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SWAZILAND GOVERNMENT

PROVISIONAL PLAN FOR THE DEVELOPMENT OF HEALTH SERVICES

MINISTRY OF HEALTH, MBABANE

AUGUST, 1975

1. Introduction
2. Present situation
  - Ministry of Health Budget
  - Hospitals
  - Rural Clinics
  - Preventive Services
  - Manpower
  - Training
3. General Strategy for development of health services, 1975 - 84
4. Detailed Proposals
  - Hospitals
  - Rural Services
  - Public Health Services
  - Training
  - General Services and Administration
5. Financial Projections
  - Recurrent Budget Projections 1975 - 84
  - Investment Programme, 1975 - 83
6. Manpower Requirements
  - Ministry of Health establishment, 1975 - 84
  - Training requirements.
7. Capital Aid and Technical Assistance Requirements

/2.....

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Annex. (not in all copies)

- I Population within 5 mile radius of existing clinics.
- II Possible locations for new rural clinics.
- III Proposed standard Facilities at rural clinics.
- IV Renovation Programme for existing rural clinics.  
(to be completed)
- V Possible locations for Rural Health Centres
- VI Proposed standard facilities at Rural Health Centres.
- VII Staff per hospital bed and per admission at Government hospitals.
- VIII Cost breakdown for services at Mbalane Government Hospital. (to be completed).

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1. INTRODUCTION

This plan is intended to establish the long-term framework for the development of Government health services in Swaziland, and to lay down the major components of the Ministry of Health's investment and recurrent budget programmes, and manpower requirements for the next ten years. As such, it will form part of the Kingdom's national development plans for this period.

Many of the proposals are based on the report of Mr. Oscar Gish, a health planning consultant provided by the U.S. Agency for International Development. However, a number of modifications and additions have been made to these original proposals, and the final plan has been prepared as a result of consultations between the Ministry of Health and the Ministry of Finance and Economic Planning.

## 2. PRESENT SITUATION

### a) Ministry of Health Budget

The 1974/5 Recurrent budget of the Ministry of Health was just over E2½ million. However, the present organisation of the accounting system makes it difficult to ascertain the full cost of the various parts of the health service. The cost of drugs for all hospitals clinics and health centres is allocated to the central Medical Stores, rather than to each individual institution, and the personal and other costs of the rural clinics are included in the costs of the hospital to which they are attached, rather than being shown separately. Action has been taken to alter this situation, and, for the 1975/6 budget onwards, each institution will have a separate allocation for drugs, and the budgets for the rural clinics will be separated from the hospitals.

Based on estimates of the amount of drugs used by each institution, it has been calculated that 60% of the 1974/5 budget was allocated to the seven Government hospitals. A further 11% was allocated as grants to the mission services, and the major part of this was also spent on hospital services. Rural and Preventive services received less than 19% of the total budget, with the remaining 10% being allocated to central services and administration.

The capital Budget allocations for health services have been in the region of E3-400,000 per annum in recent years, the major part of which has been for hospital development. However, there have been severe problems of implementation in recent years, and actual expenditure has been well below the budgeted allocations.

### b) Hospitals

There are seven government hospitals, containing approximately 1000 beds, with about 600 beds in the five general hospitals and 400 in the mental and T.B. long-stay institutions. In addition there are two mission hospitals, with a total of approximately 400 beds, as well as one small mine hospital and a small private clinic.

The distribution of hospitals is as follows:-

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	<u>Government</u>	<u>Mission</u>	<u>Private</u>
	<u>No. of beds</u>	<u>No. of beds</u>	<u>No. of beds</u>
<u>General Hospital</u>	Mbabane 320	Manzini 320	Favelock Mine 70
	Hlatikulu 180	Siteki 100	Mbabane Clinic 23
	Pigg's Peak 50	420	93
	Mankayane 40		
	<u>Nhlangano 15</u>		
	605		

Long Stay Hospitals

Mental Hospital	200	Leper Hospital	70
<u>T.B. Hospital</u>	<u>200</u>		
	400		70

TOT/L.

General -	1,118 beds
Long Stay -	<u>470 beds</u>
	1,588 beds

In addition, a number of the mission - run clinics have bedded units attached to them (about 60 beds in all), and there are three small industrial clinics accounting for a further 60 beds.

b) Rural

There are close to 60 clinics in the country, mostly in rural areas. Government runs 28 of these, with 3 more under construction, the missions 18, and the industrial sector most of the rest. The Government clinics offer both curative and preventive services, although they are all non-bedded. They are in charge of a staff nurse who lives at the clinic, and in some there is a second nurse or a nurse aide. The clinics range in standard from a small metal rondavel to a modern, purpose - built building, with nurse housing attached. At present, the Government clinics are

supervised by medical staff from the hospitals, as well as by Public Health Centre nurses, who visit them regularly. In addition, there are a number of 'health posts' which are visited weekly or fortnightly by nurses from the Public Health Centres.

The 18 Mission clinics provide similar service to the Government ones, with the addition that the 14 clinics run by the Raleigh Fitkin Memorial Hospital, Manzini have a number of beds attached (usually four), and so can perform deliveries.

c) Preventive Services

The rural clinics are one of the major delivery points for preventive health services, including mother and child health care and family planning. In addition, preventive programmes are organised through the Public Health Centres, the Public Health Inspectorate, and through special smallpox, T.B., Malaria and bilharzia control programmes.

There are Public Health Centres at Mbabane, Manzini, Hlatikulu and Siteki, and a further centre is planned for Pigg's Peak. In addition, public health nurses also operate from the two government sub-hospitals at Mankayane and Nhlanguane.

The Health centres are operated by about 20 nurses, of whom about half are based at Mbabane. The centres are mainly concerned with mother and child health activities, family planning and immunisation and vaccination. The nurses at the centres also visit the rural clinics and a number of health posts periodically. However, to date, the major part of their activities have been concerned with the urban areas and the rural areas have not yet received the attention they deserve.

Environmental sanitation activities are the work of the ten health inspectors and approximately 50 health assistants. Of the health assistants, 30 are employed in malaria work, 10 in T.B. control, and the rest in town cleaning and protection of water supplies. Until now, the work of the health inspectorate has been mainly concerned with the towns. However, a number of health assistants are now being trained in the protection of

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rural water supplies and rural sanitation techniques, and they will be attached to the rural clinics on completion of their training.

d) Manpower

The health care industry in Swaziland employs about 1,300 people, of whom about 700 are health workers. Government employes close to 800 of this total. The establishment of the Ministry of Health includes the following major categories:-

	<u>Hospitals</u>	<u>Rural &amp; Preventive Services</u>	<u>Adminis- tration</u>	<u>TOTAL</u>
Doctors (including specialists)	19	2	2	23
Registered Nurses (including sisters & matrons)	239	57	2	298
Auxiliary Nurses	30	0	0	30

A more detailed Breakdown of the Ministry of Health establishment is given in chapter 6.

In addition, there are 10 doctors and 80 nurses in the mission health services and 23 doctors and 20 nurses in industrial or private practice.

e) Training

At present, training of Swaziland's health personnel is organised as follows:-

1. Doctors and specialists

All training is conducted at centres in other countries. This will continue to be the case, since Swaziland's requirements will never be large enough to justify an indigenous training school.

2. Registered Nurses

The basic training course for staff nurses for both government and mission health services is conducted by the

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Raleigh Fitkin Mission hospital in Manzini. The basic training consists of either 3 years of nursery plus one year of midwifery after 12 years of schooling (O-levels) or 4 years of training plus one year of midwifery after 10 years schooling (Junior Certificate). About 15 nurses per year are trained at present.

In addition, Government is conducting in-service courses to upgrade the 140 to 150 enrolled nurses now in service who have less than the 14 years of combined schooling and training expected from registered nurses.

### 3. Auxiliary nurses

The Good Shepherd Mission Hospital in Siteki has recently upgraded its course for nurse aides into an 18 month course to produce auxiliary nurses. The course will include a significant public health component. About 24 auxiliary nurses will finish training each year, and the majority will be employed in Government service.

### 4. Public health nurses and Public health inspectors

At present these are trained abroad, as there is no local training school.

### 5. Health assistants

An in-country practically-oriented training course for health assistants was begun in 1974, and the first group of 12 have recently completed training and have been assigned to the rural clinics. It is intended to continue the training programme for another 4 to 5 years, resulting in an output of around 80 trained health assistants.

In addition, the Raleigh Fitkin hospital has recently begun a training programme for 'community health workers', who will perform functions similar to those of an auxiliary nurse, at the mission - operated clinics.

3. GENERAL STRATEGY FOR DEVELOPMENT OF HEALTH SERVICES, 1975-84

In the Second National Development Plan, 1973 - 77, Government's recurrent expenditure on health services has been projected to increase at 6% per annum in real terms. It is anticipated that this high rate of growth can be sustained up to 1984, and the development of the Government health services has been planned on this basis.

The present distribution of health services is heavily concentrated on the provision of conventional curative facilities in the urban areas. Therefore, it is clear that the greatest improvement in the health standards of the population will be achieved if the additional finance likely to be available over the next ten years is used primarily to develop a comprehensive system of health facilities in the rural areas. These facilities will then be used to channel a programme of health education and preventive services to the rural population. At the same time, some expansion in urban curative facilities will be allowed, to cope with the rapidly expanding urban population. However, since the basic network of urban facilities is now in place, the required expansion will be considerably slower than that of the last decade.

The development of rural health facilities will involve an expansion in the existing number of rural clinics, together with the addition of maternity units to all clinics serving areas without easy access to hospital services. A health assistant will be attached to each clinic, and a large number of part-time rural health visitors will be trained to spread basic health education concepts to the rural population, under the supervision of the rural clinic nurses.

In addition, three Rural Health Centres will be constructed, to act as major centres for the provision of preventive services in the rural areas, and to act as resource - bases for the rural clinics and the school health service. In addition, the centres will have 12 - 14 maternity and 'holding' beds, although their primary orientation will be towards preventive health care. It is also anticipated that one such rural health centre will be built and operated by a mission service during the Plan period making a total of 4 such centres in all.

This strategy of increased emphasis on rural and preventive services will result in a significant increase/budget in the share of the recurrent/spent on such services. In 1974, recurrent and preventive services will account for under 19% of the total budget, but their share is projected to increase rapidly to 27% in 1979 and to 33% in 1984. At the same time, the share of Government hospital services will decline from 60% in 1974 to 50% in 1979 and to 44% in 1984, although there will still be a modest increase in the absolute size of expenditure on hospitals (of chapter 5 for detailed projections of recurrent expenditure.)

The qualified registered nurse will remain the most important figure in the expanded health service. However, so as to obtain the widest possible coverage of the population with the given budget, an increased use will also be made of auxiliary nurses in both the hospitals and the rural clinics, provided that they will be under the supervision of a qualified registered nurse. An eighteen - month training course for auxiliary nurses has recently been instituted, to cater for Government's increased future requirements in this field.

#### 4. DETAILED PROPOSALS

##### A. Hospitals

An extra 140 beds will be added to the five existing general hospitals over the next ten years, increasing the total number of general beds from 600 to 740. Most of the additional beds will be added to the smaller district hospitals. Apart from the addition of these extra beds, together with related facilities, the only major addition to hospital facilities will be the installation of new operating theatres and laboratory facilities and the construction of a new laundry at the central hospital in Mbabane. These extensions are intended to upgrade the hospital into the central referral hospital for the country.

No major extensions to the T.B. or mental hospitals are planned, but some capital expenditure has been allocated to improve facilities at the hospitals, and a modest increase in recurrent expenditure on mental health services has been allowed for.

The detailed programme for each hospital is as follows (cost estimates are given in the investment programme included in chapter 5):-

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(i) Mbabane Hospital

1975 - 77: Stage I extensions including new laundry block, new generator house and extensions to the outpatients department.

1976 - 79: Stage II extensions including construction of 3 new operating theatres, laboratory facilities, a mortuary, office accommodation and an additional 20 - bed ward.

(ii) Hlatikulu Hospital

1975 - 77: Addition of a 25 - bed ward, doctor's consulting rooms, storerooms, and a new sewerage system.

1982 - 83: Additional 25 - bed ward.

(iii) Pigg's Peak Hospital

1975 - 76: New sewerage system

1979 - 80: Additional 40 beds.

(iv) Mankayane Hospital

1975 - 76: New kitchen, laundry and toilet block

1977 - 78 Construction of an X-ray room

1980 - 81 Additional 30 beds.

(v) Nhlangano Hospital

1976 - 77: Alterations to convert the hospital into a maternity unit. (Although out-patients department of the hospital will continue to function).

(vi) Mental and T.B. Hospitals

No major expansion is envisaged, but the hospitals are old, and provision has been made for renovations and improvements in 1977.

In both the general and long-stay hospitals, greater use will be made of auxiliary nurses to carry out those nursing duties which do not require sophisticated training. This will enable the expansion of curative services to be undertaken without depriving the vital rural services of needed recurrent budget finance. It is assumed that the staffing ratios of the hospitals can be altered to reduce the establishment of registered nurses by up to 25% with a corresponding increase in the number of auxiliary nurses. The recurrent budget costs of the expanded curative services have been calculated on this basis, as have the Manpower projections of chapter 6. However, the auxiliary nurses will still operate under the supervision of fully-qualified registered nurses.

Action will be taken to improve hospital administration practices. The existing status of hospital secretaries will be improved, and the cadre made more attractive as a career. Technical assistance will be sought to fill the posts of Hospital Secretary at the major Government hospitals, while local candidates undergo training.

B. Rural Services

(i) Rural health Clinics

The basic unit for the extension of preventive and rural services to the rural population will be the rural clinic. An additional ten clinics will be constructed in the next few years, to give a total network of 40 Government clinics. Most of these will have small maternity units attached to them (the exact number of beds will depend on the population served, but will normally be 3 maternity and 1 'holding' bed) The basic staffing of each clinic will be as follows:-

2 registered nurse /midwives  
One auxiliary nurse  
One health assistant

In addition, a comprehensive programme of renovations to existing clinics will be undertaken and the proposed programme for this is included in Annex IV to the plan.

Possible locations for new clinics, with populations served, are given in Annex II.

(ii) Rural Health Visitors

The nurses at the rural clinics will also supervise a large number of rural health visitors. These will be part - time workers, based in their home areas, who will be given 3 to 4 months training in first aid, nutrition, child care, simple health education and family planning. Their main function will be to serve as a channel for the communication of basic health education concepts to the rural population. It is intended to train 100 of these health visitors each year, until there is a total of 800 covering the whole country, with one visitor for every 40 to 50 homesteads. Funds have already been allocated to commence the training course in 1975, and training will begin in the Northern Rural Development Area. It is understood that a similar programme is being implemented in Botswana, and the health authorities there will be contacted to co-ordinate the contents of the training course.

(iii) Rural Health Centres

Three Rural Health Centres will be constructed over the next ten years, to occupy an intermediate position between the hospital and the rural clinics. They will be primarily concerned with preventive work, but, unlike the existing public health centres which are near to hospitals, they will be located in rural areas remote from existing hospitals. Consequently, they will also have a small number of maternity and 'holding' beds attached to them, with a total of 12 - 14 beds (6 maternity and 6 - 8 'holding'). The centres will supervise and provide support for the rural clinics and school health service in their area, and will be staffed as follows:-

One medical officer of health  
Three public health nurses  
Three auxiliary nurses  
One dental hygienist  
One laboratory auxiliary  
One pharmaceutical assistant.

One health inspector  
One health assistant

Details of the physical facilities to be provided at the centres are given in Annex VI, and possible locations in Annex V.

(iv) Urban Public Health Centres

Four of these are already in place, and three more are to be constructed over the plan period, at Pigg's Peak, Mankayane and Nhlanguano. Their functions are similar to those of the Rural Health Centres, except that no bedded units will be attached to them, since they are based near hospitals. However, medical officers will be attached to the five main centres (Mbabane, Manzini, Hlatikulu, Siteki and Pigg's Peak), who will regularly visit the rural clinics in the area of the centre, and will also provide support to the school health service. The staffing of the five main centres will be as follows:-

One medical officer of health  
Three public health nurses  
Two auxiliary nurses  
One dental hygienist

The staffing of the sub - centres at Mankayane and Nhlanguano will be as follows:-

Two public health nurses  
Two auxiliary nurses  
One dental hygienist

(v) School Health Service

As school health service will be instituted, to provide a regular screening of all schoolchildren, so as to facilitate early detection of disease. The service will eventually be staffed by 12 public health nurses, who will be supervised by the medical officers at the rural and urban health centres. These nurses will be responsible for visiting the 400 primary and 60 secondary schools and training institutions currently in existence, with a total school population of approximately 100,000.

(iv) Nutrition Rehabilitation Units

A number of small nutrition rehabilitation units will be operated on an experimental basis, attached to the urban and Rural Health Centres. They will cater for children newly discharged from hospitals after treatment for malnutrition, who will stay at the centres near to their home areas for one to two weeks, together with their mothers. The centres will provide a period of improved feeding during the child's convalescence, combined with education in the proper use of locally - available foods for the mother. It is hoped that these centres will help to reduce the rate of re-admittance to hospital of children suffering from diseases related to malnourishment.

