimated that the first participants will depart in August 1974, with project training entirely completed by summer 1977.

14. Implementation Plans

The greater part of project implementation will be completed by Jan. 75 when actual MCHA training will begin in operational Training Centers. Thereafter attention can be focused on evaluation, detailing a continuing educational program, and locating the trainees for maximum effect. By the end of the USAID financial input in 1979, such details will have been resolved, or be under full consideration.

PART IV. EDUCATION REQUIREMENT ANALYSIS

A. The Project and the Training of MCHAs in Tanzania

1. Project Description

The project calls for turnkey construction of 18 Maternal Child Health Aides Training Centers; 64 outstations; commodities, supplies and equipment; technical services consisting of one population officer and a secretary (DE), one MCH Public Health physician and two-three PH nurses (contract); participant training; and recurrent costs on a declining basis, for the operation of the Centers for five years. The MCHAs Centers will consist of a dormitory (36 or 26 beds), a classroom, and a demonstration unit. The outstation is merely

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a facility where trainees will be housed for the duration of their on-the-job training period. Facilities to be constructed will be either part of an existing hospital complex or rural health center. The proposed project activity is to train 2600 MCHAs by 1980 and have them placed and functioning in 300 RHCs and 2000 HDs.

2. Education's Role in Tanzania

Since independence, Tanzania's educational efforts have been directed toward establishment of a homogeneous relationship between education and the social and economic requirements of the country. The broad strategy is the attainment of self-sufficiency in the production of essential skills by 1980, and universal primary education as soon as the required resources can be harnessed. Specifically, Tanzania intends to develop secondary, technical and university education based and justified purely on manpower requirements. A major effort of the educational structure ~~is~~ is to gear it to the needs of a rural society (which now comprises 90% of the population), especially in primary and adult education which in the past few years has expanded greatly. The primary school curriculum was completely changed in 1967 as a result of issuance of the President's "Education for Self-Reliance". For the first time such subjects as agriculture and scientific agricultural practices were incorporated in the curriculum. Swahili was also made the medium of instruction in all primary schools. In essence, therefore, primary education no longer was to be regarded as a stepping stone to higher education but rather as a means to make young people more responsive to the needs of the community.

Primary school enrollment has increased substantially yearly in the last ten years as portrayed by Table I. Enrollment in Standard I has been growing faster than anticipated in "response to political encouragement and adult education."^{1/} It has been estimated that enrollment in Standard I will reach 208,300 by 1974. Total primary school enrollment in 1972 was about 1,003,596^{2/}. Enrollment per 1,000 population by region shows there is not

- 1/ Annual Manpower Reports to the President 1971 (page 7).
Manpower Planning Division, Ministry of Economic Affairs and Development
Planning, September 21, 1971
- 2/ Educational Statistics Handbook 1969-1972
Statistics Unit, Directorate of Planning and Development
Ministry of Education, Dar es Salaam
April 24, 1973

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too great a difference from region to region as often is the case in other African countries. One of Tanzania's goals is to increase educational opportunities for women. At the start of the Second Five Year Plan (1969) female enrollment in Standard I was 41% of total enrollment and 39% of total primary enrollment. The GOP plans to increase these ratios by the end of the Second Five Year Plan to 42% and 40% respectively.^{1/}

B. Qualitative Considerations

Part II of the PROP indicates how the MCHA program has been designed to ensure that the MCH Aides will be well prepared to carry out their specific functions within Tanzania's rural health delivery system and within the broader context of Tanzanian socio-economic development. Annex F details the curriculum for MCHA training which will effect realization of this goal.

C. Quantitative Analysis

1. Input-Supply of Students

Since the MCHA program is entirely new, there are of course no historical procedures for recruitment and selection of students. MOH has, however, established the basic educational prerequisite of successful completion of primary school through Standard VII. It is anticipated that preference in student body selection will be given to those primary school leavers who have had some prior experience in the health system, probably either as nursing orderlies or ujamaa village dispensary aides. Furthermore, recruitment will focus on the 18-year old plus category as a preference since this age group represents what is considered to be an optimum mix of relative maturity and receptivity to new knowledge.

The Tanzania educational pyramid for public schools (Exhibit I) illustrates the relatively enormous availability of otherwise educationally-unoccupied primary school leavers. In fact, in 1971, less than 8.7% of girl primary school leavers were absorbed into the secondary cycle. Attrition from Standard I through Standard VII is fairly steady on a percentage basis which tends to indicate that matriculation standards are stable and Standard VII output is likely to show steady growth in the foreseeable future (say, at least through 1977). Every indication is there will be an ample pool of eligibles from which to draw MCH Aide trainees. To illustrate this, we may take the region with the smallest female output

^{1/} Manpower, p. 7

from Standard VII in 1967, that is, Kigoma, adjusted to anticipated 1975 output and compare it with the annual input demands of the MCHA training center for that region. Of 446 female primary school leavers for Kigoma in 1975, only 5.8% of the total will be required to fill all the spaces in the projected 26-student capacity training center. It should be emphasized that this is likely to be the highest percentage of any region because of its small educational output; the average region in Tanzania was in fact producing over three times the number of female primary school leavers as Kigoma.

Not all of the 1980 required 2600 MCHA Aides will be the products of the full 18-month training program. A number of the 700 presently available village midwives -- 544 to be exact -- will receive a 4 to 6 month MCH retraining course at the new training centers. These more senior and practically experienced women will augment the 2636 primary school leavers discussed above who will be inputted into the MCHA training centers prior to the end of CY 1980.

The flow chart shown as Exhibit II presents a graphic analysis of the input requirements and output expectations of the MCHA training centers during this decade. It has been assumed that each school will not reach full capacity until its second year of operation, primarily due to potential recruitment and induction difficulties during the initial "shake-down" period. Immediately upon entering the training center, quite normal attrition begins to reduce the numbers of potential graduates. This is conservatively estimated at 1% per month for the duration of the 18-month program in the case of the inexperienced primary school leavers and the 6-month program in the case of village midwives. After placement in MCH career service, attrition is much slower--approximately 2% per annum. The flow chart shows no input of MCHA primary school leaver trainees in 1980 (line b). In fact it is anticipated that there will be an entering class that year but it has not been shown since output 18 months hence will not count against MOH and AID 1980 planning targets for the MCH program.

While some MCH retraining of village midwives may take place outside the 18 centers to be constructed, the large majority of them will occupy the 6% of spaces anticipated left vacant after the first 6 months of the 18-month program. Their curriculum will, of course, be different but this does not present a problem with proper classroom and practical instruction scheduling.

2. Input-Supply of Teaching Staff.

See Part II of the PROOP, paragraph C.5 for a full discussion of this aspect of the project.

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3. Output-Utilization of Graduates

As noted elsewhere in the PROP, MOH considers it requires 2600 trained maternal/child health aides by 1980 to meet its health delivery targets of one MCH aide per rural dispensary per 7,000 rural inhabitants and two MCH aides per rural health center per 50,000 rural inhabitants. With a total Tanzanian population in 1980 of 17,000,000^{1/}, 300 rural health centers and a minimum of 2,000 rural dispensaries are required for adequate service. As shown by Exhibit II, the MCHA training program will produce the number of MCHAs required to meet these targets.

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^{1/} Based on 13,846,000 population in 1972 compounded at 2.7% p.a.

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43

Manpower Training Program for Maternal and Child Health Aides

SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	IMPORTANT ASSUMPTIONS
<u>A.1. Goal</u>	<u>A.2. Measurement of Goal Achievement</u>	<u>A.3. As related to Goal</u>
To assist the GOT to expand and improve a country-wide health care delivery system as one of the components of rural development to increase the health, well being, and the quality of life of the rural population.	<ol style="list-style-type: none"> 1. Successful implementation of GOT rural health program (1973-1980) 2. Use of various statistical parameters such as reduced neo-natal mortality, infant mortality, childhood mortality, birth rates. 	<ol style="list-style-type: none"> 1. GOT maintains priority emphasis on rural health service development 2. Other donors provide assistance as projected. 3. Other areas of rural development are also pursued.
<u>B.1. Purpose</u>	<u>B.2. End of Project Status</u>	<u>B.3. As related to Purpose</u>
To assist the GOT achieve an institutional capability to provide comprehensive MCH services to the rural population as an integrated part of the MOH rural health program.	<ol style="list-style-type: none"> 1. Approx. 67% rural population within reach of MCH services. 2. MCH facilities adequately supplied with drugs, etc. 3. 2600 MCHAs trained and providing MCH services. 4. 50-60% of women of child bearing age making use of MCH facilities/personnel. 	<ol style="list-style-type: none"> 1. Rural health facilities have sufficient outreach for optimal coverage. 2. Remuneration of personnel adequate to retain all trained personnel, plus upgraded village midwives. 3. GOT designs and conducts adequate in-service training.