(ii) Health Education Unit

A small health education unit will also be created, to be attached to the public health services. This unit will be responsible for the production of health education materials and for the organisation of courses in nutrition, family planning and preventive health measures. These courses will then be included in the training programmes of the various extension workers being trained by other Ministries (e.g. agricultural extension workers, community development officers, school feeding organisers etc). The unit will also assist with the training of the rural health visitors.

The full staffing of the services can only be achieved over a number of years, because of the recurrent budget constraint. The detailed projections for expansion of establishment are given in chapter 6, and the programme for construction of new facilities will be as follows:

1975 - 6

- Construction of 3 new rural clinics, with maternity units attached
- Addition of maternity units to 2 existing clinics
- Housing for 6 health assistants/auxiliary nurses in the rural areas
- Construction of Pigg's Peak Public Health Centre

N.B. - The extra housing requirements are calculated on the assumption that the new clinics will have housing for two registered nurses incorporated into the clinic design, so their requirements have not been included elsewhere.

1976/7

- Construction of 2 new rural clinics plus maternity units
- Addition of maternity units to 2 existing clinics
- Housing for 15 health assistants/auxiliary nurses
- Construction of one rural health centre, plus housing (over 2 years)

1977/8

- Construction of 2 new rural clinics plus maternity units
- Addition of maternity units to 2 existing clinics
- Construction of housing for 15 health assistants/auxiliary nurses

1978/9

- Construction of 2 new rural clinics plus maternity units
- Addition of maternity units to 2 existing clinics
- Construction of housing for 15 health assistants/

- Construction of Mankayane Public Health Centre.

1979/80

- Construction of 1 new rural clinic plus maternity unit
- Addition of maternity units to 2 existing clinics
- Construction of housing for 10 registered or auxiliary nurses
- Construction of one rural health centre, plus housing (over 2 years)

1980/1

- Addition of maternity units to 3 existing clinics
- Construction of housing for 10 registered or auxiliary nurses

1981/2

- Addition of maternity units to 3 existing clinics
- Construction of one rural health centre, plus housing (over 2 years)

1982/3

- Addition of maternity units to 4 existing clinics (bringing total to 30 clinics with maternity units, out of a total of 40 clinics)

In addition to the above, there will be an ongoing programme of clinic renovation, and a tentative schedule for this is given in Annex IV.

C. Public Health Services(i) Public Health Inspectorate

At present there are 9 post of health inspector on the establishment of the public health inspectorate (with 2 more in the Malaria and Bilharzia Unit and one employed by each of the Mbabane and Manzini Town Councils), and five health assistants.

It is proposed to increase the establishment of the unit to 13 inspectors and 50 health assistants by 1984, in addition to the health inspectors and assistants who will be based in the rural clinics and the rural health centres. The major emphasis of the unit will be shifted away from conventional health inspection duties in the urban areas, to concentrate more on the improvement of rural water supplies and promotion of rural sanitation. The unit will also play an increased role in the extension of the Malaria and bilharzia control programmes.

A practically - oriented training scheme for health assistants has already been established, and the first 12 assistants have recently completed training and have been assigned to the rural clinics.

(ii) Malaria and Bilharzia control centre

The centre is currently staffed by one medical officer, 2 health inspectors, 18 health assistants and 4 microscopists, with a total recurrent budget in 1974/5 of E99,000. The recurrent budget is projected to increase at 5% per annum in real terms over the plan period, with most of the additional expenditure going towards the control of Bilharzia, which is a major and growing problem in the Kingdom. Technical assistance has already been requested to evaluate the present control programme for Bilharzia, and it is expected that a major project for an expanded programme will be prepared for financing by an aid donor in 1977.

(iii) T.B. Centre

The centre is currently staffed by a medical officer, 3 staff nurses and 10 health assistants. It is not

/18 cont....

expected that any major expansion in service will be required but a modest increase of 2% p.a. in real terms has been allowed for. In future, the provision of T.B. services will be integrated into the basic health services delivery systems.

#### D. Training

Detailed projections of training requirements are given in chapter 6, but, on the basis of the expected expansion of facilities, and a policy of complete localisation by 1984, then the approximate annual output of the main categories of health worker will have to be as follows:-

Registered Nurse/midwives	19 - 20	per annum
Auxiliary Nurses	16	"
Health Inspectors	2 - 3	"
Health Assistants	10 - 11	"
Doctors	7 - 8	"

The above numbers are primarily for Government service, but do include some allowance for Mission and private practice requirements - details are given in chapter 6.

To cater for the registered nurse requirements, a new Government training school will be constructed, with the aim of commencing training in early 1978. With the increased emphasis on rural and preventive services, there will be a need for an increased public health component in the training course, and technical assistance will be sought to draw up a curriculum which will emphasise this aspect. When the school is established, it will also be used to train certain types of paramedical staff (health inspectors, laboratory technologists, pharmaceutical assistants etc) and attempts will be made to establish a common core of training for all these cadres, followed by later specialisation in their particular field. Some training of health assistants will also be done at the centre, but the major part of their training, which is essentially practical in nature, will continue to be done in the rural areas. The training school will be constructed during 1976, and it is expected that courses could begin some time in 1977. First priority will be given to the introduction of a public health training course for nurses, and WHO has already been requested to provide technical assistance with the establishment of a suitable curriculum. When all courses are in operation, the school is expected to have an enrollment of approximately 150.

Training of auxiliary nurses will continue at Good Shepherd Hospital, and training of doctors will continue at a number of centres outside the country, since the kingdom's requirements will never be large enough to justify the establishment of an indigenous medical school.

### E. General Services and Administration

Recurrent expenditure on laboratory services, the administration of the central medical stores, and headquarters administration are all expected to increase at a slightly slower rate than the Ministry's overall budget, and an increase of 5% per annum in real terms has been allowed for. Grants to Mission are expected to increase at approximately the same rate as the Ministry's overall budget.

Action will be taken to improve the collection of health care statistics in the kingdom and to make them more useful for planning purposes, in line with the recommendations of the Gish Report. An established post of health planner/statistician will be created in the Ministry's headquarters as from 1976/7, and technical assistance will be sought to fill the post while a suitable local candidate is trained.

The Management Services Unit will also be requested to carry out a detailed organisational study of the Ministry, with a view of achieving cost reductions and more effective administrative procedures.

## 5. FINANCIAL PROJECTIONS

### I Recurrent Budget

The detailed recurrent budget projections are given in the Table I, with all costs based on 1974 prices. It is assumed that the Ministry's recurrent budget will be increased to offset any price increases, including any wage and salary increases which may result from the recommendations of the salaries commission which is now sitting. The budget is therefore projected to increase at 6% per annum, after allowance for price increases, in line with the second National Development Plan.

Some of the cost figures used in the projections are as follows:-

#### a) Hospitals

Until preparation of plan began, it was not possible to ascertain the full cost of any particular hospital, because

the cost of all drugs was allocated to the central Medical Stores, rather than to each hospital individually. Moreover the costs of the rural clinics attached to a hospital were included directly in the hospital's budget, rather than being shown separately. However, the accounting procedures have now been altered so that the full cost of each hospital is readily obtainable from the Ministry's accounts. The estimated recurrent cost of each hospital for 1974/5 is as follows:-

<u>Hospital</u>	<u>Recurrent cost</u> <u>1974/5</u> E	<u>No. of beds</u>	<u>Cost per bed</u> <u>per annum</u> E
Mbabane	657,000	320	2,050
Hlatikulu	361,000	171	2,100
Pigg's Peak	84,500	50	1,690
Mankayane	73,000	41	1,780
Nhlangano	44,000	15	2,930
<b>TOTAL -GENERAL HOSPITALS</b>	<b><u>1,219,500</u></b>	<b><u>598</u></b>	<b><u>2,040</u></b>
Matsaph T.B.	52,600	200	263
Matsapha Mental	90,300	200	450

A detailed investigation has been undertaken into the costs of various sections of Mbabane Government Hospital and the results of the analysis are given in Annex VIII.

b) Rural Clinics

The current (1974) annual running cost of a clinic is estimated to be approximately E6,000 per annum, including the cost of drugs. When fully staffed (2 registered nurses, 1 auxiliary and 1 health assistant), and with a small maternity unit attached it is expected that the cost will rise to E11,000, in 1974 prices (or E8,000 if 1 registered nurse is deleted). These cost estimates are based on the assumption that the patients in the maternity unit will provide their own food, since costs would rise considerably if each clinic were to begin operating kitchen for a very small number of patients.

c) Rural Health Centre

The cost of each rural health centre, when fully staffed, (cf staff list given in section 4B (iii)) is estimated to be E58,000, including cost of drugs.

d) Rural Health Visitors

~~Each visitor will receive a salary of E15 per month or~~  
E180 per year. There will be very little extra costs apart from

salaries, and the total cost of 800 health visitors is estimated at E160,000.

e) Public Health Centres

The 1974 recurrent costs of the public health centres amounted to E65,000. The cost of a fully-staffed health centre (with 1 doctor, 3 public health nurses, 2 auxiliaries and 1 dental hygienist) is estimated to be E17,000, while the annual cost of each sub - centre is estimated at E11,000. In addition, there will be a small central unit for administration and preparation of health education material etc, based at the Mbabane centre.

f) Training School

The cost per trainee per annum in the health training school is estimated at E600 in 1974 prices. The total number of trainees in any one year is based upon the manpower projections, and are given in chapter 7.

Table I gives the recurrent budget projections in 1974 prices.

Table II gives a percentage breakdown of some of the most important items in the Ministry's budget, year by year. This latter is intended for use by the Ministries of Health and Finance in the preparation of the annual recurrent budgets, as a check that the budget allocation are following the priorities laid down in the Plan, While minor deviations are not important, any major deviations from these percentage allocations would indicate that the policies of the Plan were not being fulfilled.

TABLE I: RECURRENT BUDGET PROJECTIONS, MINISTRY OF HEALTH 1975 - 84

	1974/5	1975/6	76/77	77/78	78/79	79/80	80/81	81/2	82/83	83/84	1984/5
Mbabane Hospital	657	662	665	670	690	730	740	748	760	770	760
Hlatikulu "	361	363	365	370	4 01	405	407	409	411	445	426
Piza's Peak "	85	85	86	86	87	87	120	147	152	156	160
Mankayane "	73	74	74	74	75	75	76	102	124	128	132
Mhlangano "	44	46	50	50	50	50	51	51	51	52	52
Matsapha T.B.	53	54	54	54	55	55	56	56	57	58	53
Matsapha Mental	90	92	95	96	98	100	104	107	113	118	123
TOTAL - HOSPITALS	1,363	1,376	1,389	1,400	1,456	1,502	1,554	1,620	1,668	1,727	1,802
Rural Clinics	171	202	255	308	339	355	381	400	429	450	470
Rural Health Centres	0	0	0	0	30	50	58	85	108	144	174
Public Health Centres	65	72	86	90	93	95	100	105	110	115	120
Rural Health Visitors	0	0	16	24	40	60	80	100	120	140	160
School Health Service	0	0	20	20	20	25	28	30	34	37	40
Public Health Inspectorate	44	56	75	80	85	90	98	105	116	130	144
T.B. Centre	49	50	51	51	52	52	53	54	54	55	56
Malaria & Bilharzia Centre	99	104	109	115	120	126	133	139	146	154	164
Lab. Services	47	49	52	54	57	60	63	66	69	73	77
Central Medical Stores - Admin.	63	66	69	73	77	80	84	88	93	97	102
H.Q. Admin. and Grants to Missions	374	408	433	457	481	501	531	554	590	632	676
Training	0	0	0	15	40	50	65	75	90	90	90
TOTAL BUDGET	2,275	2,383	2,555	2,687	2,890	3,046	3,228	3,421	3,627	3,844	4,075

TABLE II : PERCENTAGE BREAKDOWN OF IMPORTANT RECURRENT BUDGET ITEMS

Percentage of Total Budget going to:-	74/5	75/6	76/7	77/8	78/9	79/80	80/1	81/2	82/3	83/4	84/5
Mbabane Hospital	28.9	27.8	26.0	24.9	23.9	24.0	22.9	21.9	21.0	20.0	19.1
All Government Hospitals	59.9	57.7	54.4	52.1	50.4	49.3	48.1	47.4	46.0	44.9	44.2
Rural Clinics	7.5	8.5	10.0	11.5	11.7	11.7	11.8	11.7	11.8	11.7	11.5
Rural and Preventive Services (1)	18.8	20.3	24.0	25.5	27.0	28.0	28.8	29.8	30.8	31.9	32.6
Training Administration and grants to Missions	21.3	21.9	21.7	22.3	22.7	22.7	23.0	23.0	23.2	23.2	23.2

NOTES:-

- 1 Rural and Preventive services includes the following: Rural clinics; Rural and Urban Health Centre; Rural Health Visitors; School Health Service; Public Health Inspectorate; T.B. Centre and Malaria & Bilharzia Centre.

## II Investment Programme

The detailed investment programme is given in Table III, and is based upon the plans for the expansion of health facilities given in chapter 4.

Building costs are based upon Jan 1975 prices, and amount to approximately E100 per square metre for medium standard structures. No designs have been prepared for the extensions later in the programme, so cost estimates have been based on estimated space requirements. The following cost estimates have been used:-

### 1 Rural Clinic

- with 4 bed maternity, and housing for 2 registered nurses incorporated into the design, plus public utilities - E35,000
- Addition of maternity unit to existing clinics - E12,000

### 2 Rural Health Centres

- including equipment and staff housing - E200,000

### 3 Public Health Centres

- on standard design of existing centres, excluding housing - E25,000

### 4 Hospitals

- For basic ward extensions (i.e. including essential related services, but excluding new offices, operating theatres etc)
- E2,500 per bed.

TABLE III: INVESTMENT PROGRAMME, MINISTRY OF HEALTH, 1975 - 1983

	(Jan 75 prices)							£2/83
	1975/6	1976/7	1977/8	1978/9	1979/80	1980/1	1981/82	
Mbabane Hospital	70,000	180,000	400,000	350,000	-	-	-	
Hlatikulu "	50,000	540,000	-	-	-	-	-	
Pigg's Peak "	15,000	10,000	-	-	100,000	-	-	65,000
Mankayane "	10,000	15,000	215,000	-	-	75,000	-	
Mhlangano "	-	15,000	-	-	-	-	-	10,000
Matsaph: T.B.	-	-	20,000	-	-	-	20,000	-
Matsapha Mental	15,000	-	20,000	-	-	-	20,000	-
<b>TOTAL - HOSPITALS</b>	<b>160,000</b>	<b>270,000</b>	<b>440,000</b>	<b>350,000</b>	<b>100,000</b>	<b>75,000</b>	<b>40,000</b>	<b>75,000</b>
New Rural Clinics (Incorporating housing for 2 registered nurses)	45,000	130,000	70,000	70,000	35,000	-	-	
Maternity Units at existing Clinics	12,000	36,000	24,000	24,000	24,000	35,000	36,000	36,000

	1975/6	1976/7	1977/8	1978/9	1979/80	1980/1	1981/2	1982/3
Renovations to existing Clinics	20,000	30,000	30,000	30,000	20,000	20,000	20,000	20,000
Housing of rural clinics (other than included in clinic design)	18,000	60,000	60,000	60,000	40,000	40,000	40,000	30,000
<b>TOTAL RURAL CLINICS</b>	<b>95,000</b>	<b>256,000</b>	<b>184,000</b>	<b>184,000</b>	<b>119,000</b>	<b>96,000</b>	<b>96,000</b>	<b>86,000</b>
New Public Health Centres	15,000	10,000	-	25,000	-	-	-	25,000
Equipment for Health Assistants	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Training Unit - Health Assistants	28,000	28,000	28,000	28,000	-	-	-	-
Rural Health Visitors equipment and Training	12,500	10,000	10,000	10,000	10,000	10,000	10,000	10,000
School Health Service Vehicles and equipment	25,000	-	-	-	5,000	5,000	5,000	5,000
School Health Service Housing		10,000	10,000	10,000	5,000	5,000	5,000	5,000
Rural Health Centres		50,000	150,000	-	100,000	100,000	100,000	100,000
Bilharzia Control			150,000	150,000	150,000	150,000	-	-
Central Medical Stores	9,800	-	-	-	20,000	-	-	20,000
Radio Communications for clinics and hospitals	50,000	20,000	-	-	-	-	20,000	-
Training Schools	40,000	250,000	250,000	-	-	-	-	-
Vehicles	10,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Laboratory Services	-	-	-	-	-	-	20,000	-
<b>TOTAL - ALL HEALTH SERVICES</b>	<b>447,300</b>	<b>926,000</b>	<b>1,259,000</b>	<b>779,000</b>	<b>531,000</b>	<b>463,000</b>	<b>318,000</b>	<b>348,000</b>

6. MANPOWER REQUIREMENTS

I Ministry of Health Establishment

The detailed projections of the Ministry of Health's requirement for different categories of medical personnel are given in Tables IV A to F. These projections are based on the expansion of facilities detailed in chapter 4, and on the assumption of an increased use of auxiliary nurses in the hospital service.

These establishment projections are intended to be used as control figures to assist the Ministry of Health and Department of Establishments and Training in the appraisal of requests for new posts.

II Training Requirements

Training requirements have been calculated from the projected increase/establishment over the period; expected retirement of citizen, localisation of expatriates and existing vacancies. Some allowance has been made for the requirements of the mission and private services, although it is assumed that the mission services will continue to train the majority of their own requirements, especially in the nursing cadres.

A. Medical Officers (including specialists)

(i) Increase in Establishment 1975 - 85

	Government	13	24
	Mission	3	
	Private	8	
(ii) Retirement of citizens		3	
(iii) Existing Vacancies		0	
(iv) Localisation	Government	18	
	Mission)		
	Private)	28	46
<b>TOTAL REQUIREMENT 1975 - 85</b>			<u><b>73</b></u>

Average annual output required: 7 to 8.

6. MANPOWER REQUIREMENTS (Contd)

B. Registered Nurses (including Matrons and Sisters)

Increase in Establishment 1975 - 84 (Government only)	74
Retirement of citizens (cf P35 of Gish Report)	70
Existing Vacancies	19
Localisation	35
TOTAL REQUIREMENT 1975 - 84	<u>195</u>

Average annual output required: 19 to 20

C. Auxiliary Nurses

Increase in Establishment 1975 - 84 (Government only)	126
Retirement of citizens	15
Existing Vacancies	15
Localisation	0
TOTAL REQUIREMENTS 1975 - 84	<u>156</u>
Average annual training requirement 16.	

D. Health Inspectors

Increase in Establishment 1975 - 84 (Government 9, Town Councils 2)	11
Retirement of citizens	2
Existing Vacancies	5
Localisation	1
TOTAL REQUIREMENTS 1975 - 84	<u>19</u>

E. Health Assistants

Increase in Establishment 1975 - 84 (Government only)	73
Retirement of citizens	30
Existing Vacancies	0
Localisation	0
TOTAL TRAINING REQUIREMENT 1975 - 84	<u>103</u>

TABLE IV: MINISTRY OF HEALTH ESTABLISHMENT 1974 - 84

A. Medical officers (including Senior Medical Officers and Specialists)

	74/5	75/6	76/7	77/8	78/9	79/80	80/1	81/2	82/3	83/4	84/5
Mbabane Hospital	8	8	8	8	8	9	9	9	9	9	9
Hlatikulu "	6	6	6	6	6	6	6	6	7	7	7
Pigg's Peak "	2	2	2	2	2	2	3	3	3	3	3
Mankayane "	1	1	1	1	2	2	2	2	2	2	2
Matsapha T.B.	1	1	1	1	1	1	1	1	1	1	1
Matsapha Mental	1	1	1	1	1	1	1	2	2	2	2
Headquarters	2	2	2	2	2	2	2	2	2	2	2
Rural Health Centres	0	0	0	0	1	1	1	2	2	3	3
Public Health Centres	0	0	1	2	2	3	3	4	4	5	5
Malaria & Bilharzia Centre	1	1	1	1	1	1	1	1	1	1	1
T.B. Centre	1	1	1	1	1	1	1	1	1	1	1
<b>TOTAL</b>	<b>23</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>27</b>	<b>29</b>	<b>30</b>	<b>33</b>	<b>34</b>	<b>36</b>	<b>36</b>

B. NURSING SISTERS

	74/5	75/6	76/7	77/8	78/9	79/80	80/1	81/2	82/3	83/4	84/5
<u>Mbabane Hospital</u>	13	13	13	13	13	14	14	14	14	14	14
<u>Hlatikulu "</u>	9	9	9	9	10	10	10	11	11	12	12
<u>Piqa's Peak "</u>	1	1	1	1	1	1	2	2	2	2	2
<u>Mankayane "</u>	1	1	1	1	1	1	1	1	2	2	2
<u>Nhlenqano Hospital</u>	1	1	1	1	1	1	1	1	1	1	1
<u>Public Health Centres</u>	1	1	1	1	1	1	1	1	1	1	1
<u>Training School</u>	0	0	0	0	1	1	1	1	1	1	1
<b>TOTAL</b>	26	26	26	26	28	29	30	31	32	33	33

NOTE 1 In addition to the above, there are 9 established posts of matron, which will remain unaltered throughout the plan period.

C. REGISTERED STAFF NURSES

	74/5	75/6	76/7	77/8	78/9	79/80	80/1	81/2	82/3	83/4	84/5
Mbabane Hospital	97	97	94	93	90	90	88	86	84	82	82
Hlatikulu "	63	63	63	63	63	62	62	62	62	62	62
Piqq's Peak "	14	14	14	14	14	14	17	19	19	19	19
Mankayane "	13	13	13	13	13	13	13	15	17	17	17
Nhlangano "	7	7	7	6	6	6	6	6	6	6	6
Matsapha T.B.	6	6	6	6	6	6	6	6	6	6	6
Matsapha Mental	7	7	7	7	7	8	8	8	8	3	8
Rural Clinics	32	35	42	48	52	57	61	66	72	78	80
Rural Health Centres	0	0	0	0	2	3	3	5	6	8	9
Public Health Centres	20	20	20	22	22	22	22	22	24	24	24
T.B. Centre	3	3	3	3	3	3	3	3	3	3	3
Lab. Services	1	1	1	1	1	1	1	1	1	1	1
Training School	0	0	0	2	3	4	4	4	4	4	4
School Health Service	0	0	4	6	6	7	8	9	10	11	12
<b>TOTAL</b>	<b>263</b>	<b>266</b>	<b>274</b>	<b>282</b>	<b>288</b>	<b>296</b>	<b>302</b>	<b>312</b>	<b>322</b>	<b>329</b>	<b>333</b>

D. AUXILIARY NURSES

	74/5	75/6	76/7	77/6	78/9	79/80	80/1	81/2	82/3	83/4	84/5
Mbabane Hospital	10	10	13	14	18	23	25	27	29	31	33
Hlatikulu "	6	6	9	14	15	16	16	15	16	20	26
Piqq's Peak "	3	3	3	3	3	3	7	10	10	10	10
Mankavane "	3	3	3	3	3	3	3	6	9	9	9
Nhlangano "	3	3	3	4	4	4	4	4	4	4	4
Matsapha T.B.	2	2	2	2	3	3	3	3	3	3	3
Matsapha Mental	3	3	4	4	4	4	5	5	5	5	5
Rural Clinics	0	0	5	10	15	20	25	30	35	40	40
Public Health Centres	0	0	4	6	7	7	8	10	12	13	14
Rural Health Centres	0	0	0	0	3	4	4	7	8	11	12
<b>TOTAL</b>	<b>30</b>	<b>30</b>	<b>44</b>	<b>60</b>	<b>75</b>	<b>87</b>	<b>100</b>	<b>118</b>	<b>131</b>	<b>146</b>	<b>156</b>

E. HEALTH INSPECTORS (including Senior Health Inspectors)

	74/5	75/6	76/77	77/78	78/79	79/80	80/81	81/82	82/83	83/84	84/5
Health Inspection Unit	9	9	10	10	11	11	12	12	12	13	13
Rural Health Centres	0	0	0	0	0	1	1	2	2	3	3
Malaria & Bilharzia Unit	2	2	3	4	4	4	4	4	4	4	4
<b>TOTAL</b>	<b>11</b>	<b>11</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>18</b>	<b>20</b>	<b>20</b>

F. HEALTH ASSISTANTS (including senior health assistants)

	74/5	75/6	76/7	77/8	78/9	79/80	80/1	81/2	82/3	83/4	84/5
<b>Health Inspection Unit</b>	5	5	15	20	25	30	35	40	45	50	50
<b>Rural Clinics</b>	0	20	30	35	40	40	40	40	40	40	40
<b>Rural Health Centres</b>	0	0	0	0	0	1	1	2	2	3	3
<b>Malaria &amp; Bilharzia Unit</b>	35	35	35	40	40	40	40	40	40	40	40
<b>T.B. Centre</b>	10	10	10	10	10	10	10	10	10	10	10
<b>TOTAL</b>	50	70	90	105	115	121	126	132	137	143	143

7. CAPITAL AID AND TECHNICAL ASSISTANCE REQUIREMENTS

Implementation of the plan will require considerable quantities of capital and technical assistance. The following are the expected major requirements for the first five years of the plan:-

1975/76 - 1979/80

E

(a) Capital Aid

Mbabane Hospital Extensions	1,000,000
Hlatikulu Hospital Extensions	100,000
Construction of new rural clinics	350,000
Maternity units at existing clinics	120,000
Clinic renovations and additional housing	350,000
New Public Health Centres	50,000
New Rural Health Centres	200,000
Bilharzia Control Programme	450,000
Radio Communications	70,000
Training School	500,000
TOTAL	<u>3,190,000</u>

(b) Technical Assistance

- (i) Two posts of hospital administrator (for at least 2 years) and training fellowships for Swazi counterparts.
- (ii) One post of health planner/statistician (for 2 years) and training fellowship for Swazi counterpart.
- (iii) Medical adviser and Health education and evaluation adviser, to assist with organisation of MCH/FP activities .
- (iv) Mission to evaluate Bilharzia Control Programmes (possibly leading to further technical assistance requirements).
- (v) Sanitarian to assist with health assistant training programme.
- (vi) Mission to assist with design of curricula for nurses training school.
- (vii) One post of Senior nurse-trainer, to be in overall charge of nurse training school while Swazi nurse trainers gain adequate experience (2 years).
- ~~(viii) Technical Assistance to help staff the school health service (probably volunteers, for a period of 2 years).~~

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PD-AAC-243

AID Project Number 690-0062 31p

P R O J E C T  
G R A N T   A G R E E M E N T

between the  
KINGDOM OF SWAZILAND  
and the  
UNITED STATES OF AMERICA  
for  
HEALTH MANPOWER TRAINING

TABLE OF CONTENTS

PROJECT GRANT AGREEMENT

	<u>PAGE</u>
ARTICLE 1: The Agreement.....	1
ARTICLE 2: The Project.....	1
SECTION 2.1. Definition of Project.....	1
SECTION 2.2. Incremental Nature of Project.....	2
ARTICLE 3: Financing.....	2
SECTION 3.1. The Grant.....	2
SECTION 3.2. Grantee Resources for the Project.....	2
SECTION 3.3. Project Assistance Completion Date.....	3
ARTICLE 4: Conditions Precedent to Disbursement.....	3
SECTION 4.1. First Disbursement.....	3
SECTION 4.2. Additional Disbursement.....	4
SECTION 4.3. Notification.....	4
SECTION 4.4. Terminal Dates for Conditions Precedent..	5
ARTICLE 5: Special Covenants.....	5
SECTION 5.1. Project Evaluation.....	5
SECTION 5.2. Support of Assistance Personnel.....	5
SECTION 5.3. Trainees.....	5
ARTICLE 6: Procurement.....	6
SECTION 6.1. Foreign Exchange Costs.....	6
SECTION 6.2. Local Currency Costs.....	6
ARTICLE 7: Disbursements.....	6
SECTION 7.1. Disbursement for Foreign Exchange Costs..	6
SECTION 7.2. Disbursement for Local Currency Costs....	7
SECTION 7.3. Other Forms of Disbursement.....	7
SECTION 7.4. Rate of Exchange.....	7
ARTICLE 8: Miscellaneous.....	8
SECTION 8.1. Communications.....	8
SECTION 8.2. Representatives.....	8
SECTION 8.3. Standard Provisions Annex.....	8
ANNEX 1: Amplified Description of the Project.....	A-1 - 12

PROJECT GRANT STANDARD PROVISIONS ANNEX 2

	<u>PAGE</u>
ARTICLE A: Project Implementation Letters.....	B-1
ARTICLE B: General Covenants.....	B-1
SECTION B.1. Consultation.....	B-1
SECTION B.2. Execution of Project.....	B-1
SECTION B.3. Utilization of Goods and Services.....	B-2
SECTION B.4. Taxation.....	B-2
SECTION B.5. Reports, Records, Inspections, Audits..	B-2
SECTION B.6. Completeness of Information.....	B-3
SECTION B.7. Other Payments.....	B-3
SECTION B.8. Information and Marking.....	B-3
ARTICLE C: Procurement Provisions.....	B-3
SECTION C.1. Special Rules.....	B-3
SECTION C.2. Eligibility Date.....	B-4
SECTION C.3. Plans, Specifications, and Contracts...	B-4
SECTION C.4. Reasonable Price.....	B-5
SECTION C.5. Notification to Potential Suppliers....	B-5
SECTION C.6. Shipping.....	B-5
SECTION C.7. Insurance.....	B-6
SECTION C.8. U.S. Government-owned Excess Property..	B-6
ARTICLE D: Termination; Remedies.....	B-6
SECTION D.1. Termination.....	B-6
SECTION D.2. Refunds.....	B-7
SECTION D.3. Nonwaiver of remedies.....	B-7
SECTION D.4. Assignment.....	B-7

PROJECT GRANT AGREEMENT

Dated June 18<sup>th</sup>, 1977

Between

The Kingdom of Swaziland ("Grantee")

And

The United States of America, acting through

The Agency for International Development ("A.I.D.").

ARTICLE 1.

The Agreement

The purpose of this Agreement is to set out the understandings of the parties named above ("Parties") with respect to the undertaking by the Grantee of the Project described herein, and with respect to the financing of the Project by the Parties.

ARTICLE 2.

The Project

SECTION 2.1. Definition of Project. The Project, which is further described in Annex 1, will consist of measures to assist the Grantee in improving, expanding and institutionalizing the training of nurses and paramedical personnel and the planning, administration and delivery of preventive and curative health services. A.I.D. will assist in financing technical services, training and commodities, as well as, the construction of the Institute of Health Sciences ("IHS") and staff housing. Annex I, attached, amplifies the definition of the Project contained in this Section 2.1.. Within the limits of the definition of the Project in this Section 2.1, elements of the amplified description stated in Annex 1 may be changed by written agreement of the authorized representatives of the Parties

named in Section 8.3, without formal amendment of this Agreement.

SECTION 2.2. Incremental Nature of Project. (a) A.I.D.'s contribution to the Project, as described in Annex 1, will be provided in increments, the initial one being made available in accordance with Section 3.1 of this Agreement. Subsequent increments will be subject to availability of funds to A.I.D. for this purpose and to the mutual agreement of the Parties, at the time of a subsequent increment, to proceed.

(b) In the event that A.I.D. does not add a contemplated increment of funding in a timely fashion, it is understood that either Party may elect to terminate this Agreement in accordance with Section D.1 of the Grant Project Standard Provisions Annex, provided, that within the limits of then available funds committed to the Project by the Parties, the termination period may be extended beyond a period of 30 days to provide for orderly arrangements, and that each Party will do all it believes appropriate to retain and extend the benefits of Project activity which has already taken place.

(c) Within the overall Project Assistance Completion Date stated in this Agreement, A.I.D. based upon consultation with the Grantee, may specify in Project Implementation Letters appropriate time periods for the utilization of funds granted by A.I.D. under an individual increment of assistance.

### ARTICLE 3.

#### Financing

SECTION 3.1. The Grant. To assist the Grantee to meet the costs of carrying out the Project, A.I.D., pursuant to the Foreign Assistance Act of 1961, as amended, agrees to grant the Grantee under the terms of this Agreement not to exceed One Million One Hundred Sixteen Thousand United States ("U.S.") Dollars (\$1,116,000) ("Grant"). It is anticipated that subsequent increments aggregating Three Million One Hundred Eighty-Four Thousand U.S. Dollars (\$3,184,000) will be provided by A.I.D. subject to Section 2.2 of this Agreement.

The Grant may be used to finance foreign exchange costs, as defined in Section 6.1, and local currency costs, as defined in Section 6.2, of goods and services required for the Project.

SECTION 3.2. Grantee Resources for the Project. (a) The Grantee agrees to provide or cause to be provided for

the Project all funds, in addition to the Grant, and all other resources required to carry out the Project effectively and in a timely manner.

(b) Except as A.I.D. may otherwise agree in writing, the resources provided by Grantee for the Project will be not less than the equivalent of U.S. \$1,800,000, including costs borne on an "in-kind" basis.

SECTION 3.3. Project Assistance Completion Date. (a) The "Project Assistance Completion Date" (PACD), which is December 31, 1983, or such other date as the Parties may agree to in writing, is the date by which the Parties estimate that all services financed under the Grant will have been performed and all goods financed under the Grant will have been furnished for the Project as contemplated in this Agreement.

(b) Subject to Sub-Section 3.3(d) and except as A.I.D. may otherwise agree in writing, A.I.D. will not issue or approve documentation which would authorize disbursement of the Grant for services performed subsequent to the PACD or for goods furnished for the Project, as contemplated in this Agreement, subsequent to the PACD.

(c) Subject to Sub-Section 3.3(d), Requests for Disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters are to be received by A.I.D. or any bank described in Section 7.1 no later than nine (9) months following the PACD, or such other period as A.I.D. agrees to in writing. After such period, A.I.D., giving notice in writing to the Grantee, may at any time or times reduce the amount of the Grant by all or any part thereof for which requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters, were not received before the expiration of said period.

(d) Sub-Section 3.3(b) and (c) notwithstanding and except as A.I.D. may otherwise agree in writing, all disbursements from the Grant for financing construction shall be made within a period not exceeding thirty-six (36) months.