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35

36

Manpower Training Program for Maternal and Child Health Aides

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SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS				IMPORTANT ASSUMPTIONS			
C.1. <u>Outputs</u>	C.2. <u>Output Indicators</u>				C.3. <u>As related to Outputs</u>			
1. Construction of training centers/outstations.	1. 18 MCHAs centers and 64 outstations constructed.							
2. Trained MCH aides.	2. 2600 MCHAs trained.							
3. Improved MCH planning, management, budgeting sub-systems.								
4. MCH curriculum development.								
5. Equipment installation.								
D.1. <u>Inputs (U.S. (\$000))</u>	FY 73	FY 74	FY 75	FY 76	FY 77	FY 78	FY 79	FY 80
1. Personnel	187	227.6	307.6	307.6	77.6	77.6		
2. Participants		55	60	55	30			
3. Commodities	1507.8	14	7					
4. Other Costs	1429.0	296.6	486.5	594.1	329.3	232.0	92.4	50.5
	<u>3123.8</u>	<u>296.6</u>	<u>486.5</u>	<u>594.1</u>	<u>329.3</u>	<u>232.0</u>	<u>92.4</u>	<u>50.5</u>

D.1. Inputs (GOT)

1. Recurrent costs for 18 MCHA Centers (1974-80)	\$ 1,200,000
2. Recurrent costs for ED and EHCs (1973-80)	57,000,000
3. Capital costs - 110 RHCs and 500 RDs	10,500,000

Other Donors: (1973-1980)

Sweden	\$ 7.7 million
Denmark	2.2 million
Finland	2.1 million
Norway	2.5 million
Switzerland	400,000

PERT NETWORK

CY 1973

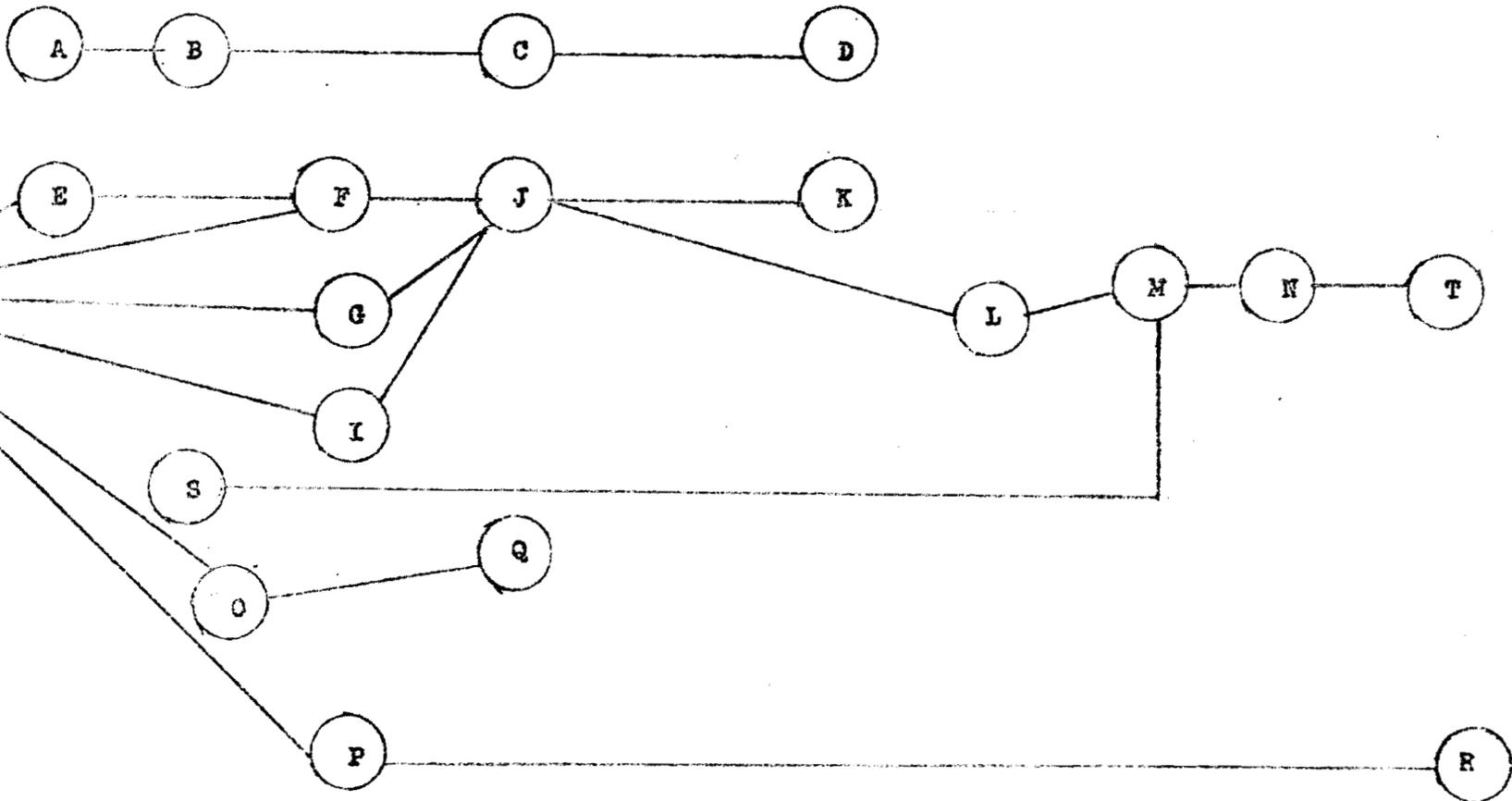
CY 1974

CY 1975

CY 1976

CY 1977

CY 1978



B. KEY TO PERT NETWORK

	<u>Activities</u>	<u>Description</u>	<u>Responsible Agent</u>	<u>Time (Months)</u>
1.	MOH - A	Determine distribution of trainees by District	MOH	2
2.	MOH - E	Begin curriculum development	MOH	2
3.	MOH - O	Identify technical assistance needs	MOH	6
4.	MOH - S	Begin to identify equipment needs	MOH	6
5.	A - B	Make training site selections	MOH	3
6.	E - F	Complete curriculum development	MOH	12
7.	MOH - G	Training staff selected	MOH	12
8.	MOH - I	First trainees selected	MOH	12
9.	MOH - P	Participant training needs identified	MOH	12
10.	B - C	Construction of 13 training sites and satellites completed	ComW/USAID	12
11.	F - J	Training materials produced	MOH	6
12.	G - J	Staff oriented and assigned	MOH	6
13.	I - J	Trainees assigned	MOH	6
14.	O - Q	US technical assistants recruited, oriented and in place	MOH/USAID	12
15.	C - D	Construction of 5 remaining training sites completed	ComW/USAID	12
16.	J - K	Full functioning of all 18 training sites and satellites	MOH	12
17.	J - L	First MCHA training completed	MOH	18
18.	L - M	MCHA assigned and in place in RHCs and RDs	MOH	1
19.	S - M	All equipment purchased and in place	MOH/Treas.	36
20.	M - N	Evaluation of MCHA training program begins	MOH	6
21.	P - R	Participant training completed	MOH/USAID	42
22.	N - T	First cycle continuing education begins	MOH	6

C. MONTHLY IMPLEMENTATION SCHEDULE 1/ (Narrative Outline)

- Sept. 72 GOT requests US assistance for MCH subsector.
- Oct. 72 GOT coordinates Rural Health aid, defines USAID/SIDA/NORAD/FINAID roles.
- Nov. 72 AID/USAID define parameters of Title X assistance to MCH subsector.
- Dec. 72 Preparation MCHA teaching materials begins. USAID/MCH design project.
- Jan. 73 PHA team visits Tanzania, approves \$3-4 million MCH project in principle. Draft MCHA curriculum completed.
- Feb. 73 PHA team establishes project support from Nairobi, London.
- *March 73 Stockholm, Oslo, Helsinki approve Nordic Rural Health projects. MOH approves Comworks' schematic drawings for MCHA Training Centers.
- June 73 MOH approves MCHA Training Center locations. AID approves USAID/T PROP. MOH defines requirements for, requests MCH Public Health Physician, other TA, PIO/T(s) issued with ProAg.
- Sept. 73 Detailed drawings completed, approved. Site surveys completed, approved. Procurement of MCHA Training Center construction materials begins at GSA. Request for prequalification of bidders advertised.
- Sept. 73 Bid documents sent prospective contractors. Procurement of UNICEF/WHO supplies for RDs/RHCs begins. Procurement of MCH Center teaching equipment, vehicles and training center furnishings.
- Dec. 73 USAID Pop Officer begins tour.

1/ This schedule constitutes the Mission's best guess as to progress of a few average Training Centers under what are believed to be average conditions (plus a reasonable cushion), but certainly not of all Centers. PERT System guarantees are impossible in a decentralized country where each of 18 regions does its own building or contracting, where rainy seasons in remote regions/districts can make supply lines and construction impossible during certain seasons of the year, where procurement is uncertain at a time of conflicting priorities, where the Ministry of Health is learning about US medical skills and training capability for the first time,

where the dearth of experienced contractors is exacerbated by the Asian exodus, where the GOT is orchestrating every aspect of the project. For example, some GOT planners and engineers insist construction will take no more than six months; some REDSO advisors say 18 months. Should Bills of Quantity be required, add two months to schedule. GOT has no experience in ordering from US catalogues: US-source procurement could add or subtract months to/from the already uncertain shipping/delivery time. On the other hand Tanzania is not locked into any schedule. Nurse Principals can be seconded, and trainees recruited, at any time. When each Region finishes its MCHA Training Center, whether 6 or 16 months, the course will get underway regardless of month.

- Dec. 73 Construction contractors selected.
 - Jan. 74 Contractors mobilize on sites.
 - Jan. 74 Construction begins first thirteen MCHA Training Centers.
 - March 74 US-source construction materials arrive.
 - Apr. 74 UNICEF/WHO supplies for RDs/RHCs arrive.
MCH advisor arrives, housed.
 - Apr. 74 MOH defines requirements for, requests US training.
 - May 74 Nurse-tutors selected as Principals for thirteen MCHA Training Centers.
 - May 74 MCHA curriculum completed, approved by MOH.
US-source teaching equipment and vehicles arrive.
 - June 74 First MCHA trainees selected.
Participants selected, PIO/Ped.
 - July 74 Training materials produced.
Project progress-to-date evaluated.
 - Aug. 74 18 Principals-to-be undergo shortcourse in pedagogy,
administration.
 - Nov. 74 First NORAD/GOT/SIDA RDs and RHCs where MCHAs work
are completed.
 - Jan. 75 MCHA staff oriented, assigned thirteen Training Centers.
Remainder US technician(s) arrive, housed.
Construction of some Training Centers completed.
 - Jan. 75 Construction remainder of thirteen Training Centers completed.
Principals, staff, trainees arrive at thirteen Training
Center sites.
- 40

First MCHA classes begin at thirteen Training Centers.
Construction begins last five MCHA Training Centers (preceded
by same phased design/contract steps as first 13 Centers
above).