#### ARTICLE 4.

##### Conditions Precedent to Disbursement

SECTION 4.1. First Disbursement. Prior to the first disbursement under the Grant, or to the issuance by A.I.D.

of documentation pursuant to which disbursement will be made, the Grantee will, except as the Parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.:

(a) A statement of the names of the persons holding or acting in the office of the Grantee specified in Section 8.3, and a specimen signature of each person specified in such statement;

(b) Written evidence that the financial and other contributions of the Grantee and other donors have been or will be provided, in accordance with Annex 1, for the implementation of the Project;

(c) Written evidence that sites described in Annex 1 for the construction of staff houses and the Institute for Health Services ("IHS") will be made available for the commencement of construction and implementation of the Project;

(d) Written evidence that the Grantee has taken all necessary steps to assure that all personnel, such as qualified trainees, tutors, hospital administrators, rural health service administrators, counterpart personnel and candidates for IHS instruction, to be provided by the Grantee, are or will be readily available for the timely implementation of the Project.

SECTION 4.2. Additional Disbursement. (a) In accordance with Section C.3 hereof and prior to disbursement under the Grant, or to issuance by A.I.D. of documentation pursuant to which disbursement will be made, for financing the construction of housing and the IHS, respectively, the Grantee will, except as the Parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.:

(i) Designs, plans and specifications, bid documents, cost estimates, and time schedules for carrying out the respective construction;

(ii) Executed contracts for such construction and for supervision of such construction acceptable to A.I.D. with firms acceptable to A.I.D.

(b) The conditions precedent to disbursement in Section 4.2(a) may be satisfied separately for the construction of housing and the IHS, respectively.

SECTION 4.3. Notification. When A.I.D. has determined that the conditions precedent specified in Section 4.1 and 4.2

have been met, it will promptly notify the Grantee.

SECTION 4.4. Terminal Dates for Conditions Precedent.

(a) If all of the conditions specified in Section 4.1 have not been met within 120 days from the date of this Agreement, or such later date as A.I.D. may agree to in writing, A.I.D., at its option, may terminate this Agreement by written notice to Grantee.

(b) If all of the conditions specified in Section 4.2 have not been met within nine months from the date of this Agreement, or such later date as A.I.D. may agree to in writing, A.I.D., at its option, may cancel the then undisbursed balance of the Grant, to the extent not irrevocably committed to third parties, and may terminate this Agreement by written notice to the Grantee.

ARTICLE 5.

Special Covenants

SECTION 5.1. Project Evaluation. The Parties agree to establish an evaluation program, as described in Annex 1 as an integral part of the Project. Except as the Parties otherwise agree in writing, the program will include, during the implementation of the Project and regularly thereafter: (a) evaluation of progress toward attainment of the objectives of the Project; (b) identification and evaluation of problem areas or constraints which may inhibit such attainment; (c) assessment of how such information may be used to help overcome such problems, in this or other projects; and (d) evaluation, to the degree feasible, of the overall development impact of the Project.

SECTION 5.2. Support of Assistance Personnel. The Grantee agrees to provide administrative support, housing and furnishings for A.I.D.-financed technical assistance personnel as described in Annex 1.

SECTION 5.3. Trainees. In accordance with Annex 1, the Grantee agrees to provide the candidates for IHS instruction and qualified trainees for tutorial and administrative positions sufficient to fully utilize Project facilities and otherwise satisfy the requirements for trainee personnel and to place, assign or employ persons having completed any of the various training programs connected with the Project in positions appropriate to and commensurate with such completed training.

ARTICLE 6.

Procurement Source

SECTION 6.1. Foreign Exchange Costs. Disbursements pursuant to Section 7.1 will be used exclusively to finance the costs of goods and services required for the Project having their source and origin in the United States (Code 000 of the A.I.D. Geographic Code Book as in effect at the time orders are placed or contracts entered into for such goods and services ) ("Foreign Exchange Costs"), except as A.I.D. may otherwise agree in writing, and except as provided in the Project Grant Standard Provisions Annex, Section C.1(b) with respect to marine insurance.

SECTION 6.2. Local Currency Costs. Disbursements pursuant to Section 7.2 will be used exclusively to finance the costs of goods and services required for the Project having their source and, except as A.I.D. may otherwise agree in writing, their origin in Swaziland ("Local Currency Costs"). To the extent provided for under this Agreement, "Local Currency Costs" may also include the provision of local currency resources required for the Project.

ARTICLE 7:

Disbursement

SECTION 7.1. Disbursement for Foreign Exchange Costs.

(a) After satisfaction of conditions precedent, the Grantee may obtain disbursements of funds under the Grant for the Foreign Exchange Costs of goods or services required for the Project in accordance with the terms of this Agreement, by such of the following methods as may be mutually agreed upon:

(i) by submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters, (A) requests for reimbursement for such goods or services, or (B) requests for A.I.D. to procure commodities or services in Grantee's behalf for the Project; or,

(ii) by requesting A.I.D. to issue Letters of Commitment for specified amounts (A) to one or more U.S. banks, satisfactory to A.I.D., committing A.I.D. to reimburse such bank or banks for payments made by them to contractors or suppliers, under Letters of Credit or otherwise, for such goods or services, or (B) directly to one or more contractors or suppliers

committing A.I.D. to pay such contractors or suppliers, through Letters of Credit or otherwise, for such goods or services.

(b) Banking charges incurred by Grantee in connection with Letters of Commitment and Letters of Credit will be financed under the Grant unless Grantee instructs A.I.D. to the contrary. Such other charges as the Parties may agree to may also be financed under the Grant.

SECTION 7.2. Disbursement for Local Currency Costs.

(a) After satisfaction of conditions precedent, the Grantee may obtain disbursements of funds under the Grant for Local Currency Costs required for the Project in accordance with the terms of this Agreement by submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters, requests to finance such costs.

(b) The local currency needed for such disbursements may be obtained:

(i) by acquisition by A.I.D. with U.S. Dollars;

(ii) by A.I.D. (A) requesting the Grantee to make available the local currency for such costs, and (B) thereafter reimbursing an amount of U.S. dollars equal to the amount of local currency made available by the Grantee.

The U.S. dollar equivalent of the local currency made available hereunder will be, in the case of sub-section (b)(i) above, the amount of U.S. dollars required by A.I.D. to obtain the local currency.

SECTION 7.3. Other Forms of Disbursement. Disbursement of the Grant may also be made through such other means as the Parties may agree to in writing.

SECTION 7.4. Rate of Exchange. If funds provided under the Grant are introduced into Swaziland by A.I.D. or any public or private agency for the purpose of carrying out obligations of A.I.D. hereunder, the Grantee will make such arrangements as may be necessary so that such funds may be converted into currency of Swaziland at the highest rate of exchange which, at the time the conversion is made, is not unlawful in Swaziland.

ARTICLE 8.

Miscellaneous

SECTION 8.1. Communications. Any notice, request, document or other communication submitted by either Party to the other under this Agreement will be in writing or by telegram or cable, and will be deemed duly given or sent when delivered to such party at the following addresses:

To the Grantee:

Permanent Secretary  
Ministry of Finance and Economic Planning

Mail Address:  
P.O. Box 602  
Mbabane, Swaziland

Alternate Address for cables:  
MinFin  
Mbabane, Swaziland

To A.I.D.:

Regional Development Officer

Mail and Cable Address:  
U.S. AID  
P.O. Box 750  
Mbabane, Swaziland.

All such communications will be in English, unless the Parties otherwise agree in writing. Other addresses may be substituted for the above upon the giving of notice.

SECTION 8.2. Representatives. For all purposes relevant to this Agreement, the Grantee will be represented by the individual holding or acting in the office of Permanent Secretary, Ministry of Finance and Economic Planning, and A.I.D. will be represented by the individual holding or acting in the office of Regional Development Officer, Mbabane, Swaziland, each of whom, by written notice, may designate additional representatives for all purposes other than exercising the power under Section 2.1 to revise elements of the amplified description in Annex 1. The names of the representatives of the Grantee, with specimen signatures, will be provided to A.I.D., which may accept as duly authorized any instrument signed by such representatives in implementation of this Agreement, until receipt of written

notice of revocation of their authority.

SECTION 8.4. Standard Provisions Annex. A "Project Grant Standard Provisions Annex " (Annex 2) is attached to and forms part of this Agreement.

IN WITNESS WHEREOF, the Grantee and the United States of America, each acting through its duly authorized representative, have caused this Agreement to be signed in their names and delivered as of the day and year first above written.

KINGDOM OF SWAZILAND

By: R. P. [Signature]  
Title: Minister of Agriculture and  
Livestock Production

UNITED STATES OF AMERICA

By: [Signature]  
Title: [Signature]

SWAZILAND HEALTH MANPOWERTRAINING PROJECTI. GENERAL

As defined in Swaziland's Ten-Year Health Development Plan, 1975-1985, the Grantee will require approximately two hundred registered nurses and twenty health inspectors over the next decade. Although training of these health professionals is presently being undertaken in Swaziland, almost exclusively by the Nazarene and Catholic churches, this training either fails to focus on the kinds of preventive medical care required by the rural Swazi population, or produces graduates who are primarily used to staff private hospitals and urban clinics rather than the system of rural centers and clinics established by the Government to make medical skills more accessible to the rural population. Since it does not operate a nurse training facility, the Grantee is greatly handicapped in its ability to control and coordinate health personnel development. Similarly, a primary impediment to the attainment of Swaziland's health sector objectives has been the limited number of trained administrators with the supervisory and planning skills necessary to effectively plan, monitor and evaluate health programs.

The Project, which will be implemented by the Ministry of Health acting in cooperation with other ministries, seeks to improve health services and expand their coverage in rural areas of Swaziland through the achievement of the following major objectives:

1. establishing a permanent Institute of Health Science (IHS) with a faculty capable of training sufficient numbers of nurses and para-medical personnel to meet Swaziland's projected future needs.
2. developing a cadre of administrative personnel able to coordinate Swaziland's regional health-related activities, integrate preventive and curative services offered by Swaziland's health clinics and hospitals and, generally, plan, monitor and evaluate Swaziland's health care system.

II. A. I. D. CONTRIBUTION

It is anticipated that A. I. D. will assist the Project for approximately seven years. Such assistance will consist of the following:

A. Technical Assistance

Approximately 21 person years of technical assistance will be provided by the following personnel:

(a) A Family Nurse Practitioner ("FNP") Educator will head the curriculum design team responsible for developing a nursing curriculum for the IHS and will also serve as advisor to two Swazi registered nurses who are to become tutors for Swazi Family Nurse Practitioner counterpart personnel.

(b) A Maternal, Child Health/Family Planning ("MCH/FP") Educator will participate in the development of the IHS curriculum and will supervise and help train a Swazi counterpart who will become a permanent instructor at IHS.

(c) A Curriculum Design Specialist will teach workshops on curriculum design, evaluation, redesign and instructional methods.

(d) A Nursing Advance-Placement Evaluator will evaluate the background and experience of prospective nurse tutors to determine the extent of education credit which can be granted for their previous training towards a Bachelor of Science degree in nursing education at an accredited U.S. educational institution.

(e) A Health Statistician/Analyst will compile general health statistics and will assist in the selection and training of a Swazi counterpart who will be trained to assume the permanent Health statistician position within the Ministry of Health.

(f) A Hospital Administrator will work at all four of Swaziland's government hospitals to establish adequate management procedures and will work with four Swazi administration counterparts in the implementation of a management system.

(g) A Rural Health Services Administrator will assist the Ministry of Health in developing effective logistical management methods to coordinate rural health services and programs in Swaziland and will train four Swaziland counterparts to administer these services and programs.

B. Training

A. I. D. will finance approximately 26 person-years of

academic and specialized training in appropriate U.S. and African institutions to prepare Swazi staff to carry out their responsibilities within the Ministry of Health and permit phase-out of U.S.-provided personnel prior to the PACD. Training will be in fields important to achievement of project objectives and will be mutually agreed to in advance by A.I.D. and the Grantee.

A.I.D.-funded technical assistance personnel will carry out on-the-job training for their Swazi counterparts who will be preparing to take over full operational responsibility for the Ministry of Health.

C. Commodities

A.I.D. will provide certain medical equipment and supplies and three motor vehicles for the Project.

D. Construction

A.I.D. will finance the physical construction of the IHS and three houses for technical assistance personnel.

III. GRANTEE'S CONTRIBUTION

In addition to its general obligation under Section 3.2 to supply funds and resources needed for the Project, the Grantee will make the following specific contributions:

A. Administrative and Logistical Support for A.I.D.-Financed  
Technical Assistance Personnel

The Grantee will provide such support as is required by the U.S.-financed technical assistance ("TA") personnel and their counterparts to properly carry out their responsibilities under the Project. Such support shall include adequate office space, furniture, qualified clerical and administrative staff and other miscellaneous services. The Grantee shall also finance the cost of local travel incident to the implementation of the Project and will provide proper maintenance of A.I.D.-supplied commodities and vehicles. The Grantee will assure the availability of satisfactory housing and hard furnishings for the A.I.D.-financed technicians in accordance with standards established by the Grantee for other expatriate contract employees of comparable rank and will assume the cost of utilities incident to such housing. The Grantee will furnish all costs of temporary lodging for short-term consultancies and for other technical

assistance personnel in the event these technicians arrive in Swaziland prior to the availability of permanent housing, Finally, the Grantee will provide to all U. S.-financed technical assistance personnel such benefits and allowances, including annual leave, usually provided to the Grantee's employees of similar rank.

B. Support for Swazi Counterparts

The Grantee shall furnish all necessary support, including salaries, for required counterpart personnel for the Project. Such counterpart personnel shall include, but are not limited to, approximately 8 to 14 persons working in such areas as hospital administration, rural health services administration, statistics, training and planning.

C. Support for Participant Training

The Grantee shall provide local costs incidental to the departure of participants from Swaziland and standard support allowances or salary maintenance normally provided for the Grantee's employees engaged in out-of-country training.

D. Commodities

The Grantee will provide hard furnishings for the IHS.

E. Other Costs

For the purposes of the construction component of the Project and operation of the IHS the Grantee shall provide:

- (1) design and construction supervision services for the construction of the IHS and staff housing;
- (2) sites for the IHS and staff housing;
- (3) operating expenses of the IHS including: student and faculty supplies, IHS Employees' salary, honorariums, maintenance and upkeep, and maintenance for one bus.

IV. CONTRIBUTIONS OF OTHER DONORS

It is anticipated that contributions of other donors will include the following:

The United Kingdom ("U. K. ") will furnish two teachers in the fields of psychology and midwifery for the IHS for four year terms and one health planner, also for a four year term. The United Kingdom will also provide participant training in the U. K. for one registered nurse to obtain a B. Sc. degree in education and for one nurse-tutor.

The Institute for Development Management ("IDM") in Botswana will provide a curriculum design specialist for two 3 month consultancies and a teacher of logistics management for three 8 week courses for hospital administrators.

The World Health Organization ("WHO") will provide a teacher in the field of health inspection for the IHS for a five year period.

## V. IMPLEMENTATION

### A. Implementation Principles

The parties hereto will implement the Project and evaluate its effectiveness in accordance with the following principles:

(1) The activities of the A. I. D.-funded health planning and administration technicians and the curriculum design and training specialists will be closely coordinated. The technical specialists working on the curriculum will draw on their professional backgrounds and experience; however, the Ministry of Health will have powers of mediation and final decision over all curriculum matters.

(2) The training of nurse practitioners (NPs) to train and supervise lower level personnel will focus on developing demand for preventive health services equal to that currently existing for curative services. Teaching techniques and curriculum content will encourage the NPs to foster this demand through emphasizing the relevance of daily behavior to health status.

(3) Popularly expressed health concerns and traditional cultural practices will be reflected specifically in the curriculum developed and throughout the entire training program. The participation of traditional healers and birth attendants in the national health program will be maximized. To this end, training program content will be thoroughly vetted among current nursing and public health staff, community leaders, and others. Any additional social/cultural analysis inherent in this process will be performed either by the Grantee alone or with A. I. D. (or other donor) assistance.

(4) The national program for delivery of expanded health services will include maximum delegation of responsibility at every

level, including the NP level.

(5) Priorities will be carefully established and emphasized in the training program among the client population's competing needs, e. g. , for medical relief, maternity services, family planning services, personal preventive services, etc. , and national health programs, such as, environmental sanitation, communicable disease control, national population control, general health education, mental health, etc.

(6) Epidemiological studies will be undertaken in support of the training programs.

(7) Non-formal adult education techniques will be taught to the NPs to enable them to encourage greater initiative and personal responsibility in their audience for changing health situations, such as, unsafe water supplies, inadequate waste disposal habits, human over-crowding, etc.

(8) The NP training program will be carried out and NP operational positions will be developed so that NP status is adequately recognized and rewarded and so that NPs do not need to further specialize to advance in their chosen field.

## B. Implementation Plan

### 1. Construction

The Grantee will enter into a contract for engineering design and supervision of construction within one month from the date of this Agreement. A. I. D. will not assist in financing this contract.

A. I. D. will finance construction under the fixed amount reimbursement ("FAR") method whereby the Grantee will be reimbursed, subject to this Agreement, the local currency equivalent of \$1,220,000 for completing the construction of staff housing and the IHS in accordance with the schedules, plans, designs and specifications approved by A. I. D. The Grantee will be eligible for periodic reimbursements and for advances of working capital in accordance with schedules and procedures set forth in Project Implementation Letters. A. I. D. shall make disbursements upon approval of documentation submitted by the Grantee, as specified in Project Implementation Letters, and following such site inspections as A. I. D. considers necessary.