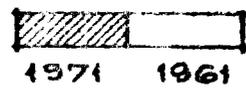
- June 75 First participants depart.
- July 75 Construction begins on first 47 outstations.
- Aug. 75 Procurement UNICEF/WHO midwifery equipment for RDs, RMCs begins.
- Oct. 75 Nurse-tutor Principals selected for final five Training Centers.
- Nov. 75 NORAD/GOT/SIDA complete RDs and RHCs in which MCHAs will work.
- Nov. 75 First MCHA trainees selected for final five Training Centers.
- Dec. 75 Construction completed on first 47 outstations.
- Dec. 75 Second class of MCHA trainees selected for thirteen Training Centers.
- Dec. 75 Midwifery equipment for RDs, RMCs arrives.
MCHA advisor contract renewed.
- Dec. 75 Five Principals-to-be complete shortcourse in pedagogy, administration.
Construction last five MCHA Training Centers completed.
- June 76 MCHA staff oriented, assigned five Training Centers
Materials, principals, staff, trainees arrive five Training Center
sites.
First class completes didactic training, moves to district outstations.
- July 76 Second 12-month class begins at thirteen Training Centers.
First MCHA class begins at last five MCHA Training Centers.
First class begins 6-mo supervised OJT at 47 outstations.
- Aug. 76 Participants depart.
- Sept. 76 Construction begins on last 17 outstations.
- Oct. 76 Operational positions for first MCHAs determined.
Other US advisor contracts renewed.
- Dec. 76 First MCHA class finishes OJT supervision, completes 18-mo training
cycle.
All dispensary, midwifery equipment in place.
- Jan. 77 First MCHAs in place in RDs and RHCs, operational.

- Feb. 77 Construction completed on last 17 outstations.
- March 77 Participants selected, PIO/Ped.
- Apr. 77 MCHA trainees selected for third (second full MCHA cycle.
- May 77 Evaluation of MCHA training program begins
- June 77 First class graduates from last five Training Centers
Second class graduates from first eighteen Training Centers.
- July 77 All graduates begin supervised OJT at district outstations.
- Aug. 77 Participants depart.
- Sept. 77 MCH Central Estabs agree on civil service positions/
conditions for MCHAs.
- Oct. 77 Field position for graduates of first full MCHA cycle determined.
- Nov. 77 AID team visits Tanzania, tours MCHA Training Centers.
- Dec. 77 First full 18-school cycle graduates: first class in five
Centers, second class in thirteen Centers, complete cycles.
- Jan. 78 First full 18-school cycle of graduates in place in RDs
and RHCs.
- Feb. 78 First cycles of continuing education and midwife upgrading
begin.
- June 78 Project participant training completed.
- July 78 GOT assumes full recurrent costs of Training Centers.

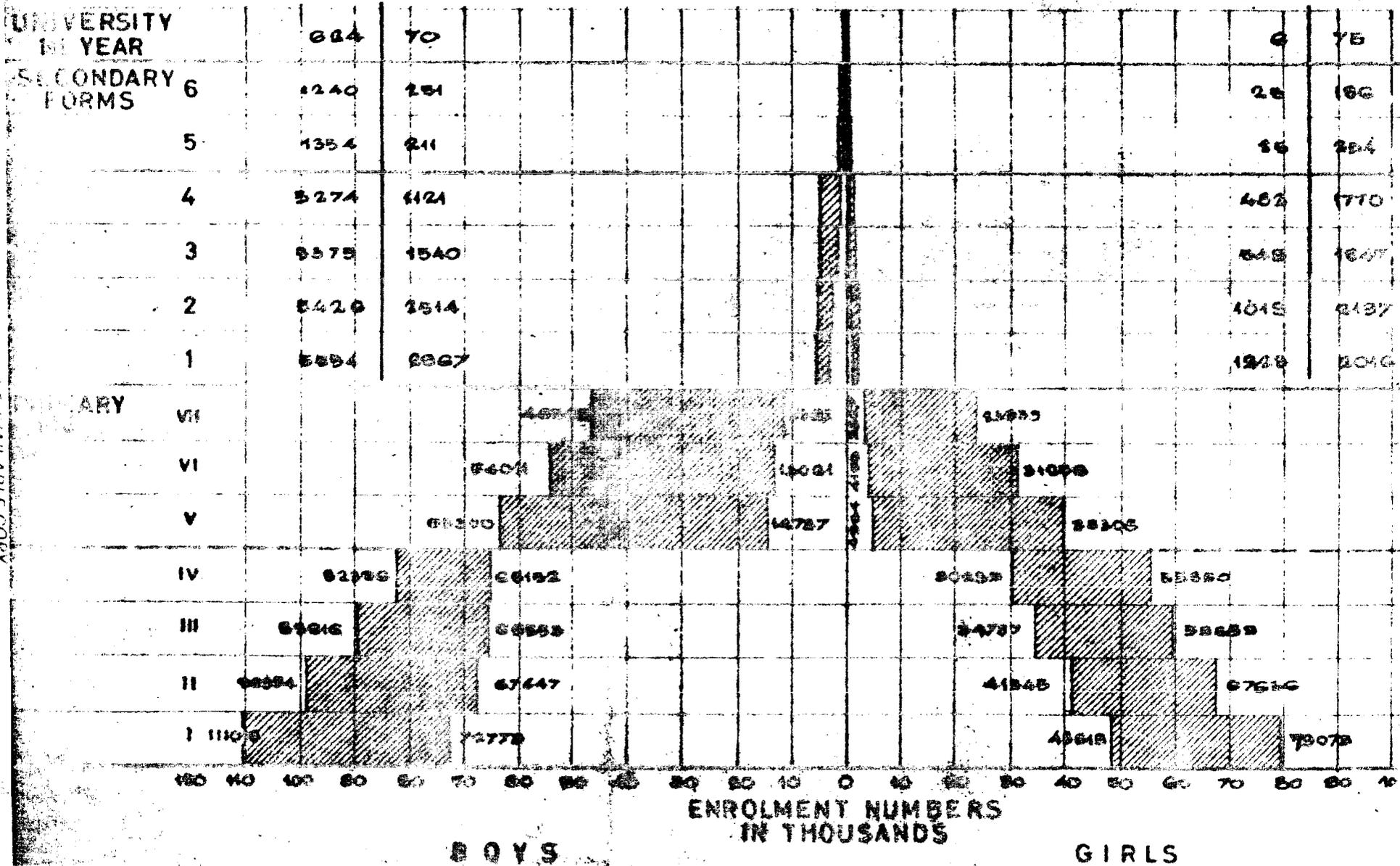
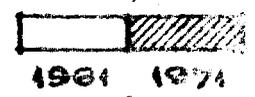
TANZANIA EDUCATIONAL PYRAMID COMPARATIVE DATA FOR PUBLIC SCHOOLS

1961 & 1971

KEY TO FIGURES



KEY TO FIGURES



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USAID/Tanzania MCH Aide Project
Input/Output Flow Chart

Year	1975	1976	1977	1978	1979	1980	Total
a. Spaces available	428	588	588	588	588	588	Non-Add
b. Student input per annum each January (18-month program)	324 ^{1/}	548 ^{2/}	588	588	588	-0-	2636
c. Graduate output per annum each July (18-month program)	-0-	265 ^{3/}	449	482	482	482	2160
d. Cumulative adjustment for career attrition among graduates ^{4/}	-0-	-0-	-5	-14	-24	-24	Non-Add
e. Cumulative, adjusted 18-month graduates available	-0-	265	709	1177	1635	2093	2093
f. Village midwife retrainee input per annum each July (5-month program assumed)	20	33	35	35	35	386	544
g. Village midwife <u>cum</u> MCHA output per annum each December	19	31	33	33	33	363	512
h. Cumulative adjustment for career attri- tion among retrainees	-0-	-0-	-1	-2	-2	-3	Non-Add
i. Cumulative, adjusted 5-month retrainees available	19	50	82	113	144	507	507

1/ Assumes 75% of capacity first year (relates to ANNEX G)

2/ Assumes 100% utilization capacity 13 schools and 75% utilization last 5 schools

3/ Assumes 82% of student input graduates program and is assigned (1% attrition/month)

4/ 2% p.a. against line c. prior years, cumulative

UNITED REPUBLIC OF TANZANIA

THE TREASURY

P.O. Box 111

Dar es Salaam

Ref No: TZA/50/7/19

7th September, 1972

U.S. Agency for International Development

P.O. Box 1130

Dar es Salaam

Sir,

MINISTRY OF HEALTH
MEDICINE PROGRAM

Reference is made to the Ministry of Health and you have indicated that you are in a position to provide a grant of Malariacide and DDT for the (1972 programme)

Annual and anti-malaria services in this country have fully been met. The grant is to be provided and provided through special arrangements for a grant of DDT and Malariacide. The Government now gives the above grant with special attention to public health services and to the strengthening of the public health services. This grant is being provided in one of the public health schemes for the development of the public health services.

Further, the development of D.D.T. services is a very important part of the programme in the public health services. As a result, the Government is providing technical assistance in the form of a grant of D.D.T. for the Ministry of Health in procuring a grant of D.D.T. for the development of D.D.T. services in the future.

Thank you for your very positive reply.

Yours sincerely,

(Signed)

(Name of Signatory)

PRINCIPAL SECRETARY

The Principal Secretary
Ministry of Health
Dar es Salaam

The Principal Secretary
Ministry of Economic Affairs
and Development
Dar es Salaam

The Principal Secretary
Ministry of Foreign Affairs
Dar es Salaam

TZA/50/7/19

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Headquarters

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Approved for Release by NSA on 05-08-2014 pursuant to E.O. 13526

SD

Calculation of Construction Budget

ANNEX C

(In these conversions, dollar figures estimated using exchange rate of 7.0 Tsh/dollar and rounding to nearest \$10.)

Training Schools of 36 Student Capacity

	<u>Sq. Meters</u>	<u>T. Shs/M</u> ²	<u>T. Shs</u>	<u>U.S. Dollars</u>
I. School Building			<u>104,760</u>	<u>15,000</u>
Classroom	64.8	700	45,360	
Office and Library	43.2	700	30,240	
Toilet	21.6	1,050	22,680	
Covered Way	21.6	300	6,480	
II. Recreation, Dining and 36-Bed Hostel			<u>236,580</u>	<u>33,800</u>
Recreation	21.6	500	10,800	
Dining	43.2	700	30,240	
Kitchen and Store	21.6	700	15,120	
Hostel (36 Beds)	178.2	650	115,830	
Corridor	40.5	300	12,150	
Covered Way	43.2	300	12,960	
Toilet	37.6	1,050	39,480	
III. Demonstration Area			<u>108,240</u>	<u>15,500</u>
Women's Examination	43.2	750	32,400	
Children's Examination Room	43.2	700	30,240	
Waiting Area	64.8	500	32,400	
Discussion Room	13.8	500	6,900	
Toilet	6.0	1,050	6,300	
IV. Two-bedroom House	43.2	750	<u>32,400</u>	<u>4,600</u>
V. Six-bed (average) Outstation hostels	43.2	600	25,920	
Four hostels (average) per training school			<u>103,600</u>	<u>14,800</u>
VI. Miscellaneous			<u>232,000</u>	<u>33,100</u>
Drainage			50,000	
Site Works			25,000	
Furniture			50,000	
Preliminaries and Contingencies			15,000	
School Equipment			50,000	
Vehicle (Land Rover)			42,000	
		TOTAL	817,580	116,800
		ROUNDED TOTAL	818,000	117,000
Total of 12 training schools of 36 student capacity			9,816,000	1,404,000

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Schools of 26 Student Capacity

	<u>Sq. Meters</u>	<u>T. Shs./m²</u>	<u>T. Shs.</u>	<u>U.S. Dollars</u>
I. School Building			<u>104,760</u>	<u>15,000</u>
Classroom	64.8	700	45,360	
Office and Library	43.2	700	30,240	
Toilet	21.6	1,050	22,680	
Covered Way	21.6	300	6,480	
II. Recreation, Dining and 26-Bed Hostel			<u>181,155</u>	<u>25,900</u>
Recreation	21.6	500	10,800	
Dining	43.2	700	30,240	
Kitchen and Store	21.6	700	15,120	
Hostel (26 beds)	128.7	650	83,655	
Corridor	25.2	300	7,560	
Covered Way	21.6	300	6,480	
Toilet	26.0	1,050	27,300	
III. Demonstration Area			<u>108,240</u>	<u>15,500</u>
Women's Examination Room	43.2	750	32,400	
Children's Examination Room	43.2	700	30,240	
Waiting Area	64.8	500	32,400	
Discussion Room	13.8	500	6,900	
Toilet	6.0	1,050	6,300	
IV. Two-Bedroom House	43.2	750	<u>32,400</u>	<u>4,600</u>
Six-bed (average) Outstation Hostel	43.2	600	25,900	
Three Hostels (average) per Training School			<u>77,700</u>	<u>11,100</u>
V. Miscellaneous			<u>211,000</u>	<u>30,100</u>
Drainage			48,000	
Site Works			24,000	
Furniture			48,000	
Preliminaries and Contingencies			14,000	
School Equipment			35,000	
Vehicle (Land Rover)			42,000	
		TOTAL	715,255	102,200
		ROUNDED TOTAL	<u>715,000</u>	<u>102,000</u>
Total for six training schools of 26 student capacity			4,290,000	612,000
TOTAL CONSTRUCTION				2,016,000
CONCURRENCE (15 percent)				302,400
GRANT TOTAL				<u>2,318,400</u>

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SUGGESTED LIST OF EQUIPMENT FOR DISPENSARIES

1.	Basins kidney 12 oz	3 @ 0.54	= \$ 1.62
2.	Basins kidney 28 oz.	- 1 @ 0.70	= 0.70
3.	Bowl stainless steel set of 2	- 2 @ 1.51	= 3.02
4.	Bowl solution deep	- 1 @ 1.35	= 1.35
5.	Bowl solution shallow	- 1 @ 1.92	= 1.92
6.	Sterilizer Large	- 1 @ 10.13	= 10.13
7.	Sterilizer Small	- 1 @ 5.53	= 5.53
8.	Sterilizer forceps 1 1/2 ins	- 2 @ 1.04	= 2.08
9.	Dressing Tray	- 1 @ 3.18	= 3.18
10.	Dressing forceps 2"	- 6 @ 0.46	= 2.88
11.	Knife handle No. 4	- 2 @ 0.37	= 0.74
12.	Knife blade surgical (pk + 6)	- 2 @ 0.30	= 0.60
13.	Stretcher army type	- 1 @ 21.39	= 21.39
14.	Examination table	- 1 @ 98.91	= 98.91
15.	Microscope monocular	- 1 @ 93.35	= 93.35
16.	Microscope slides (per box)	- 3 @ 0.44	= 1.32
17.	Microscope cover glasses (per box)	- 3 @ 0.34	= 1.02
18.	Dressing jar 72 oz.	- 2 @ 1.97	= 3.94
19.	Pail waste 13 qt.	- 3 @ 7.31	= 21.93
20.	Irrigator stainless steel	- 1 @ 2.04	= 2.04
21.	Measure graduated 500 ml.	- 2 @ 1.19	= 2.38
22.	Tray instrument covered	- 1 @ 2.48	= 2.48
23.	Apron, plastic	- 11 @ 0.57	= 6.84
24.	Thermometer clinical oral C°	- 12 @ 0.22	= 2.64
25.	B. P. machine	- 1 @ 13.98	= 13.98
26.	Stethoscope ford tube	- 2 @ 1.21	= 2.42
27.	Splinting wire cramer set of 2	- 2 @ 1.45	= 2.90
28.	Centrifuge hand operated	- 1 @ 15.22	= 15.22
29.	Centrifuge tubes graduated	- 12 @ 0.16	= 1.92
30.	Centrifuge tubes ungraduated	- 12 @ 0.05	= 0.60
31.	Large Pot (clothes boiling 40 litre)	- 1 @ 20.48	= 20.48
32.	Forceps dissecting curved tips	- 3 @ 0.35	= 1.05
33.	Forceps tissue 4 x 5 teeth 6 in	- 3 @ 0.71	= 2.13
34.	Needle suture set 6 in size	- 3 @ 0.16	= 0.48
35.	Scissors gauze 8 1/2 in	- 6 @ 0.51	= 3.06
36.	Scissors dissecting (6 1/2 in) straight	- 4 @ 0.70	= 4.20
37.	Scissors operating (5 1/2 in) sharp / blunt points	- 3 @ 1.48	= 4.44
38.	Scissors operating (5 1/2 in) blunt / blunt points	- 3 @ 0.48	= 1.44
39.	Control of communicable disease	- 1 @ 1.60	= 1.60
40.	Control of disease in the tropics	- 1 @ 7.63	= 7.63
41.	Spatule laboratory cry nickel 210 mm	- 3 @ 2.99	= 8.97
			\$ 378.05

SUGGESTED LIST OF MIDWIFERY EQUIPMENT

1.	Delivery bed	- 1 @ 500.00	= \$500.00
2.	Baby bath	- 1 @ 1.08	= 1.08
3.	Bed pan	- 1 @ 5.31	= 5.31
4.	Bicycle ladies 12" wheel 26 in	- 1 @ 24.50	= 24.50
5.	Bulk order supply of bicycle spare parts		= 2.50
6.	Rest beds	2 @	undetermined
7.	Midwifery kit "type 3"	- 1 @ 16.04	= 16.04
			\$ 179.52

- UNICEF Midwifery Kits includes:

Type I	- "Simple Kit" for full-time midwife (items 1-17)
Type II	- "Intermediate Kit" for indigenous midwife, including irrigation outfit (items 1-22)
Type III	- "Advanced Kit" for fully-trained midwife (items 1-33, plus perhaps optional items 34-39)

<u>Item No.</u>	<u>Description</u>	<u>Qty</u>	<u>Est. Cost</u>
1a)	Case, Aluminum, 12" x 8½" x 6"	1	\$ 3.89
	Or		
1b)	Bag, canvas, waterproof with replaceable washable cotton lining	1	7.34
2)	Apron, utility, clear vinyl plastic, 8-gauge, smooth finish, one-piece bib type	1	.51
3)	Pouch, clear vinyl plastic, approximate size 10" x 14"	1	.10
4)	Sheeting, clear vinyl plastic, 8-gauge, 36" x 72"	1	.59
5)	Brush, hand, white nylon, medium stiff, 14 x 6 rows, woodblock 3½" x 1½"	1	.20
6)	Soap box, aluminum, 2-piece type	1	.17
7)	Soap, toilet, 3-oz cake	1	.33
8)	Towel, huck, 12" x 20"	2	.18
9)	Scissors, general operating, straight 6" blunt/blunt; stainless steel	1	.68
10)	Forceps, sterilizer, Vaughn, 7½"; chrome	1	.21
11)	Basin, kidney, 10" x 4-3/8" x 2-1/8"; stainless steel	1	.90
12)	Bowl, sponge, pair of 2, 5½" x 2½"; stainless steel	pair	1.36
13)	Bottle, dropping, amber glass, ½ oz capacity	1	.04
14)	Bottle, amber, narrow-mouth, 2 oz capacity with bakelite screw top	1	.03
15)	Bottle, amber, wide-mouth, 2 oz capacity with bakelite screw top	2	.08
16)	Cotton, absorbent, non-sterile, "Merital" short staple ¼ lb per roll	roll	.13
17)	Gauze, 3" x 3", 16 ply, 20/12 mesh; in paper envelope	20	.21
18)	Irrigator, round ID 4¼", height 5¾", with flat handle, side spout located beneath handle, and suspension hole; stainless steel	1	1.99
19)	Clamp, screw, metal, Hoffman type with fixed bar	1	.06
20)	Connector, glass, straight, both ends 5/16" O.D.	1	.02
21)	Tubing, pure gum rubber, 9/32" I.D., 1/16" wall, (Irrigator tubing without rolled end) 4-foot length.	1	.19
22)	Tube, rectal, soft rubber, 20" long, one eye, open tip, size 12 Fr.	1	.20
23)	Catheter, female, soft rubber, solid tip, 2 eyes, size 12 Fr.	2	.32
24)	Forceps, hemostatic, straight Kelly, 5½", box lock; stainless steel	2	1.66
25)	Measure, tape, cloth, vinyl coated, graduated in centimetres and inches; 60" length.	1	.11
26)	Scale, spring, all metal construction, pocket style; chrome-plated, 15-lb capacity.	1	1.28
27)	Stethoscope, Ford type, binaural; chrome-plated metal parts, plastic bell and ear tips	1	1.10