Except as A. I. D. may otherwise agree in writing, the Grantee will contract for construction services in accordance with and subject to Chapter two of A. I. D. Handbook 11 ("Country Contracting, Procurement of Construction Services"). Construction services, materials and equipment procured for the Project shall have their source and origin in Swaziland or the United States, except that construction materials procured for not in excess of \$650,000 may have their source and origin in countries included in A. I. D. Geographic Code 935.

Within three months from this Agreement the Grantee will enter into a contract for preliminary site preparation to provide for rough grading of the IHS site. The contract price will be less than \$100,000 and it is estimated that work will be completed in less than three months from the date of contract.

It is planned that an Invitation for Bids ("IFB") for construction will be issued within five months from this Agreement and that a contract or contracts will be awarded within eight months from this Agreement. Construction of housing will be completed within ten months from this Agreement and construction of the IHS will be completed within 26 months from this Agreement.

The Grantee may issue separate IFBs for staff housing and for the IHS or may issue a single IFB with severable components for housing and for the IHS, permitting bids on either or both components.

## 2. Commodity Procurement

Grant funded procurement of operational commodities for the Ministry of Public Health (MOPH), including motor vehicles and such items as teaching aids and laboratory equipment will be carried out either by A. I. D. or the Grantee, as will be specified in Project Implementation Letters after consultation between the parties hereto.

All operational commodities procured under the Grant for the MOPH shall have their source and origin in Swaziland or the United States, except that motor vehicles (limited to one bus and two passenger vehicles) may have their source and origin in countries included in A. I. D. Geographic Code 935.

The Grantee will assure that motor vehicles procured under the Grant are available for use on the Project within six months from this Agreement and that items to be used at the IHS are available when construction of the IHS is completed.

### 3. Technical Assistance and Training

Technical assistance ("TA") personnel financed by A.I.D. will be United States citizens or permanent residents, except as A.I.D. may otherwise agree in writing. A.I.D. utilizing Grant funds or the Grantee will contract directly with a U.S. university or other institution for the services of required TA personnel. The contracting institution shall have the capability to provide professional backstopping for the TA personnel and to provide consulting personnel to deal with emergent matters on short notice. Within eight months from this Agreement biographic data for TA personnel nominated for Project positions shall be submitted by the contractor to the Grantee and A.I.D. for approval.

The following six TA personnel are scheduled to arrive in Swaziland approximately 12 months from this Agreement (approximately June 1978):

(1) FNP Nursing Educator	4 P/Y
(2) MCH/PP Nursing Educator	3 P/MO
(3) Curriculum Design Consultant	4 P/MO
(4) Health Statistician	4 P/Y
(5) Hospital Administrator	3 P/Y
(6) Rural Health Services Administrator	4 P.Y

Curriculum design specialists will return for approximately three additional consultancy periods of two to four months duration. An MCH/FP Nursing Educator will arrive approximately in June of 1980 for a four year term to finalize IHS curriculum preparation and to assume teaching duties. The description and scheduling of services of TA personnel, including those of a nursing advance placement evaluator, will be further specified in Project Implementation Letters, as necessary, following evaluation of Project implementation and consultation between the parties.

Similarly, the schedule and quantification of training activities will be set forth more specifically in Project Implementation Letters, as may be necessary. The following, however, represents a general initial schedule:

Preparatory Training of RNs for

Nursing Education Participant  
Training begins..... August 1978

Counterpart Training for Rural  
Health Services Administrators begins.....June 1978

Three 8 week courses for Hospital  
Administrators at IDM..... October 1978  
February 1979  
June 1979

Approximately 26 P/Y of U.S. Participant  
Training in psych/mental health,  
nursing education/tutoring, health planning.... July 1978 to June 1983

Three 8 week courses for Rural Health  
services administrators at IDM.....January 1980  
June 1980  
January 1981

IHS becomes operational and begins  
instruction in.....August 1980

VI. EVALUATION

The Project, achievement of its objectives and implementation of the principles described in Section V(A) of this Annex 1 will be evaluated in accordance with the following procedures:

A. Evaluation Procedures Incorporated Within Project

(1) Baseline Data

To establish the necessary guidelines for the development of an adequate curriculum and teaching program to meet local conditions and requirements, all A.I.D. funded technical assistance personnel ("TAs") will initially gather and assemble quantitative and qualitative data within their respective disciplines. This information will serve as baseline data for the development and implementation of the various project elements, as well as for future comparison (evaluation) to determine project progress and project design adjustments. A major supportive element will be provided by the TA Health Statistician who will help to collect and analyze baseline data required.

(2) Continuous Project Evaluation Process

The curriculum and teaching program will be reviewed and evaluated annually by all technicians in accordance with their respective disciplines. This will serve as the basis for the preparation of an integrated project review and evaluation report by the curriculum team (TA and Swazi faculty) working in conjunction with the Curriculum Design Specialist. The report will include recommendations for remedial action to meet the student and faculty requirements or Project design adjustments.

The MOH will appraise the above annual review and evaluation report and will endeavor to implement the report's recommendations, subject to the agreement of A. I. D. In addition, the MOH will prepare its own independent project review and evaluation report with whatever recommendations it may deem necessary and submit such report annually to A. I. D. for its consideration, review and comments.

Each annual review and evaluation report to be prepared by individual TAs, the contracted institution and MOH will cover all the basic elements of the Project. The individual TA personnel will also evaluate the training and on-the-job experience of their Swazi counterparts to determine the adequacy of their performance and capability to assume their designated responsibilities in academic training or administration. On the basis of such evaluation, and if necessary, TA personnel will recommend or provide the remedial action required to improve the performance or strengthen the capability of their Swazi counterparts. The U. S. advance placement evaluator will evaluate the in-country training, curriculum design and teaching experience of RNs to ascertain whether the quality of such training and experience meets the criteria and credit requirements of a U. S. training institution towards a B.Sc. degree in nursing education.

B. Project Appraisal Reports

A. I. D. will prepare annual project appraisal reports in accordance with A. I. D. regulations.

C. Independent External Evaluation

Two independent external evaluations will be held during

the life of the Project. The first will take place after completion of the IHS physical facilities and after two years of TA services and, it is anticipated, prior to the initiation of classes in August of 1979. This is considered a critical point when consideration may be given to project design adjustments or future project requirements for adequate and timely implementation. The second and final independent external evaluation will occur shortly before the PACD.

VII. PROJECT FINANCIAL PLAN

(Source and Application of Funding - \$000s)

As of June 1, 1977Project No. 690-0062AMOUNT FOR AN INCREMENTALLY FUNDED PROJECT

PROJECT INPUTS	Cumulative Obligations/ Commitments as of June 1, 1977			Future Years Anticipated			Total		
	A. I. D.	B/G	OTHER	A. I. D.	B/G	OTHER	A. I. D.	B/G	OTHER
Staff and Consultants.....	720		53	1,824	638	1,642	2,544	638	695
Training. ....	86			296	135	60	382	135	60
Project Personnel (Swazi & TA) Administrative Support.....					314			314	
Commodities.....	10			81	167		91	167	
Construction.....	300		100	900			1,200	146	100
Engineering Design and Super- vision.....		146						146	
Contingency (Construction).....				83			83		
Land.....					70			70	
Maintenance of Facilities.....					330			330	
<b>TOTALS</b>	<b>1,116</b>	<b>146</b>	<b>153</b>	<b>3,184</b>	<b>1,654</b>	<b>1,702</b>	<b>4,300</b>	<b>1,800</b>	<b>1,855</b>

PROJECT GRANT STANDARD  
PROVISIONS ANNEX

Definitions: As used in this Annex, the "Agreement" refers to the Project Grant Agreement to which this Annex is attached and of which this Annex forms a part. Terms used in this Annex have the same meaning or reference as in the Agreement.

ARTICLE A.

Project Implementation Letters.

To assist Grantee in the implementation of the Project, A.I.D., from time to time, will issue Project Implementation Letters that will furnish additional information about matters stated in this Agreement. The parties may also use jointly agreed-upon Project Implementation Letters to confirm and record their mutual understanding on aspects of the implementation of this Agreement. Project Implementation Letters will not be used to amend the text of the Agreement, but can be used to record revisions or exceptions which are permitted by the Agreement, including the revision of elements of the amplified description of the Project in Annex 1.

ARTICLE B.

General Covenants.

SECTION B.1. Consultation. The Parties will cooperate to assure that the purpose of this Agreement will be accomplished. To this end, the Parties, at the request of either, will exchange views on the progress of the Project, the performance of obligations under this Agreement, the performance of any consultants, contractors or suppliers engaged on the Project, and other matters relating to the Project.

SECTION B.2. Execution of Project. The Grantee will:

(a) carry out the Project or cause it to be carried out with due diligence and efficiency, in conformity with sound technical, financial, and management practices, and in conformity with those documents, plans, specifications, contracts, schedules or other arrangements, and with any modifications therein, approved by A.I.D. pursuant to this Agreement; and

(b) provide qualified and experienced management for, and

train such staff as may be appropriate for the maintenance and operation of the Project, and, as applicable for continuing activities, cause the Project to be operated and maintained in such manner as to assure the continuing and successful achievement of the purposes of the Project.

SECTION B.3. Utilization of Goods and Services.

(a) Any resources financed under the Grant will, unless otherwise agreed in writing by A.I.D., be devoted to the Project until the completion of the Project, and thereafter will be used so as to further the objectives sought in carrying out the Project.

(b) Goods or services financed under the Grant, except as A.I.D. may otherwise agree in writing, will not be used to promote or assist a foreign aid project or activity associated with or financed by a country not included in Code 935 of the A.I.D. Geographic Code Book as in effect at the time of such use.

SECTION B.4. Taxation. (a) This Agreement and the Grant will be free from any taxation or fees imposed under laws in effect in Swaziland.

(b) To the extent that (1) any contractor, including any consulting firm, any personnel of such contractor financed under the Grant, and any property or transaction relating to such contracts, contractors or personnel and (2) any commodity procurement transaction financed under the Grant, are not exempt from identifiable taxes, tariffs, duties or other levies imposed under laws in effect in the territory of the Grantee, the Grantee will, as and to the extent provided in and pursuant to Project Implementation Letters, pay or reimburse the same with funds other than those provided under the Grant.

SECTION B.5. Reports, Records, Inspections, Audit. The Grantee will:

(a) furnish A.I.D. such information and reports relating to the Project and to this Agreement as A.I.D. may reasonably request;

(b) maintain or cause to be maintained, in accordance with generally accepted accounting principles and practices consistently applied, books and records relating to the Project and to this Agreement, adequate to show, without limitation, the receipt and use of goods and services acquired under the Grant. Such books and records will be audited regularly, in accordance with generally accepted auditing standards, and maintained for three years after the date of last disbursement by A.I.D.; such books and records will also be adequate to show the nature and extent of solicitations of

prospective suppliers of goods and services acquired, the basis of award of contracts and orders, and the overall progress of the Project toward completion; and

(c) afford authorized representatives of a Party the opportunity at all reasonable times to inspect the Project, the utilization of goods and services financed by such Party, and books, records and other documents relating to the Project and the Grant.

SECTION B.6. Completeness of Information. The Grantee confirms:

(a) that the facts and circumstances of which it has informed A.I.D., or caused A.I.D. to be informed, in the course of reaching agreement with A.I.D. on the Grant, are accurate and complete, and include all facts and circumstances that might materially affect the Project and the discharge of responsibilities under this Agreement;

(b) that it will inform A.I.D. in timely fashion of any subsequent facts and circumstances that might materially affect, or that it is reasonable to believe might so affect, the Project or the discharge of responsibilities under this Agreement.

SECTION B.7. Other Payments. Grantee affirms that no payments have been or will be received by any official of the Grantee in connection with the procurement of goods or services financed under the Grant, except fees, taxes, or similar payments legally established in the country of the Grantee.

SECTION B.8. Information and Marking. The Grantee will give appropriate publicity to the Grant and the Project as a program to which the United States has contributed, identify the Project site, and mark goods financed by A.I.D., as described in Project Implementation Letters.

ARTICLE C.

Procurement Provisions

SECTION C.1. Special Rules. (a) The source and origin of ocean and air shipping will be deemed to be the ocean vessel's or aircraft's country of registry at the time of shipment.

(b) Premiums for marine insurance placed in the territory of the Grantee will be deemed an eligible Foreign Exchange Cost, if otherwise eligible under Section C.7(a).

(c) Any motor vehicles financed under the Grant will be of United States manufacture, except as A.I.D. may otherwise agree in writing.

(d) Transportation by air, financed under the Grant, of property or persons (and their personal effects) will be on carriers holding United States certification, to the extent service by such carriers is available. Details on this requirement will be described in a Project Implementation Letter.

SECTION C.2. Eligibility Date. No goods or services may be financed under the Grant which are procured pursuant to orders or contracts firmly placed or entered into prior to the date of this Agreement, except as the Parties may otherwise agree in writing.

SECTION C.3. Plans, Specifications, and Contracts. In order for there to be mutual agreement on the following matters, and except as the Parties may otherwise agree in writing:

(a) The Grantee will furnish to A.I.D. upon preparation,

(1) any plans, specifications, procurement or construction schedules, contracts, or other documentation relating to goods or services to be financed under the Grant, including documentation relating to the pre-qualification and selection of contractors and to the solicitation of bids and proposals. Material modifications in such documentation will likewise be furnished A.I.D. on preparation;

(2) such documentation will also be furnished to A.I.D., upon preparation, relating to any goods or services which, though not financed under the Grant, are deemed by A.I.D. to be of major importance to the Project. Aspects of the Project involving matters under this subsection (a)(2) will be identified in Project Implementation Letters;

(b) Documents related to the prequalification of contractors, and to the solicitation of bids or proposals for goods and services financed under the Grant will be approved by A.I.D. in writing prior to their issuance, and their terms will include United States standards and measurements;

(c) Contracts and contractors financed under the Grant for engineering and other professional services, for construction services, and for such other services, equipment or materials as may be specified in Project Implementation Letters, will be approved by A.I.D. in writing prior to execution of the contract. Material modifications in such contracts will also be approved in writing by A.I.D. prior to execution; and

(d) Consulting firms used by the Grantee for the Project but not financed under the Grant, the scope of their services and such of their personnel assigned to the Project as A.I.D. may specify, and

construction contractors used by the Grantee for the Project but not financed under the Grant, shall be acceptable to A.I.D.

SECTION C.4. Reasonable Price. No more than reasonable prices will be paid for any goods or services financed, in whole or in part, under the Grant. Such items will be procured on a fair and, to the maximum extent practicable, on a competitive basis.

SECTION C.5. Notification to Potential Suppliers. To permit all United States firms to have the opportunity to participate in furnishing goods and services to be financed under the Grant, the Grantee will furnish A.I.D. such information with regard thereto, and at such times, as A.I.D. may request in Project Implementation Letters.

SECTION C.6. Shipping. (a) Goods which are to be transported to the territory of the Grantee may not be financed under the Grant if transported either: (1) on an ocean vessel or aircraft under the flag of a country which is not included in A.I.D. Geographic Code 935 as in effect at the time of shipment, or (2) on an ocean vessel which A.I.D., by written notice to the Grantee has designated as ineligible; or (3) under an ocean or air charter which has not received prior A.I.D. approval.

(b) Costs of ocean or air transportation (of goods or persons) and related delivery services may not be financed under the Grant, if such goods or persons are carried (1) on an ocean vessel under the flag of a country not, at the time of shipment, identified under the paragraph of the Agreement entitled "Procurement Source: Foreign Exchange Costs," without prior written A.I.D. approval; or (2) on an ocean vessel which A.I.D., by written notice to the Grantee, has designated as ineligible; or (3) under an ocean vessel or air charter which has not received prior A.I.D. approval.

(c) Unless A.I.D. determines that privately-owned United States-flag commercial ocean vessels are not available at fair and reasonable rates for such vessels, (1) at least fifty percent (50%) of the gross tonnage of all goods (computed separately for dry bulk carriers, dry cargo liners and tankers) financed by A.I.D. which may be transported on ocean vessels will be transported on privately-owned United States-flag commercial vessels, and (2) at least fifty percent (50%) of the gross freight revenue generated by all shipments financed by A.I.D. and transported to the territory of the Grantee on dry cargo liners shall be paid to or for the benefit of privately-owned United States-flag commercial vessels. Compliance with the requirements of (1) and (2) of this subsection must be achieved with respect to both any cargo transported from U.S. ports and any cargo transported from non-U.S. ports, computed separately.

SECTION C.7. Insurance. (a) Marine insurance on goods financed by A.I.D. which are to be transported to the territory of the Grantee may be financed as a Foreign Exchange Cost under this Agreement provided (1) such insurance is placed at the lowest available competitive rate, and (2) claims thereunder are payable in the currency in which such goods were financed or in any freely convertible currency. If the Grantee (or government of Grantee), by statute, decree, rule, regulation, or practice discriminates with respect to A.I.D.-financed procurement against any marine insurance company authorized to do business in any State of the United States, then all goods shipped to the territory of the Grantee financed by A.I.D. hereunder will be insured against marine risks and such insurance will be placed in the United States with a company or companies authorized to do a marine insurance business in a State of the United States.

(b) Except as A.I.D. may otherwise agree in writing, the Grantee will insure, or cause to be insured, goods financed under the Grant imported for the Project against risks incident to their transit to the point of their use in the Project; such insurance will be issued on terms and conditions consistent with sound commercial practice and will insure the full value of the goods. Any indemnification received by the Grantee under such insurance will be used to replace or repair any material damage or any loss of the goods insured or will be used to reimburse the Grantee for the replacement or repair of such goods. Any such replacements will be of source and origin of countries listed in A.I.D. Geographic Code 935 as in effect at the time of replacement, and, except as the Parties may agree in writing, will be otherwise subject to the provisions of the Agreement.