<u>Item No.</u>	<u>Description</u>	<u>Qty</u>	<u>Est. Cost</u>
28)	Thermometer, clinical, oral, in plastic case, Centigrade or Fahrenheit (specify which)	1	\$.29
29)	Thermometer, clinical, rectal, in plastic case, Centigrade or Fahrenheit (specify which).	1	.29
30)	Urinalysis outfit; set comprising the following: -2 each test tube, pyrex, 16 x 150 mm -1 each bottle, narrow neck, 1 oz capacity, with screw cap attached; for acetic acid -1 each test tube holder, metal	1 set	.20
31)	Lamp, alcohol, 2-oz, chrome-plated brass with screw cap; 2½" diameter.	1	.87
32)	Sterilizer, stainless steel, 22-gauge, 8¾" x 3¼" x 1-5/8"	1	1.65
33)	Pins, safety, medium size, card of 12	card	.05

Optional Items: (Type III Only)

34)	Syringe, Luer, 2 cc	1	.50
35)	Needle, hypodermic, 22 G x 1¼", Luer Slip, rustless	2	.08
36)	Case, metal, for items 34 and 35	1	.19
37)	Ergot ampoules, aseptic, 1 cc Box of 6 ampoules	box	.90
38)	Ergotrate Maleate Tablets, No. 1572, 1/320 gr (0.2 mg)	10	.20
39)	Catheter, Mucus, with glass connector	1	.22

Costs (Including Packing charge) of Midwifery Kit items

Type I -	Items 1a to 17 in aluminum case (omitting item 1b)	\$ 10.50
	Items 1b to 17 in canvas bag (omitting item 1a)	14.00
Type II-	Items 1a to 22 in aluminum case (omitting item 1b)	13.25
	Items 1b to 22 in canvas bag (omitting item 1a)	17.00
Type III-	Items 1a to 33 in aluminum case (omitting item 1b)	20.00
	Items 1b to 33 in canvas bag (omitting item 1a)	23.75
Optionals -	Items 34 to 39 (For Type III only)	2.50
Type III & all optionals	Items 1a to 39 in aluminum case (omitting item 1b)	22.50
	Items 1b to 39 in canvas bag (omitting item 1a)	26.25

55

**POPULATION AND HEALTH FACILITIES
DISTRICT DISTRIBUTION (Provisional Figures)**

DISTRICT Name	Total Pop.* (000's)	HOSPITALS						HEALTH CENTRES						POPULATION NOT WITHIN 10 KMS. of:					
		No. of Hosp.	1 Pop. within				No. of R.H.C.s	2 Pop. within				No. of all Facil- ities	Hospital		R.H.C.		Any Health Facility		
			0-5 Kms.		0-10 Kms.			0-5 Kms.		0-10 Kms.			No.	3	No.	4	No.	5	
			(000's)	%	(000's)	%		(000's)	%	(000's)	%		(000's)	%	(000's)	%	(000's)	%	
Arusha	214.2	2	74.1	34.6	130.6	60.9	1	22.0	12.1	57.2	31.5	23	83.7	39.1	124.6	68.5	4.6	2.1	
Hanang	147.4	2	5.6	3.8	19.6	13.3	1	6.4	4.3	14.2	9.6	24	127.8	86.7	133.2	90.4	35.2	24.0	
Masai	106.9	2	1.8	1.7	6.8	6.7	2	2.4	2.2	4.2	3.9	28	100.1	93.6	102.7	96.1	64.8	60.6	
Mbulu	142.0	3	21.2	14.9	49.0	34.5	0	0	0	0	0	20	93.0	65.5	142.0	100.0	18.0	12.7	
Bagamoyo	117.5	1	7.3	6.2	12.7	10.8	0	0	0	0	0	19	104.8	89.2	112.4	100.0	32.2	27.4	
Kisarawe	180.5	1	3.0	1.7	8.0	4.4	1	8.0	4.4	14.6	8.1	19	172.5	95.6	165.9	91.9	51.0	28.2	
Mafia	16.7	1	1.4	8.4	6.2	37.0	0	0	0	0	0	8	10.5	63.0	16.7	100.0	0	0	
Mzizima (DSM)	348.5	(3)	275.8	79.2	304.8	87.5	0	0	0	0	0	(7)	43.7	12.5	75.7	100.0	18.4	5.3	
Rufiji	121.0	1	6.0	4.9	13.0	10.7	1	1.6	1.3	5.6	4.6	11	108.0	89.3	115.4	95.4	59.0	48.7	
Dodoma	321.0	3	30.9	9.6	42.7	13.3	3	6.2	2.1	26.0	8.7	42	278.2	86.7	271.4	91.3	69.2	21.6	
Kondoa	212.2	1	9.1	4.3	21.1	10.0	2	6.8	3.3	17.4	8.4	24	191.1	90.0	190.3	91.6	36.4	17.2	
Mpwapwa	176.2	1	10.8	6.1	16.0	9.1	3	14.0	8.1	32.0	18.4	28	160.2	90.9	141.8	81.6	50.4	28.6	
Iringa	252.6	2	31.9	12.6	50.3	19.9	1	2.6	1.1	7.0	3.0	29	202.3	80.1	223.9	97.0	77.8	30.8	
Mufindi	118.5	1	1.0	0.8	5.8	4.9	0	0	0	0	0	12	112.7	25.1	118.5	100.0	58.2	49.1	
Njombe	318.8	6	17.4	5.5	49.2	15.4	1	3.8	1.2	8.6	2.7	58	269.5	84.6	310.2	97.3	84.4	26.5	
Kasulu	207.5	3	42.6	20.5	99.4	42.1	0	0	0	0	0	32	118.2	56.9	207.6	100.0	17.0	8.2	
Kibondo	136.9	1	5.6	4.1	18.0	13.1	2	3.2	2.3	13.4	9.8	21	118.9	86.9	123.5	90.2	17.4	12.7	
Kigoma	128.9	2	32.2	25.0	49.6	38.5	1	8.0	7.4	28.2	26.2	19	79.3	61.5	79.4	73.8	14.2	11.0	

* Census of 1967.

1. Total population in District (i.e. rural and urban).
2. Rural population only, and percent of rural population.
3. In percent of total (rural and urban) population.
4. In percent of rural population only.