SECTION C.8. U.S. Government-owned Excess Property. The Grantee agrees that wherever practicable United States Government-owned excess personal property, in lieu of new items financed under the Grant, should be utilized. Funds under the Grant may be used to finance the costs of obtaining such property for the Project.

#### ARTICLE D.

##### Termination: Remedies.

SECTION D.1. Termination. Either Party may terminate this Agreement by giving the other Party 30 days written notice. Termination of this Agreement will terminate any obligations of the Parties to provide financial or other resources to the Project pursuant to this Agreement, except for payments which they are committed to make pursuant to non-cancellable commitments entered into with third parties prior to the termination of this Agreement. In addition, upon such termination A.I.D. may, at A.I.D.'s expense, direct that title to goods financed under the Grant be transferred to A.I.D. if the goods are from a source outside Grantee's country, are in a deliverable state and have not been offloaded in ports of entry of Grantee's country.

SECTION D.2. Refunds. (a) In the case of any disbursement which is not supported by valid documentation in accordance with this Agreement, or which is not made or used in accordance with this Agreement, or which was for goods or services not used in accordance with this Agreement, A.I.D., notwithstanding the availability or exercise of any other remedies under this Agreement, may require the Grantee to refund the amount of such disbursement in U.S. Dollars to A.I.D. within sixty days after receipt of a request therefor.

(b) If the failure of Grantee to comply with any of its obligations under this Agreement has the result that goods or services financed under the Grant are not used effectively in accordance with this Agreement, A.I.D. may require the Grantee to refund all or any part of the amount of the disbursements under this Agreement for such goods or services in U.S. Dollars to A.I.D. within sixty days after receipt of a request therefor.

(c) The right under subsection (a) or (b) to require a refund of a disbursement will continue, notwithstanding any other provision of this Agreement, for three years from the date of the last disbursement under this Agreement.

(d) (1) Any refund under subsection (a) or (b) or (2) any refund to A.I.D. from a contractor, supplier, bank or other third party with respect to goods or services financed under the Grant, which refund relates to an unreasonable price for or erroneous invoicing of goods or services, or to goods that did not conform to specifications, or to services that were inadequate, will (A) be made available first for the cost of goods and services required for the Project, to the extent justified, and (B) the remainder, if any, will be applied to reduce the amount of the Grant.

(e) Any interest or other earnings on Grant funds disbursed by A.I.D. to the Grantee under this Agreement prior to the authorized use of such funds for the Project will be returned to A.I.D. in U.S. Dollars by the Grantee.

SECTION D.3. Nonwaiver of Remedies. No delay in exercising any right or remedy accruing to a Party in connection with its financing under this Agreement will be construed as a waiver of such right or remedy.

SECTION D.4. Assignment. The Grantee agrees, upon request, to execute an assignment to A.I.D. of any cause of action which may accrue to the Grantee in connection with or arising out of the contractual performance or breach of performance by a party to a direct U.S. Dollar contract with A.I.D. financed in whole or in part out of funds granted by A.I.D. under this Agreement.



PROJECT REVIEW PAPER  
PROJECT 690-0062  
SWAZILAND HEALTH MANPOWER TRAINING

	<u>PAGE</u>
INTRODUCTION OF THE PROJECT	i-iii
1. PRIORITY AND RELEVANCE	1
2. DESCRIPTION OF PROJECT	7
A. Goal	7
Goal indicators and means of verification	8
Goal assumptions	10
B. Purposes	12
Purpose indicators and means of verification	12
Purpose assumptions	16
C. Outputs	17
Output indicators and means of verification	17
Output assumptions	21
D. Inputs	22
Input indicators and means of verification	22
Input assumptions	25
3. AID AND OTHER RELEVANT EXPERIENCE	27
4. BENEFICIARIES	27
5. FEASIBILITY ISSUES	32
6. OTHER DONOR COORDINATION	36
7. FINANCIAL PLAN	39
8. IMPLEMENTATION PLAN	42
9. PROJECT DEVELOPMENT REQUIREMENTS	46
10. SUPPORTING ANALYSES	
A. Logical framework matrix	
B. Cost and financial data	
1. Summary cost and financial data	
2. Costing of project outputs/inputs	
3. Project summary: AID Appropriated funds	
C. Construction of training facility	
D. Project linkages	
E. Current and projected training of health personnel in Swaziland.	

## Introduction to the Project

This project is intended to assist the Government of Swaziland in achieving the health sector objectives established in the national development plan (1973-77) and further developed in the recently issued ten year "Plan for the Development of Health Services". In these two documents the government states its intention to re-orient its health services delivery system away from conventional institutional facilities catering largely to the urban populace, toward the more effective provision of basic health care in the rural areas. A redirection of this magnitude has major implications for manpower needs, and requires attention to planning and administrative capability.

In order to cope with the inadequacies and drawbacks of conventional health personnel training, now performed largely in the private sector and abroad, the government has determined to design its own training programs and to construct a public health manpower training facility. The government also recognizes its need for added strength in the areas of health planning and health services administration. The ten year health plan calls for foreign donor assistance in meeting these requirements.

Therefore, this project addresses both present shortcomings in the substance and range of health manpower training in Swaziland and the seriously over-extended planning and administrative capacity of the Ministry of Health.

The project provides 2 experienced nurse tutors for the organization of the manpower training program including curriculum design, instruction, training of nurse tutors and training administration. The project also includes commodity and capital components to assist in the costs of constructing and equipping the training facility.

Once operational, the training facility will help service the manpower training and field support needs of a strengthened preventive care oriented rural health delivery system. Instructional programs are planned in pre-nursing, basic nursing, nursing specialty areas, rural sanitation and health auxiliary fields. The training facility will provide a location for in-service training, workshops, conferences and related activities.

In addition, long and short term technical assistance and training are made available under the project in the planning, administrative and health statistics areas.

An AID-funded health planner will assist in formulating, refining and evaluating implementation activities stemming from the ten year health plan, and in the provision of on-the-job training in anticipation of localization. Two health services administrators will play pivotal roles in the management and support of the health services delivery network, including its personnel, physical facilities, supplies and logistics.

Project recruitment will use the OPEX mechanism. Training of counterpart and other key Swazi personnel will take place in-country and in U.S. and third country institutions. The GOS will bear all operating costs associated with the training institution. Other donor inputs will support the development of training curricula, instructional programs and training of nurse-tutors.

1. Priority and Relevance

The primary development goal of Swaziland's Second National Development Plan (1973-77) is to promote the widespread participation of the Swazi people in development in order to improve their general level of living and quality of life, particularly in the subsistence rural sector. Enhanced human health and, by extension, the expansion and improvement of integrated rural health delivery services is essential to furthering this goal. The second plan states with respect to the health sector that the "greatest needs for health services (are) those of the young and the inhabitants of the rural areas"...and that "there is now an urgent need to reorientate priorities for development in the health field away from conventional institutional facilities centered on urban areas and toward different kinds of programmes which are cheaper and more closely geared to the preventive aspects of health so that a wider impact may be achieved on the health problems of the rural population at large."

In the absence of extensive preventive and promotive health care activities, a continuing heavy load of illness in the subsistence sector is inevitable. Although Swaziland possesses relatively highly developed hospital services, these cater principally to the urban populace and have shown little ability to alter the incidence of major diseases or improve general health in the rural areas where 80% of the populace resides. Moreover, it is estimated that the government's four urban public health

centers (associated with public hospitals) and 30 rural clinics are reaching not more than 15% of the country's under-five population with preventive health care services. The problem is to bring prevention-based health services to the people rather than waiting for the sick to come to urban areas for curative care.

The Ministry of Health (MOH) is determined to undertake a major re-direction of the public health services in order to address this problem. The findings and recommendations of an AID-funded health consultant to the GOS ("Planning and Health Services of Swaziland" prepared July 10 - September 15, 1974 by Oscar Gish), have largely been accepted by the MOH and have provided the basis for the government's ten year plan for health sector development, which was approved by the GOS Council of Ministers in October 1975. The Gish report recommends and the ten year plan confirms MOH support for a reoriented health services delivery program emphasizing preventive care and focusing on the requirements of the rural population.

Swaziland presently has a respectable though less than adequate infrastructure of public and private rural clinics. Furthermore, the government has succeeded in obtaining support from the U.K. and the African Development Bank (ADB) for extension and renovation of the system of physical facilities for health care in rural areas. Specifically, six public clinics are planned for development over the next several years and have their funding assured. It is anticipated that additional private,

mission clinics will also be constructed. Presently probably 85 to 90% of the populace lives within 7 or 8 miles of a clinic. With an additional 10 to 12 rural clinics constructed over the next decade, 80 to 90% of the population would live within 5 miles of a clinic. The ten year plan for the health services also calls for the development of three "rural health centers" which would hold an intermediate position in the health care hierarchy between the clinic and the hospital. They will be primarily centers for preventive health care activity, though provision will be made for curative care as well. These centers are to be staffed by nurses, public health inspectors, and pharmaceutical, lab and dental assistants, and would have a doctor present on a scheduled basis.

The Ministry is also examining means of improving the work of the hospitals in order to better serve a broader spectrum of the populace. Attention is now focusing on improved management and administration of hospital health services. Moreover, with the restrictions imposed on the MOH recurrent budget by the Ministry of Finance, priorities should shift from heavy investment in hospital and curative services toward a more cost effective program focused on preventive services and rural health. In this connection, previous plans for hospital expansion are being curtailed significantly. The government plans to absorb the costs of only 200 additional hospital beds over the next decade and these beds are to be distributed in hospitals other than those in the main urban centers of Manzini and Mbabane.

The manpower requirements of a re-directed and improved health services system are also being addressed by the MOH. The government is presently conducting a one year in-country training course for rural health assistants. This program, instituted in 1974, is aimed at improving results of efforts to control communicable diseases and to promote rural sanitation. Eight health assistants have completed the training to date. The MOH is preparing a program to train a cadre of approximately 800 "rural health workers." These personnel will be selected on the basis of minimal qualifications and will receive very basic training in such areas as MCH/FP and the identification of health problems requiring further care. Subsequently, they will work in their local communities where they will be linked to the health services system and supervised through the network of rural clinics.

These and other indicators lend force and promise to the rural-focused health sector policy and strategy outlined in the current national development plan. Particularly in the area of the training of Swazi health personnel, however, the MOH faces serious obstacles to progress in operationalizing a more efficacious health services program. The training of health manpower, performed largely by private mission institutions or abroad, is both inadequate in terms of numbers and inappropriate in terms of substance. Such training is incapable of providing the manpower necessary to plan, organize and operate a comprehensive integrated rural health delivery system with a preventive focus. A significant number of Swaziland's nurses

will have to take charge of rural units, and the nursing curriculum should be revised accordingly. It must include a much more substantial element of public health work, as well as being designed so as to prepare these nurses to function for much of the time in a more independent fashion than is customary in hospital practice. If such a curriculum could be brought into effect within the next two years there would be sufficient output of the "new" nurses to assure at least one for each rural facility by 1985. These nurses should be able to give direction to the auxiliary nurses, rural health workers and other rural health staff who will work under their supervision.

The Gish report, which constituted the basis for the subsequent Development Assistance Program (DAP) health sector assessment, recognizes manpower deficiencies as a key constraint in an inter-dependent health system and recommends that priority attention be directed to the need for expanded and more relevant training of field health personnel, both professional and auxiliary. The report also recommends the development of a government training institution and curricula for this purpose. The emphasis in the health sector segment of the DAP upon attention to health personnel requirements is consistent with the broader conclusion in the DAP that the primary impediment to the attainment of the country's development objectives is its severely limited pool of qualified indigenous manpower in all fields, particularly at the middle level managerial and technical levels. The DAP health sector assessment points out that with the expansion of preventive health services (while maintaining adequate

hospital coverage) and the expected deterioration in the doctor/patient ratio, the need for more nurses and auxiliary personnel becomes apparent.

There are serious inadequacies and drawbacks in the training of Swazi health personnel as presently performed. The government does not operate a nurse training school; Swaziland is probably the only Commonwealth African country without such a public facility. All training of registered nurses and nurse auxiliaries is carried out privately by the Nazarene and Catholic Churches, with a few exceptions where training has been received in South Africa. The MOH is greatly handicapped in its ability to control and coordinate health manpower development. Specifically, the training problem can be viewed in terms of the following elements:

- (1) The MOH lacks influence over training curricula and the substantive aspects of training programs. Present training is conventional, conservative and oriented toward curative health care in the context of the hospital; serious differences in philosophy exist between the GOS and the Nazarene Mission which trains registered nurses.
- (2) The MOH cannot at present exert direct influence over the mix of training for the health sector.
- (3) The MOH requires an opportunity to provide greater in-service training and field support if rural health services are to be expanded and improved.

- (4) The Nazarene school for registered nurses is not producing nurses in numbers sufficient to accommodate both public and private institutional needs.
- (5) Although the MOH is determined to operate its own training and field support institution, it lacks the capital finances and personnel resources to do so without external assistance.

The Gish consultancy report referred to above also identifies the dearth of analytic and administrative capacity in the MOH as a critical problem bearing directly on rational expansion of rural health services by the government.

## 2. Description of Project

This proposed AID-financed project will provide resources which will enable the GOS to overcome the critical obstacles to the implementation of its health policies which the lack of training and administrative capacity present.

The detailed project description which follows is presented in the form of a narrative explanation of the preliminary Logical Framework in section 10-A, proceeding from goal to inputs. \* The Logical Framework should be read in conjunction with these comments.

### (A-1) Goal

The health sector goal to which this project contributes is the improvement of MOH health services and the expansion of their

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\*Numbers in parentheses refer to "project logical framework" blocks and are not all in sequential order.

coverage, in accordance with the GOS ten year plan for the Development of Health Services.

(A-2/A-3) Goal Indicators/Means of Verification

The goal of expansion of health service coverage will be considered to have been achieved when 85% of all inhabitants live within five miles of a clinic. At present an estimated two-thirds of the population live within five miles of a clinic. Construction of ten to twelve properly located government clinics over the next decade, for a total of about 40 MOH and 30 "other" clinics, would place a clinic within five miles of the dwellings of 80% to 90% of the population, and within seven or eight miles of most of the rest. Verification of progress toward this goal will involve comparison of population distribution and clinic locations.

The ten year plan indicates that the basic staffing pattern of each clinic will be as follows:

two registered nurse/midwives

one auxiliary nurse

one health assistant

Most of the clinics will have a small (probably 3 bed) maternity unit; the nurse/midwives will therefore be able to provide prenatal, delivery and postpartum services, making good use of their midwifery skills. Nurses at rural clinics in Swaziland are also regularly called upon to diagnose and treat the health problems of patients; the addition of essential nurse practitioner skills to their

present areas of competence would enable them to deal more competently and confidently with problems which they are now forced to diagnose and treat without having been trained to do so. MOH has expressed interest in providing nurses with such training, and some such skills will be included in the basic nursing curriculum. A specialized course to produce fully trained nurse practitioners is also contemplated; selected graduates of the basic nursing course will go to a fourth year of practitioner training.

The auxiliary nurses for the rural clinics are being trained at Good Shepherd Hospital, with some financial support from the MOH.

Health assistants are being trained by the MOH, with most of the teaching done by a WHO sanitarian. Twelve students completed the first one year course, which began in 1974, and the program is continuing. Health assistants, working under the supervision and direction of health inspectors and clinic and health center nurses, will work in disease control (e.g., TB and malaria) and environmental sanitation. Their training is predominantly practical and field oriented, but future health assistant students will spend a total of about two months at the MOH training facility.

Verification of the composition and preparation of clinic staffs will involve studies of personnel and pay records.

Adequate supervisory and logistic support is a prerequisite to obtaining the full benefits of well trained rural health personnel.

Supervision must be a supportive function, rather than punitive, and must be seen as such if tasks are to be successfully delegated to auxiliaries. Logistical support, particularly where drugs and supplies are concerned and where facilities are relatively isolated, has similar importance to full functioning of the system. Progress in these areas will be assessed through field visits, interviews with staff, inventories, and reviews of records, with focus on the rural clinics.

Improvements in rural health services, and particularly adequate training of health workers to meet Swaziland's specific needs, will make it possible for most health problems to be prevented and/or dealt with at the local (homestead, village, or rural clinic) level. However, some patients will always need to be referred for diagnosis or treatment. The adequacy of the responses of referral facilities receiving patients from rural facilities, as well as the appropriateness of the referrals, will be evaluated on the basis of information obtained from outpatient and inpatient records and through tracer studies.

Acceptance and use of promotive, preventive and curative services by the people is essential to health improvement. Utilization and attitude studies will provide means of ascertaining problems and success in this area.

#### (A-4) Goal Assumptions

(Some of these assumptions are also discussed in other sections of this paper.)

Other donor funds for capital costs of health system development are likely to continue to be available. Funding for six new rural clinics is already assured. Other donors are encouraged by the existence of the official GOS ten year plan, which outlines the overall system to which their donations would contribute.