DISTRICT		HOSPITALS						HEALTH CENTRES						POPULATION NOT WITHIN 10 KMS. of:					
Name	Total Pop. (000's)	No. of Hosp.	Pop. within				No. of R.H.C.s	Pop. within				No. of all Facilities	Hospital		R.H.C.		Any Health Facility		
			0-5 Kms.		0-10 Kms.			0-5 Kms.		0-10 Kms.			No. (000's)	%	No. (000's)	%	No. (000's)	%	
			No. (000's)	%	No. (000's)	%		No. (000's)	%	No. (000's)	%								
Kilimanjaro	503.1	7	204.3	40.6	492.7	97.9	4	122.0	25.6	321.0	67.4	56	10.4	2.1	155.2	32.6	7.6	1.5	
Pare	149.6	3	24.0	16.0	57.4	38.4	2	12.8	8.6	39.6	25.1	38	92.2	61.6	112.0	74.9	9.6	6.4	
Musoma	355.6	2	23.6	6.6	39.8	11.2	1	7.0	2.1	17.0	5.0	54	315.8	88.8	323.2	95.0	128.8	36.2	
N. Mara	188.5	2	8.0	4.2	28.6	15.2	1	2.4	1.3	6.4	3.4	24	159.9	84.8	182.1	96.6	86.6	45.9	
Chunya	53.6	0	0	0	0	0	0	0	0	0	0	17	53.6	100.0	51.2	100.0	23.2	43.3	
Mbeya	192.7	2	20.7	10.7	39.3	20.4	2	8.4	4.7	31.6	17.5	16	153.4	79.6	148.6	82.5	36.6	19.0	
Mbosi	147.5	0	0	0	0	0	1	6.6	5.0	19.8	13.4	13	147.5	100.0	127.7	86.6	65.0	44.1	
Rungwe	360.0	5	55.7	15.5	156.7	43.5	1	2.8	0.8	8.8	2.5	36	203.3	56.5	347.1	97.5	17.0	4.7	
Sumbawanga	215.3	2	1.6	0.7	6.8	3.2	1	2.8	1.3	3.8	1.8	37	208.5	96.8	211.5	98.2	89.4	41.5	
Kilosa	193.8	2	9.7	5.0	27.3	14.1	2	10.2	5.4	19.0	10.0	27	166.6	85.9	170.4	90.0	26.8	13.8	
Morogoro	316.4	5	49.7	15.7	83.3	26.3	3	17.0	5.8	48.8	16.8	31	233.1	73.7	242.3	83.2	69.0	21.8	
Ulanga	174.9	3	20.0	11.4	41.2	23.6	1	5.6	3.2	8.6	5.0	38	133.7	76.4	166.3	95.0	16.2	9.3	
Kilwa	98.0	3	5.8	5.9	15.6	15.9	0	0	0	0	0	25	82.4	84.1	98.0	100.0	27.2	27.8	
Lindi	241.4	2	19.0	7.9	27.6	11.4	3	15.4	6.8	28.8	12.6	31	213.9	88.6	199.3	87.4	50.2	20.8	
Masasi	213.7	2	15.6	7.3	38.0	17.8	2	8.4	4.0	24.4	11.4	31	175.7	82.2	189.3	88.6	35.2	16.5	
Mtwara	134.7	1	24.4	18.1	31.4	23.5	1	2.4	2.1	6.8	6.0	14	103.3	76.7	107.5	94.0	30.2	22.4	
Nachingwea	80.5	2	6.8	8.4	17.6	21.8	1	2.6	3.4	4.6	6.0	13	62.9	78.2	72.1	94.0	37.0	46.0	
Nevala	272.9	1	11.6	4.5	30.0	11.0	3	24.4	9.0	84.0	30.8	14	242.9	89.0	188.9	69.2	61.2	22.4	
Geita	371.4	2	9.0	2.4	30.2	8.1	3	11.2	3.0	35.6	9.6	45	341.2	91.9	335.8	90.4	157.2	42.3	
Kwimba	305.5	1	6.8	2.2	12.1	4.0	3	23.4	7.7	65.0	21.3	23	293.3	96.0	240.5	78.7	76.0	24.9	
Mwanza	268.9	2	48.7	18.0	73.3	27.2	3	1.6	6.7	38.0	16.2	23	196.4	72.8	196.1	83.8	51.6	19.1	
Ukerewe	109.2	1	16.4	15.0	33.8	30.9	3	30.8	28.2	70.2	64.2	15	75.5	69.1	39.1	35.8	1.4	1.3	

DISTRICT		HOSPITALS					HEALTH CENTRES					POPULATION NOT WITHIN 10 KMS. of:							
Name	Total Pop. (000's)	No. of Hosp.	Pop. within				No. of R.H.C.s	Pop. within				No. of all Facilities	Hospital		R.H.C.		Any Health Facility		
			0-5 Kms.		0-10 Kms.			0-5 Kms.		0-10 Kms.			No.	%	No.	%	No.	%	
			No. (000's)	%	No. (000's)	%		No. (000's)	%	No. (000's)	%		(000's)	%	(000's)	%	(000's)	%	
Mbinga	144.1	2	9.0	6.2	29.0	20.1	1	6.6	4.6	15.8	11.0	20	115.1	79.9	128.3	89.0	36.8	25.5	
Songea	151.4	2	13.4	8.9	27.2	18.0	3	2.8	2.0	9.6	6.6	33	124.2	82.0	136.4	93.4	52.8	34.9	
Tunduru	97.6	2	7.4	7.6	15.2	15.6	0	0	0	0	0	22	82.4	84.4	97.6	100.0	33.6	34.4	
Kahama	147.6	3	10.4	7.1	21.0	14.2	1	2.8	2.0	6.4	4.4	21	126.6	85.8	138.0	95.6	46.4	31.4	
Maewa	430.9	1	6.6	1.5	16.8	3.9	3	4.2	1.0	15.4	3.6	31	414.1	96.1	415.5	96.4	178.8	41.5	
Shinyanga	320.9	3	19.7	6.1	48.1	15.0	4	17.6	5.6	37.8	12.0	n.a.	272.8	85.0	278.0	88.0	n.a.	n.a.	
Iramba	184.0	1	7.4	4.0	16.4	8.9	0	0	0	0	0	22	167.6	91.1	184.0	100.0	43.6	23.7	
Manyoni	80.2	1	4.0	5.0	9.6	12.0	2	7.8	9.7	14.0	17.5	15	70.6	88.0	66.2	82.5	22.2	27.7	
Singida	193.8	2	17.5	9.0	41.9	21.6	2	12.8	6.9	34.6	18.8	15	151.9	78.4	149.7	81.2	47.6	24.6	
Mpanda	60.8	1	3.4	5.6	13.0	21.4	2	2.4	3.9	5.0	8.2	14	47.8	78.6	55.8	91.8	24.8	40.8	
Nzega	302.0	2	11.4	3.8	35.8	11.2	0	0	0	0	0	26	268.2	88.8	302.0	100.0	99.4	32.9	
Tabora	200.1	2	28.6	14.3	40.2	20.1	1	2.0	1.1	5.0	2.8	26	159.8	79.9	174.0	97.2	86.6	43.3	
Handeni	133.2	3	11.8	8.9	25.2	18.9	2	4.6	3.5	13.4	10.1	25	108.0	81.1	119.8	90.0	35.8	26.9	
Korogwe	140.3	1	14.3	10.6	41.5	29.6	2	9.8	7.3	48.8	36.5	29	98.8	70.4	84.8	63.5	10.0	7.1	
Lushoto	210.5	2	32.4	15.4	80.4	38.2	2	27.2	13.0	38.0	18.2	42	130.1	61.8	170.7	81.8	1.0	0.5	
Pangani	28.4	1	4.4	15.3	12.4	43.5	1	6.2	24.3	10.0	39.3	8	16.1	56.5	15.5	60.7	1.8	6.3	
Tanga	258.6	3	90.1	34.8	119.1	46.0	2	17.2	8.7	37.2	18.8	30	139.6	54.0	160.4	81.2	2.8	1.1	
Biharamulo	81.9	2	8.0	9.8	21.2	25.9	0	0	0	0	0	23	60.7	74.1	81.8	100.0	4.0	4.9	
Bukoba	383.1	5	64.9	17.0	175.3	45.8	1	12.0	3.2	37.0	9.9	21	207.6	54.2	338.0	90.1	45.4	11.8	
Karagwe	97.4	1	5.2	5.3	11.9	12.1	2	19.0	19.5	39.2	40.2	20	85.6	87.9	58.2	59.8	11.2	11.5	
Ngara	96.3	3	3.0	3.1	9.8	10.2	1	2.8	2.9	5.2	5.4	22	86.5	89.8	91.1	94.6	36.0	37.4	
TOTALS	11,958.7	128	1,534.0	12.8	2986.1	25.0	96	574.6	5.1	1480.6	13.1	1510+	8972.4	(75.0)	9809.3	87.0	11059.2+	21.8+	

+ Excludes District

TANZANIA CHRISTIAN MEDICAL ASSOCIATION

P.O. Box 9433, DAR ES SALAAM, TANZANIA

Telephone: 27720

Mansfield Street
above the Cathedral Bookshop 3rd Floor

Or Ref: 007/C/4/73

Your Ref:

Date: 4th January, 1973

The Principle Secretary,
Ministry of Health,
P.O. Box 9083
Dar es Salaam. Attention of Dr. Rutasatara.

Dear Dr. Rutasatara,

TRAINING OF VILLAGE MIDWIVES.

Your HET/30/72 of 6th. November 1972 refers.

I enclose a draft for the syllabus of the M and C H Aids, as they are now to be called, for your consideration.

I presume that this cadre will no longer mainly consist of mature women (HE.200/13 of 30th June 1964) but will be mostly ex-primary school girls, or Nursing Assistants with primary education.

I agree that the training should be mainly apprenticeship, but as they will be working for the most part unsupervised in rural dispensaries, a certain amount of theory is essential for them to understand the implications of what they are doing. This, however should be very carefully interwoven at all stages with practical training. I cannot stress enough the vital importance of theoretical and practical being at the same time and place with the implications of the one to the other made explicit all the time.

If these women are to take the responsibility which they will have to do, I do not think they can absorb enough in a year and a half and think the training must be two years.

I have said nothing about evaluation (examinations) but suggest this includes continuous assessment and tests which include objective questions.

I think some of the Nursing side of what I have written is not sufficiently full. I am therefore copying this to Sister Edith Frances at Magila of comments. I hope this is in order.

The Antenatal and Delivery section I discussed with Dr. Everett at the Faculty of Medicine. She also showed me a letter (T.1/4/481 of 7th. December 1972) from Regional Medical Officer, Mtwara, which seemed to me to have several relevant suggestions.

I return your old syllabus herewith,

Yours sincerely,

/s/ H.M. May
(Dr.) H.M. May

Secretary: T.C.M.A.

cc:

Dr da Silva Rosa.

cc:

The Sister Edith Frances CSR, Magila.

cc: Dr. M. Kaisi, Mtwara

UMP/stl

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54'

PROVISIONAL DRAFT SYLLABUS FOR M.G.H. AIDES

Nursing:

Routine cleaning of the ward and annexes.
Care of bedding and Mackintoshes.
Necessity of keeping covers on pillows and socks on mattresses.
Prevention and treatment of bed-bug infestation of beds.
(Delete bed-making and use of blocks?)
Temperature, pulse, and respiration.
Simple record-keeping. Charts.
Catheterisation.
Enema with tube and funnel.
Common medicines.
Common lotions.
Sepsis, asepsis antiseptics. Simple explanation.
Sterilisation. Methods.
Disinfection of equipment. Methods.
Diet for patients and importance of fluid intake.

Hygiene:

Personal and domestic cleanliness.
Disposal of rubbish, excreta, placenta, etc.
Water: prevention of contamination, purification, storage.
Care of food, clean handling.
Care of milk. Boiling.
Ventilation.
Prevention of mosquito breeding. Use of nets.
Flies Dangers.
Essential points in construction and care of pit latrines.
Use of chamber or special basin for young children (secaris).

Baby Care - Infant Welfare:

Management of breast feeding.
Dangers of bottle feeding. Use of cup and spoon.
Weaning. Importance of different classes of food and milk.
Importance of adequate fluid, calories, and protein.
Importance of love of single mother or mother-substitute.
Psychological effects on child at time of birth of next baby.

Nutrition:

Common sources of animal protein) use food.
Common sources of plant protein)
Absolute necessity of using easily obtainable inexpensive
sources of protein of that particular area
Brief explanation of vitamins.

Care of Newborn:

The normal newborn.
Asphyxia. Predisposing causes: long labour.
Management. Vital importance of getting O₂ to brain quickly.
Cerebral baby. Cause: disproportion skull. Cerebral cry.
Management: Keep quiet and sedate.
Hypothermia. Importance of keeping newborn warm.
Seven common congenital abnormalities.
Danger signs in neo-natal period: failure to suck, cyanosis,
convulsions, jaundice, pallor.
Danger of infection. Treat seriously skin and respiratory
infections.
Tetanus neonatorum. Cause, early signs, prevention. Management:
sedate and refer to hospital.
Prematurity. Paramount importance of warmth.

Ailments

Malaria. Fever settles quickly if treatment given and absorbed.

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5

Can present as severe anaemia with normal or sub-normal temperature.
Cerebral Malaria.
Convulsions. Importance of clear airway and sedation.
If does not respond to antimalarial, suspect meningitis.

Gastro-enteritis:

Importance of replacement of fluids and salts, and calories.
Simple salt/sugar/water solution (see Maurice King).
DO NOT STOP BREAST-FEEDING.

Measles:

Recognition. Care. Complications, Prevention.

Pertussis:

Recognition. Care, Complications. Prevention.

Tuberculosis:

Suspect in marasmic child. Usually no cough.
Adenitis. Heaf test.

Trachoma: (in areas where common)

Importance of washing face with water. Treatment. Complications.

Malnutrition:

Kwashiokor. Marasmus. Most cases have signs of both to some extent.
Predisposing causes: Poverty, ignorance.
Intercurrent disease, TB, Multiparity, Polygamy.
Divorce, Working mother. Unloved wife. Unmarried mother.
Necessity of sympathetic understanding of her different culture.
Early signs. Failure to gain weight. Wasting in upper arms.
Late signs.
Treatment: Easily obtainable inexpensive local protein in early stages. Find cause (see above) and deal as far as possible. Let mother look after her own child, and teach as she does so.

Anaemia: Malaria much the commonest cause in babies.

Use of iron and folic acid. Always give anti-malarial in cases of anaemia.

Intestinal Worms: Hookworm, Roundworm. Others where common.

Skin Infections: Scabies. Impetigo. Boils. Tinea.

Refer any patches of decreased pigment. Leprosy.

Under-Five Clinic:

Organization.
Importance of weighing.
An absolute understanding of the weight chart and how to fill it in.
Care and filing of records (very important and virtually never done in rural clinics).
Immunization. DPT, Polio, Smallpox, Measles. Only simple explanation of theory of immunization.
Importance of oral iron.
Ask about prophylactic anti-malarials.

Ante-natal and Maternity:

Anatomy of pelvis and fetal skull and of pelvic organs with models.
Mechanism of labour. Simple description and demonstration with models.
Organization of ante-natal clinic.
Importance of early attendance.

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61

History:

Vital importance of good history.
 Obstetric history: Of abnormal delivery, forceps, vacuum
 expiration, Caesarean section, prolonged labour. Of
 stillbirth or neonatal death.
 Of abnormal third stage, PPH or retained placenta.
 History of present pregnancy. LMP. Ask about any bleeding.
 Moslem calendar in Moslem areas.

Examination:

At each visit: General exam for anaemia and edema. BP in areas
 where PET common.
 Abdominal exam. Fundus, lie, presentation and foetal heart.
 At first visit: Height.
 Abnormalities:
 Anaemia. Signs of PET.
 Abdomen.
 Stress danger of any ante-Partum bleeding. Transverse lie.
 Breech. Multiple pregnancy. Big baby.

Treatment:

Anaemia. Stress importance of oral iron at each attendance.
 Folic acid.
 Hookworm treatment as soon as possible after fourteen weeks
 without stool examination in endemic areas.
 Malaria prophylaxis where possible

Reasons for referring for hospital delivery:

Better to refer many cases than have one calamity.
 General reasons. Anaemia and PET.
 Obstetric reasons. Disproportion. Suspect in: Patients with
 bad history. Short stature. Limp.

Abortion:

Description and management.

Ectopic:

Brief description. Any woman in child-bearing age with severe
 pallor must be presumed to have ectopic until proved otherwise.

Conduct of Labor:

Admission. Examination as at ANC. Fundus.
 First and second stage of labor management.
 Early recognition of complications and referral.
 Care of patients on journey.
 Importance of sending relatives as blood donors.
 Management of third stage.

Post partum haemorrhage:

Predisposing causes: Past history of PPH. Anaemia (by increasing
 danger of even small PPH)
 Prolonged labor. Uterine distension e.g. trauma. High parity.
 Full bladder.
 All except last should be reason for hospital delivery.
 Prevent: By proper referral to hospital.
 By proper management of third stage
 Management of established case. Ergometrine. Massage.
 Catheterise.
 Treat shock with any fluid available.
 Manual removal if other methods fail.
 Traumatic causes.

Ruptured Uterus: Suspect when pain continuous, especially in patient of
 high parity.

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62

Puerperium. Care of breasts. Cleaning of vulva. Use of pads.
 Lochia. Abnormalities of lochia.
 Infection of the genital and urinary tracts.

Child Spacing:

Dangers of high parity. Haemorrhage. Ruptured Uterus,
 Malpresentation. Over-confident mother. Larger babies.
 Danger to child of early weaning.
 Poverty.

Methods: Brief description of methods.

Management of patients using contraceptive methods:

Pills. Must be taken regularly even if bleed. ~~can.~~
 Acts by preventing ovulation, so missed doses mean unsafe
 till next period.

Injections. Must be given every three months. May cause
 amenorrhoea irregular or heavy bleeding. For heavy bleeding
 give stilboestrol 1 mg daily x 7 days.

Loop. Expect some increased menstrual pain or bleeding for first
 three months. If severe or prolonged bleeding remove.

Barrier. Condoms.

Home-made barriers.

Any method is better than none.

Health Education:

Importance of understanding beliefs and customs of local people.

Importance of audience participation, of Instructional Material.

Flannelgraphs. Cooking Demonstrations.

Patients doing cooking themselves.

Training School should have its own garden and encourage students
 to have their own at their dispensaries.

M.C.H. Aides Training:
Intake and Output.

District	Estimated Pop. '000, 1972	Intake (1)	Output
ARUSHA ^{1/}	250.1	7	6
Hanang	157.4	6	5
Mbulu	184.0	6	5
Masaai	122.2	5	4
	713.7	25	20
COAST			
Mzizima ^{1/}	100.2	4	3
Bagamoyo	129.5	5	4
Kisarawe	188.8	6	5
Rufiji	124.8	5	4
Mafia	18.2	2	2
	561.5	22	18
DODOMA			
Hwapa	354.0	11	9
Mpwapwa	202.7	7	6
Kondoa	233.8	9	7
	790.5	26	22
IRINGA			
Mufindi	297.1	10	8
Njombe	146.7	5	4
	356.4	12	10
	800.2	27	22
KIGOMA			
Kibondo	142.2	5	4
Kasulu	216.9	7	6
	144.9	5	4
	504.0	17	14
KILIMANJARO ^{1/}			
Rombo	467.6	13	11
Pare	120.6	5	4
	172.9	5	5
	761.1	24	20
MUSOMA			
Bunda	278.7	9	7
Tarime	140.3	5	4
	213.3	7	6
	632.3	19	17
MBEYA			
Chunya	221.2	7	6
Mbozi	88.4	4	3
Rungwa	174.6	6	5
Kyela	299.8	10	8
Sumbawanga	101.5	4	3
	255.2	8	7
	1,140.8	59	32

District	Estimated Pop. '000, 1972	Intake (1)	Output
MOROGORO	341.1	11	9
Kilosa	217.8	7	6
Ulanga	191.8	6	5
	750.7	24	20
LINDI	259.3	9	7
Kilwa	142.9	5	4
Nachingwea	96.9	4	3
	499.1		14
MTWARA	148.2	5	4
Masasi	269.5	2	7
Newala	303.8	1	8
	721.5	8	19
MWANZA	292.7	10	8
Geita	476.0	13	11
Kwimba	324.6	10	8
Ukerewe	116.1	4	3
	1,209.4	37	30
SONGEA	170.9	6	5
Mbinga	169.2	6	5
Tunduru	108.0	1	3
	488.1	16	13
SHINYANGA	356.9	1	9
Maswa	497.8	1	13
Kahama	161.3	1	5
	1,016.0	3	27
SINGIDA	200.5	1	6
Manyoni	99.5	4	3
Iramba	188.3	6	5
	488.3	11	14
TABORA	211.0	7	6
Nzega	340.4	1	9
Mpanda	68.7	3	2
	619.1	11	17
^{1/} TANGA/Muheza	289.7	11	7
Handeni	155.0	6	5
Korogwe	157.5	1	5
Lushoto	71.5	1	5
Pangani	31.9	3	2
	805.6	22	24

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BUKORA	424.7	13	11
Ngara	97.2	4	3
Karagwe	116.6	5	4
Biharamulo	92.4	4	3
	730.9	26	21
Totals (64)	11,225.8	445	304

There will be a training outstation constructed in each District. These stations will have 6 hostel units for 6 M.C.H. Aides each. The number of units will depend on District output.