Sufficient GOS funding of recurrent costs of the system is assured by the official approval by the Council of Ministers of the Ten Year Plan, which is based on 6% annual increase (in real terms) of the MOH budget. Caution will need to be exercised in making any changes which would increase recurrent costs (e.g., salary increases or addition of faculty or other positions not planned for) because the Ministry of Finance and Economic Planning indicates that MOH operations must be carried out within the limits of the 6% annual increase.

The present outpatient charges do not seem to present, for most Swazis, a serious obstacle to utilization. If they were raised in order to increase revenues, however, problems could arise. There are no plans for such increases.

Doctors and other health workers are likely to provide needed supervision, support and delegation of responsibility to auxiliaries at all levels. Delegation of diagnosis and treatment functions to nurses, as a matter of necessity, is already common in rural areas. High level support in the MOH, possibly aided by a series of workshops to explain and discuss changes being made, will help assure full support.

MOH officials fully support this project and realize that for its benefits to be obtained personnel trained (at all levels) will need to be used appropriately.

The auxiliary personnel trained under the project will be adequately prepared for work in rural areas. This will reduce the anxiety and discomfort due to lack of preparation which some health workers say makes them dislike and avoid rural assignments. If the TF were to be located in a rural area, this would also make it easier to keep personnel in rural areas.

The nurse auxiliary training program at Good Shepherd Hospital is fully coordinated with MOH plans and activities. Relationships between the MOH and the Hospital are excellent. No problems are foreseen in this area. Training personnel at the hospital are willing to change their program as required as plans for this project are developed in greater detail.

Many rural people are already accustomed to accepting health services from non-physician personnel of the MOH, and no serious difficulties are expected from extending the use of auxiliaries.

(B-1/B-2/B-3) Purposes/Indicators/Means of Verification

The first purpose listed in the project's logical framework is to:

Train nurses and other auxiliary personnel  
for MOH health services.

The corresponding indicator states that:

By EOP, TF enrollment and attrition figures  
indicate that TF production of graduates will

match quantitative requirements and employment capacity projected in ten year plan.

The ten year plan gives the following estimated annual health worker training output requirements, based primarily on GOS needs, but with some allowance for the needs of missions and private practitioners:

Registered Nurse/Midwives	19-20
Auxiliary Nurses	16
Health Inspectors	2-3
Health Assistants	10-11
Doctors	7-8

Auxiliary nurses and doctors will not be trained at the MOH training facility. The flow of students/trainees into and through the school is projected along the following lines. In year one, ten pre-nursing (Junior certificate level) students and twenty-five/nursing students will begin the first year of the three year basic nursing course. Also, a class of eight health inspector students will begin the three year course for this profession. No new health inspector classes will be inaugurated until year four after graduation of the initial group. In the second year of operation courses will be taught in the second year of basic nursing, and there will be an intake of new students for the first year basic and pre-nursing courses. Instruction will continue to expand in this manner through the third year of basic nursing. In the fourth year of operation,

three one year nursing specialty courses will be offered (midwifery, public health, nurse practitioner) to graduates of the basic course, and the training facility will be operating at capacity.\*

In addition to long term training, the facility will also program short courses for health assistants (1-2 months per year) and possibly for village health workers, as well as in-service training and workshops for all categories of health personnel as appropriate.

Comparison of the planned production of graduates and the ten year plan's projected needs indicates that they match well. During and at the end of the project, review of the training facility's enrollment and attrition figures will make it possible to project the actual production of graduates. These projected figures will then be compared with initial and revised estimates of the need for health workers of the various types trained at the facility.

The second project purpose is to

"Institutionalize training capacity,"

and the corresponding indicator states that:

At EOP, permanent TF faculty are training students who fulfill criteria set for evaluation of their skills and knowledge at each stage of their training.

Experts in training methodology agree in stating that learning objectives should be predetermined and that criteria for deciding whether

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\* see p. 14a.

\* Note: In year five, at full capacity, an anticipated 140 to 150 places will be required at the training facility. Total annual enrollment will exceed the number of places due to the scheduling of activities of short duration. Annual enrollment at full capacity is projected as follows:

pre-nursing = 10, basic nursing = 65, nursing specialty courses = 20, health inspectors = 8, para-medicals and auxiliaries = 40 to 50 (est.), in-service training (short courses, workshops)= 25 (est.).

trainees have attained the objectives should be preset. It is assumed that the TF faculty and TA personnel will use such approaches in the TF programs. If this is done, it will be possible to determine whether the testing methods used were appropriate and adequate and whether the students were being prepared successfully for competent job performance. Since preparation of competent health workers to meet the health service needs of the people is the reason for the existence of the health training faculty, such an assessment of student performance should constitute a fair test of faculty performance. It might be argued that admission of an unusually inept group of students might make even a good faculty appear to be performing inadequately. Such an argument could be met by reviewing students' previous performance and any available aptitude test results. Such efforts would probably be unnecessary, however, if students were found to perform adequately in most areas, but inadequately in one or a few, in which case a specific reason for such discrepancies would be sought in order to correct the deficiencies. If it were found that standards had been set which students were unable to meet, and such standards correspond (as they should) to real job requirements, a change in the job would be required rather than simply alterations in standards of student performance.

The third purpose of the project is to

"Strengthen the planning and administration  
of MOH health services,"

and the corresponding indicator states that:

At EOP, the MOH planning and administration functions required for implementation and appropriate revision of the ten year plan on schedule are being carried out adequately and with due consideration of needs and of available resources.

Verification of this indicator will be accomplished through review of MOH plans, planning activities, plan implementation, and administration/management, especially regarding the rural health infrastructure. Such a review will need to be carried out by, or under the close direction of, experts in health planning and health program administration/management who have broad experience in developing countries, preferably including Commonwealth countries in Africa. Verification of performance will be to a great extent a matter of judgement, especially where adequate consideration of needs and available resources is concerned.

(B-4) Purpose Assumptions

Discussions with MOH, Ministry of Finance and Planning Office officials indicate that new positions for faculty and planning, administration and management personnel will be established as required and that GOS funds will be available for new and upgraded positions.

High level MOH support of the project and official acceptance of the ten year plan assure that personnel trained for and under the project will continue to be used in appropriate positions.

Sufficient numbers of suitable candidates for training appear to be available. The number of applicants for nurses training (and especially the number of 'O'-level applicants) has been increasing, a trend which the Planning Office and the MOH expect to continue. No problems are anticipated in finding candidates for other health worker training.

(C-1/C-2/C-3) Outputs/Output Indicators/Output MOV

The logical framework lists four project outputs with indicators for each:

Narrative Summary

Objectively Verifiable Indicators

C1 Outputs:

- 1) Training Facility (TF) (completed and equipped physical facility).
- 2) Appropriate curricula and training programs.
- 3) Trained and experienced trainers.
- 4) Trained and experienced planner/administrators.

C2 Output Indicators:

- 1a) TF construction completed and basic physical services installed and functioning, all as scheduled.
- 1b) TF furnishings and equipment installed and operating, as scheduled.
- 2) Designs of appropriate curricula and training programs for all personnel to be trained in the institute completed in sufficient detail for implementation.
- 3) Full time TF faculty, supplemented by part time faculty when necessary, incorporates teaching competence in all areas required for full TF teaching program.
- 4) MOH planners and administrators have adequate training and experience to completely carry out their duties.

The first output, the completed and equipped physical plant for the training facility, is essential to the fundamental improvement of Swaziland's health services and to obtaining the full benefits of the other project outputs. A listing of the facilities to be included in the TF, based upon discussions including MOH representatives, the November 1975 health manpower training consultant team, the REDSO engineer, and OSARAC, is presented in Annex 10B.

The indicators for this first output are:

TF construction completed and basic physical services installed and functioning, all as scheduled.

TF furnishings and equipment installed and operating, as scheduled.

Verification of each of these indicators will be through review of contracts and records of construction, delivery, installation and testing; and on site inspections.

The second project output listed is:

Appropriate curricula and training programs.

The corresponding indicator states that:

Designs of appropriate curricula and training programs for all personnel to be trained in the institute completed in sufficient detail for implementation.

Verification will be accomplished through:

Review of curricula and of training programs:

faculty interviews.

A key factor in the success of the entire project, in terms of improvements in health services, will be the appropriateness of the curricula and the training programs. It is essential that these be designed to prepare students to competently perform the tasks which their jobs will require. The assignments of tasks to jobs must in turn be made only after a careful review of service needs and planned personnel availability in the various facilities to which workers will be assigned. Such considerations have already been initiated; they have led to the changes in staffing patterns outlined in the ten year plan and to the adoption of the basic approaches to training discussed in the present proposal. For example, the MOH decision to include essential nurse practitioner skills in the basic nursing curriculum reflects acknowledgement of the facts that physicians will not be continuously present at the rural clinics, that curative services will continue to be provided by nurses, and that specific training should be provided so that such services will be more effective. Much more detailed and systematic study of such problems will be required in order to provide a solid basis for the full job and task descriptions upon which training decisions will depend.

The Nursing Examination Board of Botswana, Lesotho and Swaziland sets requirements for registration of nurses and midwives which are incorporated into Swaziland law. The present requirements

are closely linked to those of the Republic of South Africa (which sends a representative to the BLS Board for liaison) and to those of the U. K. In working out the revised curriculum, it will be necessary to assure that local needs are fully met without violating the accreditation standards already in force in Swaziland. It should be borne in mind that the creation of a national health training facility by Swaziland's MON represents a rare opportunity to institute patterns of health training and health services which are fully appropriate to the country's needs: while due attention to outside factors is needed, under the circumstances, it is to be hoped that such requirements will not cause the training to be less than entirely appropriate for local requirements.

The third output is:

Trained and experienced trainers.

The indicator for this output is:

Full time TF faculty, supplemented by part time faculty when necessary, incorporates teaching competence in all areas required for full TF teaching program,

to be verified through:

Review of faculty composition, training, experience and teaching performance; review of student performance; comparison of both with full program requirements.

By the EOP, the TF faculty should be ready to continue the full teaching program without further technical assistance. Faculty members will have been selected and trained as necessary with this in mind. The areas of teaching competence required will, of course, depend on the exact content of the teaching programs. The training which will need to be supplied in order to meet these faculty requirements is discussed below under "inputs."

The fourth project output is:

Trained and experienced planners/administrators.

The accompanying indicator and means of verification are:

MOH planners and administrators have adequate training and experience to competently carry out their duties.

Review of training, experience and performance of MOH planners and administrators and comparison with job requirements.

As is the case with regard to the purpose to which this output most directly contributes, expert judgement will be required here to assess the adequacy of training, experience and performance.

(C-4) Output Assumptions

The discussion in section B-4 above applies to "output assumptions."

(D-1/D-2) Inputs/Input Indicators

[Inputs are discussed in Section 7, "Financial Plan," and in the preceding portions of this logical framework narrative as they relate to outputs and purposes. The inputs listed in the logical framework will together serve to overcome the key deficiencies identified in the Gish Report and the GOS ten year plan: manpower and planning/administration.]

Technical Assistance is an integral component of the proposed project. TA personnel will fill established government positions, to be occupied at the end of the project, if not before, by trained and experienced Swazi counterparts. Once these positions have been filled by Swazis, the U.S. experts will continue to advise and assist as appropriate. Five TA positions are proposed for AID funding:

Two nurse tutors

One health planner

Two health services administrators

The two nurse tutors, working with one or more expatriate nurses provided by other donors, will advise and assist as required in curriculum design, development of instructional programs, teaching, appropriate organizational and administrative tasks associated with the operation of the training facility, and the provision of on-the-job and external training for Swazi counterparts.

The MOH has expressed interest in obtaining TA nurse tutors with expertise in diagnostic and treatment skills (a nurse practitioner),

psycho-social aspects of nursing practice (possibly a psychiatric nurse), maternal and child health (including pediatric nursing), and public health. WHO is providing a consultant to assist the MOH in the development of specialty training in public health nursing, and ~~is~~<sup>s</sup> therefore expected to be able to provide further TA in the public health area. Of the remaining three TA positions contemplated, two seem to be of most central importance to the planned changes in the health system: the nurse practitioner and the MCH specialist. For the sake of integration and coordination of teaching and health service activities, it is anticipated that AID will fill these two TA positions. Another donor (possibly U.K.) will be sought to provide a nurse tutor able to teach the psycho-social aspects of nursing.

The health planner will work with senior MOH staff throughout the four year assignment and will work closely with a Swazi counterpart planner, who will undertake long term participant training. The breadth of the responsibilities and concerns inherent in this position make it advisable that a health/development economist be recruited to fill it. A person with practical overseas experience in the design and implementation of health systems in developing countries should be sought, since much of the work will focus on the implementation of the GOS ten year plan for the Development of Health Services.

The two health services administrators will serve as counterparts to Swazis in what is expected to become a key administrative/management position in the revised health system, viz. the post of Hospital Secretary. The Hospital Secretary, in Commonwealth countries, is an

administrative officer assigned to a hospital. Since hospitals are responsible for the administrative and logistic support of rural clinics (a responsibility shared to a limited extent with Central Medical Stores for supplies), the Secretaries' positions will become much more important as focus shifts to rural services. The two health services administrators will be based, one each, at the hospitals in Mbabane and Hlatikulu. Their principal responsibility will be to further rationalize and develop the established position of "hospital secretary" as the pivotal point for day-to-day management and administration of the health center/rural clinic network. The health services administrators will foster the smooth and efficient operation of both the hospital facility and the rural network. They will also be charged with assisting in on-the-job training of Swazi counterparts and the design of suitable formal training for Swazis.

Inputs other than technical assistance will take the form of participant training, commodities and other contributions. Training will be provided on-the-job, abroad or in country, as deemed appropriate, and will be of both long and short duration. It is essential that qualified and experienced Swazis be in a position to replace departing U.S. technicians.

Commodity inputs will take the form of instructional aids and some laboratory equipment for the training facility. It is anticipated that the major portion of such equipment will be furnished by the GOS or solicited from other donors.

In order to enable the GOS to carry out the training and field support functions envisaged by the project, construction of a physical facility for this purpose is required. In addition, three houses will be built for U.S. personnel.

(D-3) Verification of Inputs

Verification of inputs will be carried out through reviews and audits of AID and GOS records (ProAgs, implementation orders, contracts) related to the project and by examination of the contributions of other donors.

(D-4) Input Assumptions

The availability of adequate architecture and engineering firms and of construction firms was investigated by the REDSO engineer, who found that many "local" firms are registered in Swaziland but controlled and operated by expatriates. The Public Works Department has expressed interest in handling these aspects of the project itself; its capabilities and experience should be considered along with those of eligible private firms.

Continued availability of AID funding during the project will be essential. The activities selected for AID support complement one another and obtaining the full benefits of any one component is dependent upon the presence of the others.

Other donor inputs are discussed in Section 6, "Other Donor Coordination," and in Section 7, "Financial Plan."

Recruitment of adequate TA personnel is of critical importance to the success of the project. TA workers will need to be able to function adequately in their own professional roles and to transfer their skills to their Swazi counterparts as required. Specific details of requirements for TA personnel will be developed during the PP preparation. OSARAC considers that it will be probably not be necessary to use an institutional contract mechanism for the recruitment of TA workers. During both PP preparation and implementation of the project, it is also anticipated that AID consultants will be working in Lesotho on the training, planning and administration/management aspects of the proposed AID-MOH project there; the same consultants might assist in the development and implementation of the project in Swaziland.

The MOH can readily identify suitable local candidates for faculty positions and expects no difficulty in identifying candidates" for planning, administration and management positions. However, USAID suggests that qualified Swazi candidates for counterpart relationships and participant training can be difficult to obtain. This matter is discussed further in Section 5, "Feasibility Issues."

3. AID and Other Relevant Experience

AID/W will provide this section.

4. Beneficiaries

The most immediate and direct beneficiaries of the project activities will be the persons trained. These will include the health planners, the hospital secretaries, the faculty members, the nurses who will become nurse practitioners, and the ward attendants and aides who will be trained as nurse assistants. The nurses and many of the other workers trained at the new facility will be women, whose status, power and income will increase as a direct result of the project.

The health training institution which this project will support in its construction and developmental stages is to be more than the conventional nursing school, in terms of both the substantive mix and the nature of training provided. The training center will furnish an opportunity to build training needs into new curricula and programs encompassing, in addition to traditional nursing skills, public health, rural sanitation, maternal and child health, family planning and other courses of instruction as required. The institution will be a center for seminars, in-service up-grading, and field support activities for government health programs.

The center will serve to build the relationship between nursing and rural health programs. Above all, it will serve as the major means of implementing and institutionalizing a shift in the focus of public health care away from curative services located in urban areas to an emphasis on the provision of adequate preventive services to the rural populace. As the principal source of qualified and properly-oriented health manpower, the training center and program development proposed constitute a key element in an interdependent system which is critical to the provision of rural health services. The principal output of the project will be an expanded, more effective and re-oriented health services delivery system. The beneficiaries of the project output will be the rural populace, which will have readier access to improved health care accenting preventive treatment to reduce the heavy load of illness in the countryside.

Well over 3/4 of the country's population resides in the rural areas and engages in subsistence agriculture. This group contains high proportion of women of childbearing age and of children. Annual per capita cash income from this traditional way of life is about \$45. The (countrywide) literacy rate is 20%. The UN puts net annual growth in the Swazi population at 3%, placing it among the highest in Africa and the world, despite a very high infant mortality rate (168/1,000). The UN also estimates life expectancy for the Swazi at 41 years. These statistics are especially striking, since probably 85-90% of the country's population lives within seven or eight miles of a health facility. The major constraint bearing on an effective network serving the low income Swazi is one of staffing and efficient operation since physical infrastructure in the rural areas is largely adequate. The proposed project addresses this obstacle with the aim of improving the quality of rural life.