1/ The urban population in these four districts, which contain the four largest towns in Tanzania, have been excluded from the calculation.

(1) Based on one M.C.H. Aide per 30,000 people which gives us the planned national intake and output until the year 1980.

USAID OPERATIONAL SUPPORT COSTS

ANNEX I

Fiscal Year

1. FY 1975 (January - June 1975)	\$105,950
a. 13 units x 6 months @ \$8,150 (100%) =	\$105,950
2. FY 1976 (July 1975 - June 1976)	231,460
a. 13 units x 6 months @ \$8,150 (100%) =	105,950
b. 13 units x 6 months @ \$6,520 (80%) =	84,760
c. 5 units x 6 months @ \$8,150 (100%) =	40,750
	<u>231,460</u>
3. FY 1977 (July 1976 - June 1977)	221,680
a. 13 units x 6 months @ \$6,520 (80%) =	84,760
b. 13 units x 6 months @ \$4,890 (60%) =	63,570
c. 5 units x 6 months @ \$8,150 (100%) =	40,750
d. 5 units x 6 months @ \$6,520 (80%) =	32,600
	<u>221,680</u>
4. FY 1978 (July 1977 - June 1978)	154,420
a. 13 units x 6 months @ \$4,890 (100%) =	63,570
b. 13 units x 6 months @ \$2,600 (40%) =	33,800
c. 5 units x 6 months @ \$6,520 (80%) =	32,600
d. 5 units x 6 months @ \$4,890 (60%) =	24,450
	<u>154,420</u>
5. FY 1979 (July 1978 - June 1979)	92,440
a. 13 units x 6 months @ \$2,600 (40%) =	33,800
b. 13 units x 6 months @ \$1,630 (20%) =	21,190
c. 5 units x 6 months @ \$4,890 (60%) =	24,450
d. 5 units x 6 months @ \$2,600 (40%) =	13,000
	<u>92,440</u>
6. FY 1980 (July 1979 - June 1980)	42,340
a. 13 units x 6 months @ \$1,630 (20%) =	21,190
b. 5 units x 6 months @ \$2,600 (40%) =	13,000
c. 5 units x 6 months @ \$1,630 (20%) =	8,150
	<u>42,340</u>
7. FY 1981 (July 1980 - January 1981)	8,150
a. 5 units x 6 months @ \$1,630 (20%) =	8,150
	<u>8,150</u>
	<hr/>
Grand Total	\$856,440

3) Recurrent Costs \$ 856,000

a. Training Schools (average)	T. Shs.	
Principal	11,000	
One full-time teacher (equivalent)	9,000	
Messenger, cleaner, cook @3,480	10,440	
Driver	3,480	
Electricity and water	9,000	
Food, travel and books ^{2/}	27,000	
Allowances ^{2/}	6,600	
Transport	7,500	
Teaching Materials ^{2/}	2,200	
Miscellaneous (10% of total)	<u>8,000</u>	
ROUNDED TOTAL	94,220	13,400
b. Outstations for practical training (average)		
Food and allowances (average) ^{3/}	15,000	
Travel and other (average) ^{3/}	<u>5,000</u>	
TOTAL	20,000	2,900
Total per average Training School per year	114,000	\$ 16,300
Total U.S. Recurrent Cost Input ^{4/}		

^{2/} Based on an average of 22 students per Training Center cycle (average intake is 25, average expected output is 20): 100 shillings per student month for food, travel and books; 300 shillings allowances per student; 100 shillings teaching material per annum per student.

^{3/} Based on an average of 20 students in practical training per training school; 750 shillings food and allowances per six-month period per student, 250 shillings travel and other expenses per six-month per student.

^{4/} U.S. recurrent costs are based on a 100-80-60-40-20 percentage scale over a five-year period. In Year One, 13 of the 18 clinics will be constructed and no outstation training will occur.

A. MONITORING OF CONSTRUCTION

General responsibility for inspection of the works will be assigned to GOT ComWorks. The ComWorks Central Office in Dar es Salaam will make periodic inspections of the construction, the frequency of which will be determined by the stage of construction.

The Regional Engineer in each region will be responsible to the Principal Secretary ComWorks for assuring construction meets the standards specified. The Regional Engineer will make site inspections on a day to day or week to week basis, depending upon the stage of construction. In most cases he will assign a "check of the works" to the project who will provide continuous inspection.

The REDSO Engineering Office in Dar will inspect the projects at least monthly during the construction, and more often if it is considered warranted. Any deficiencies noted in the construction will be brought to the attention of ComWorks, and corrective action will be taken by ComWorks to rectify the deficiencies, and prevent insofar as possible, any reoccurrence of deficiencies during the construction.

B. PAYMENT PROCEDURES

Payments for construction will be made by the GOT who will be reimbursed by AID as per the standard procedures. If necessary, to assist the Government, a revolving fund may be established wherein AID would initially deposit into the fund a percentage of the construction costs. The funds would be drawn against by the GOT for payments of mobilization advances, and the monthly construction progress payments, or in the case of force account as payments for materials and labour. The Government would request that AID make replenishment payments into the fund, based on certified invoices for valid expenditures from the fund.

All payments would be made against valid and certified documents prepared by the Regional Engineer usually on a monthly basis. These payment documents would be submitted to the Quantity Surveying Division Central Office for further certification prior to payment by ComWorks. After payment, these documents would constitute the basis of the request to AID for additional payments into the revolving fund.

C. ABILITY OF THE GOVERNMENT OF TANZANIA TO MAINTAIN THE PROPOSED FACILITIES

The past history of maintenance of USAID funded building construction in Tanzania has been acceptable. The standard of maintenance, although less than would be acceptable in the United States, has been adequate to prevent the structures from deterioration to the extent that the serviceability is reduced. In some cases the esthetic qualities have suffered due to lack of paint, etc., but maintenance to assure the effective use of the facilities has, in all the cases, been satisfactory. Examples of maintenance of US funded facilities are as follows:

1. University College

USAID financed construction of a complex of buildings situated at University Hill in Dar es Salaam and construction was started in 1964 and completed by 1967. All of these buildings, since their completion, occupation, are very well maintained. University College has its own maintenance organization with a qualified staff and adequate maintenance facilities.

2. Morogoro Agriculture College

The construction of this College was completed in late 1968. The College buildings, including staff houses and hostel facilities, constitute a large complex which is situated at Morogoro. These projects have been visited frequently, by AID officials since their completion, and are known to be very well maintained.

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70

3. Regional Office Blocks

Under a loan, seven regional office blocks were constructed in seven regions (Moshi, Songea, Iringa, Singida, Kigoma, Musoma, and Shinyanga) in Tanzania. All blocks provide office space for the regional government. They are three-story frame structures. The construction was completed in late 1967. Since then AID Engineers have visited these blocks and have found they are adequately maintained, and in continuous use.

4. District Training Centers

Fourteen District Centers, two Community Centers and two Farm Training Centers were built in 14 districts throughout Tanzania. The training center complex consist of three hostels, a kitchen/dining building, office/teaching blocks and staff houses. All buildings were completed in 1967-1968. These buildings have been found to be adequately maintained.

5. Teachers Training College

A complex of two dormitories, classrooms, library, staff quarters, an administration block and a dining/recreation block were constructed in Dar es Salaam in year 1967. The college is in operation and has been well maintained since its completion.

Based on this history of acceptable maintenance by the GOT, USAID/T feels confident that the proposed capital construction will be adequately maintained, and fully utilized.

D. IMPLEMENTATION PLAN FOR CONSTRUCTION

CHRONOLOGY

<u>Target Date</u>	<u>Action</u>	<u>Action Responsibility</u>
1. June 15, 1973	Final working drawings (excluding site plans) and outline specifications adjusted cost estimates for standard MCHA training center submitted; select quantity surveyor and request AID approval.	GOT ComWorks Buildings and Quantity Survey Sections
2. June 20, 1973	Final working drawings cost estimates and outline specs approved	REDSO
3. June 30, 1973	Site data submitted by regional engineers to ComWorks; quantity surveyor approved by AID and signed contract with ComWorks	ComWorks REDSO
4. July 15, 1973	General construction plan for each site submitted AID	ComWorks
5. July 25, 1973	General construction plan approved by AID; REDSO commences discussions with quantity surveyor re tender documents provisions	REDSO ComWorks
6. July 30, 1973	Submit draft CBD notice re construction services for AID approval	ComWorks
7. August 5, 1973	CBD notice approved by REDSO and cabled Chicago	REDSO

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-71-

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|------------------------|---|---------------------------|
| 8. August 15, 1973 | CBD notice published; QS submits final draft tender documents for ComWorks and AID review | CBD
QS |
| 9. August 30, 1973 | Draft tender documents approved | ComWorks/REDSO |
| 10. September 15, 1973 | Tender documents (IFB) released in Dar by Central Tender Board (CTB); PIO/C's sent AID/W for GSA construction materials procurement | ComWorks
REDSO |
| 11. September 30, 1973 | AID/W coordinates GSA procurement | Com/PO/SA/GS |
| 12. November 15, 1973 | Tenders opened | CTB |
| 13. December 15, 1973 | Tenders awarded with AID approval | CTB and REDSO |
| 14. January 1, 1974 | Contractors' NIP issued; contractors take possession of sites; GSA ships construction materials | CTB
Contractors
GSA |
| 15. February 15, 1974 | GSA-procured materials arrive Dar | ComWorks |
| 16. March 15, 1974 | GSA-procured materials delivered at sites | ComWorks
REDSO |
| 17. January 1, 1975 | MOH/ComWorks takes delivery of completed training centers | - |

NOTE: Items 10 through 17 apply to construction of the first thirteen MCHA training centers and associated "outstations". The same chronology and items will exist for the remaining five training centers, under the phase two (second year) construction plan, with all facilities completed by January 1976.