The benefits of the project will reach the rural people, at the latest, as soon as the first upgraded personnel begin to work in the rural areas. Even earlier, though, it is likely that improved planning and administration will have begun to augment or redistribute rural health resources and thereby to produce an overall improvement in rural health services.

There are other benefits of the project which will contribute to improved health care for the rural poor. These include the following:

- greatly augmented MOH control over pre-service and in-service training of health personnel in and for Swaziland;
- the opportunity for the MOH to design and modify curricula and training programs as necessary and desired;
- enhanced opportunity for the government to regulate the mix of training delivered;
- improved prospects for effective government-sponsored field support activities;
- strengthening of the MOH planning and analytic capabilities and thus contributing to more effective resource application and better programming;
- a government health data collection capacity serving the MOH with the establishment of a broader data base for planning and program evaluation;
- fully qualified, professional hospital administrative capability which will enable the MOH to continue adequate hospital care while diverting resources to the development of rural health services.

The project is directly responsive to the expressed needs of nurses in rural clinics for increased skills and for support in dealing with their work responsibilities.

- greatly augmented MOH control over pre-service and in-service training of health personnel in and for Swaziland;
- the opportunity for the MOH to design and modify curricula and training programs as necessary and desired;
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- strengthening of the MOH planning and analytic capabilities and thus contributing to more effective resource application and better programming;
- a government health data collection capacity serving the MOH with the establishment of a broader data base for planning and program evaluation;
- fully qualified, professional hospital administrative capability which will enable the MOH to continue adequate hospital care while diverting resources to the development of rural health services.

The project is directly responsive to the expressed needs of nurses in rural clinics for increased skills and for support in dealing with their work responsibilities.

The rural people have not participated directly in the formulation of the project, but they already accept and use the full range of services which nurses in rural clinics offer now, and which they will continue to offer after further training has made them more qualified to provide such services, including diagnosis and treatment. The MOH considers that villagers will also accept the services of rural health visitors soon to be trained by the MOH.

There seem to be no groups which will resist or be harmed by the project. Traditional practitioners do not seem to be a very powerful force in Swaziland, supposedly due in part to the long history of missionary health activities and of government health services in the country.

The only group in Swaziland which could conceivably take over certain project outputs, divert them from the intended beneficiaries, and turn them to their own use is the small group of physicians in private practice. They could do this by hiring health workers away from the MOH and using them in private offices. The number of private practice physicians is relatively small, and legislation could control their use of MOH trained personnel if this were found to be necessary. There is no indication that this problem will arise, although it might if private physicians felt that they could somehow increase their profits by using auxiliary personnel trained by the project.

It is possible that personnel trained under the project (especially nurses) could be lost to other countries, especially to wealthier industrialized countries. Efforts should be made to minimize such potential losses, and particularly careful attention should be given to avoiding actions or conditions which will facilitate them.

#### 5. Feasibility Issues

A. Location of Training Facility: Three sites have been discussed by the GOS as possible locations for the Health Training Institute (HTI). Two are located in Mbabane, the capital; one of these is adjacent to the country's largest hospital, while the other is several kilometers away, but also an urban site. The third site is adjacent to Hlatikulu Hospital, a 193 bed rural hospital located in the southern part of the country, approximately 70 miles from Mbabane. Hlatikulu has a population under 2,000, while Mbabane is roughly 20,000. Both towns have hospitals of sufficient size to provide adequate and appropriate teaching material and clinical experience. Both supervise an extensive network of rural clinics, and both have adjacent public health centers.

Hlatikulu offers the advantage of being in a distinctly rural setting and would provide students and trainees with ample opportunity to learn how personnel and institutions function in the delivery of rural health services.

It is reasonable to believe that the rural environment would prevent excessive dependence on the kind of support and proximity to MOH personnel which would be characteristic of Mbabane. The Hlatikulu site might also be expected to reduce problems of motivating personnel to live and work in rural areas.

Mbabane, on the other hand, would have advantages in terms of reduced logistical problems in transporting lecturers and supplies and carrying out other support requirements for the training facility. Construction of the physical plant in Mbabane would be somewhat cheaper (e.g. housing for nurse-tutors would be more readily available in Mbabane) and could be more easily monitored both by the government and USAID.

**B. Curriculum Design:** The PRP consultancy team expressed differing views on the manner in which curriculum design services should be performed. One view is that the two nurse-tutors provided under this project would provide the necessary technical assistance over a period of six months prior to the commencement of instruction at the training facility. Recruitment for the two nurse tutor positions would require special attention to qualifications in health training curriculum design in addition to those otherwise expected for these positions.

The alternative proposal calls for recruitment of short term health curriculum design consultants as needed.

Advisory services would be sought specifically for the curriculum design task, and demonstrated competence in this field would be of primary concern in the recruitment process. This matter remains to be fully resolved with the Government of Swaziland.

C. Raleigh Fitkin Training Program: There is reasonable assurance that Swaziland will not produce a surfeit of registered nurses once the government training facility begins producing graduates. Government projections of need which appear in the ten year plan are based on projections of public need, with some attention to private sector requirements. RFM, on the other hand, has indicated that it plans to continue to train registered nurses, and that it anticipates being in a position to retain for employment in the RFM Hospital and clinical network those graduates not absorbed by the government or private sector. RFM currently depends heavily on students for patient care.

The government subvention to RFM is a broader issue between the Nazarene Mission and the GOS and is only of peripheral concern to this project. The ten year plan indicates that government support for RFM and health sector programs of other religious missions will continue in the foreseeable future at roughly current levels. It should be noted that the budgetary support provided to RFM by the GOS is spread among a broad range of health sector activities sponsored by this mission, of which training is only one.

D. Counterparts and Participant Training: In Swaziland, qualified manpower for counterpart relationships and formal training has, as a rule, been scarce.

It is vital to the institutionalization of this project that suitable Swazi candidates be identified in a timely manner for the counterpart and training functions. Nurse-tutor counterparts and training candidates are already identifiable with reasonable certainty. However in the areas of health planning and statistics and health services administration there is less assurance. It will be important as project development proceeds to bear in mind the need to identify Swazi counterparts.

0. Other Donor Coordination

The WHO is enthusiastic about the development of this new school; in fact it had been pressing the African Development Bank to construct such an institution. The WHO would probably be willing to offer some support to the project in the form of T.A. ( a nurse-tutor and a health inspector) and continued training for Swazi nurse-tutors. The major bilateral donor in Swaziland is the U.K., and it is very likely they will be carrying out most of the health sector construction included in the new 10 year health plan. The support the U.K. will be providing to the Swazi health sector is based primarily upon the new health plan, and there have been firm indications that they will be prepared to support some aspects of the development of the training facility including a nurse-tutor and training for Swazi nurse-tutors. Also, as part of the package of health sector construction, the U.K. is likely to be supporting Swaziland's first rural health center. Such a center could be an ideal location for rural field practice for the students of the new school, and for other health workers as well. The essential and minimum requirements to make it suitable for such use would be the addition of a dormitory and classroom (conference room) at the health center. Other adjustments to the center's design might be made so as to make it more suitable for teaching, although these adjustments should not be allowed to detract from its basic (simple) character as a rural institution representative of those in which the students will later work.

The essential coordinating factor for donors is the new 10 year health plan, which spells out all major inputs to the health sector and identifies capital and technical assistance requirements. For example, in forthcoming triennial negotiations it is anticipated that the U.K. will be asked for support for one rural health center, seven rural clinics, six maternity units to be added to existing rural clinics, the improvement of some rural clinics, two public health centers, some improvements to Mbabane hospital (outpatient department, new laundry, garages etc), and a 25 bed ward for Hlatikulu Hospital. All of these are clearly stipulated for development during the first three years of the 10 year (1975-84) health plan. There is every reason to believe the U.K. will respond favorably to these requests.

In addition to the 10 year health plan being a central coordinating factor to the sector as a whole, specific cooperation with regard to this project is likely in the areas already mentioned, i.e., tutors and out-of-country training from the U.K. and WHO (in addition to AID), and U.K. support for the rural health center that would be utilized for training purposes.

Questions have been raised as to whether WHO, or any other group, has plans for development of a regional public health training program in the area and what effect might this have on Swaziland's proposed training school.

There are absolutely no plans for the development of such a program with regard to nursing or auxiliary personnel. There has been some rather vague discussion about some formal cooperation in this general area, but only with regard to post graduate training for medical doctors. In any event, the breakup in October 1975 of the University of Botswana, Lesotho and Swaziland makes the possibility of any regional training scheme all the more remote.

## FINANCIAL PLAN

Total project cost according to estimates refined subsequent to submission of the PID is \$3,820,000. This figure includes GOS inputs of \$845,000 and an other donor contribution of \$595,000 leaving AID's cost at \$2,386,000. During the final phase of project design a further assessment will be made of the soundness of the cost components of the project total.

Construction costs of the training facility (AID-financed) are projected at \$750,000. The Government of Swaziland will assume the costs of architectural and engineering services incurred prior to the inception of construction. This figure includes a 10% contingency allowance and provides for 20% compounded inflation to cover sharply and continually <sup>escalating</sup> construction costs. Additional detail relating to the construction element is provided in annex 10-C.

An additional \$225,000 (mainly from the GOS and other donors) will be required for furnishings, laboratory equipment and instructional materials/aids. Costs of making the facility operational and improving the MOH health services planning and administrative capability (technical assistance, training) are estimated at \$2.336 million. Total operating costs of the training facility for the first three years of operation, as provided in the recurrent cost projections of the 10 Year Health Plan, are \$105,000 (current prices).

The fixed amount reimbursement procedure has been discussed in a preliminary manner with the GOS in connection with the construction component. The FAR method has been used successfully in construction of AID project housing in Swaziland and would probably be acceptable for the housing element in this project. There may be some question, however, as to whether the application of FAR procedures to a job as large and complex as construction of the training facility is appropriate. The extent of limitations imposed on advance payments and attendant implications for GOS cash flow requirements is of concern, as well as the fact that risks to the GOS of unanticipated cost escalation and exchange rate fluctuations would be greater under FAR.

The cost of AID inputs is estimated as follows (\$000's):

Technical Assistance (20 p/y long term, 15 p/m short term)	\$1,275
Training (15 p/y long term, 22 p/m short term)	261
Commodities (lab equipment, instructional materials)	25
Other costs	825
- Construction of training facility =	750
- Technician housing =	75
- Office expenses =	8
TOTAL	\$2,386

The following are projected Government of Swaziland  
contributions to project costs (\$000's):

Technical Assistance (Housing for 2, office space, admin support - AID funded TA only)	240
Training (Support for AID funded participant and local training only)	70
Commodities (Furnishings for training facility)	100
Other (5 years operating costs, land, training facility A & E costs)	435
	<hr/>
TOTAL	845

Other donor inputs are estimated as follows:

Technical Assistance (8-10 p/y: nurse tutors)	350
Training (18-20 p/y nurse tutors)	140
Commodities (lab equipment for training facility)	100
Other (residential and conference facilities at 1 rural health center)	5
	<hr/>
TOTAL	595
GRAND TOTAL	\$3,826

For further development of the project it is anticipated that funding will be required for six to eight person weeks of short term consultancy services.

8. Project Implementation Plan

AID funds for the project will be provided on a grant basis to the Ministry of Finance and Economic Planning which represents the GOS in donor programming and coordinates planning. The Government of Swaziland will contract for construction requirements, while USAID will contract for technical services. The Ministry of Health will bear primary responsibility for implementation of the project. The Ministry of Works, Power and Communications will be concerned with the construction component. The extent of involvement by the Ministry of Works, Power and Communications in the construction activity has yet to be determined. It has been suggested that the Ministry itself might construct the physical plant.

The training focus of the project will require that the MOH recruit qualified candidates for manpower development activities under the project. This will include pre-service and in-service training, counterpart personnel for on-the-job training, and candidates for participant training.

The effort to re-orient the health services system will require considerable competence in planning, administration, information management and evaluation. This project recognizes that the MOH is experiencing deficiencies in these areas and aims to overcome them through specific inputs of technical assistance and training.

USAID's responsibilities will involve routine project management and documentation duties as well as programming for in-depth mid-project and end-of-project evaluations. It is anticipated that recruitment will involve contracting with individuals to fill established government positions, i.e. the OPEX procedure.

The project extends from October 1976 through October 1982. Project duration, by present AID/W definitions, is six years.

It must be emphasized that the implementation schedule below is a tight one, and has been compressed to the extent possible with current AID/W guidelines in mind. The schedule has, of necessity, taken into account the projected two year construction period for the training facility which must be largely completed prior to introduction of the nurse-tutor technical assistance and commencement of instructional programs. The project design team and Government of Swaziland staff associated with development of this project concur that efforts to further telescope the implementation schedule would jeopardize maximum effectiveness of technical assistance inputs directly associated with the training center and would fail to deal realistically with local constraints.

The following schedule is proposed for project implementation:

December 1975	PRP approved
Jan/Apr 76	Resolution of outstanding issues
May 1976	Submit Project Paper
June 1976	Project Paper Approved

June - October 1970	Construction A & E work (GOS-financed).
October 1970	Project Agreement signed
October 1976	PIO/Ts issued for Health Planner, Health Services Administrators.
October 1976	IFB for construction of GOS training facility, 3 houses.
December 1976	Contractor Selected
January 1977	Construction of training facility begins.
January 1977	Construction 3 houses begins
August 1977	Housing completed
August 1977	Health Planner and Health Services Administrators arrive.
September 1977	PIO/Ps issued for training of health services administrators.
October 1977	PIO/Ts issued for nurse tutors, short term consultancies.
January 1978	Swazi health planner and health services administrators begin training.
March 1978	Short term health statistics consultant arrives.
April 1978	PIO/P for short term health statistics training issued.
April - Sep 1978	Curriculum design/modification assistance as required.
June 1978	Nurse tutors arrive.
July 1978	PIO/C issued for training equipment.
July 1978	PIO/Ps for nurse tutors issued.
October 1978	Trained health services administrators return.
December 1978	Construction, furnishing and equipping of training facility completed.
January 1979	Instruction begins
January 1979	Training begins for nurse tutors ( 1x3 years, 1x4 years, 4x1 years).
Jan - June 1979	PIO/C commodities arrive.

February 1970	Health statistician returns from training .
July 1970	PIO/T for in-depth evaluation.
September 1970	Begin second tour for health planner and health services administrators.
January 1980	4 trained Swazi nurse tutors return.
January 1980	In-depth external evaluation.
February 1980	Project paper revised.
June 1980	Begin second tours for nurse tutors.
December 1980	Trained Swazi health planner returns.
August 1981	Departure health planner and health services administrators.
December 1981	PIO/T for second external evaluation
January 1982	One trained Swazi nurse-tutor returns.
April 1982	Second external evaluation
June 1982	Departure nurse tutors
Oct. 1982	One trained Swazi nurse-tutor returns.
Oct. 1982	End of project.

## 9. Project Development Requirements

This section should be read in conjunction with the implementation schedule in the preceding section. Submission of the Project Paper is projected for May 1976 with approval in June 1976. In preparation for PP submission it is anticipated that short term consultation (approximately 6-8 person/weeks) will be required in the areas of curriculum design and the development of paramedical and auxiliary health services delivery networks. A further visit by health planner Oscar Gish would also be valuable provided this can be arranged in conjunction with consultancy services which he might be performing in the Southern Africa area during the period prior to PP submission. If appropriate, consultancies required for further design of this project <sup>might</sup> be effectively keyed to health project design activities in Lesotho.

The TDY services of a REDSO/EA engineer will be required as plans continue to be refined for construction of the training facility and arrangements for A and E services. OSARAC will consult with AID/W and REDSO on scope of work design in connection with PP consultancies and any other requirements during this phase.

The design officer for this project is George E. Lewis (OSARAC). Consultants for PRP design work are Oscar Gish (health planning), Laura Yergan (health manpower training), Dr. Eugene Boostrom (public health, health manpower training), Marie Kirby (public health nursing), and Gene Swanson (REDSO/EA engineer).

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p><b>A1 Goal:</b></p> <p>Improve GOS [MOH] health services and expand coverage, as in ten year plan for Development of Health Services.</p>	<p><b>A2 Goal Indicators:</b></p> <ul style="list-style-type: none"> <li>- At least 85% of all inhabitants live within five miles of a clinic.</li> <li>- Permanent staff of each clinic includes two registered nurse/midwives with essential nurse practitioner skills, one auxiliary nurse, and a health assistant.</li> <li>- Rural health facilities receive adequate supervisory and logistic support.</li> <li>- Outpatient facilities adequately backed up by regional and national referral facilities.</li> <li>- Promotive, preventive and curative services offered are accepted and used by the people.</li> </ul>	<p><b>A3 Goal MOV:</b></p> <ul style="list-style-type: none"> <li>- Comparison of population distribution and clinic locations to determine percent of inhabitants living within 5 miles of nearest clinic.</li> <li>- Study of clinic staffing patterns.</li> <li>- Field visits, interviews, inventories and review of records.</li> <li>- Review of outpatient and in-patient records; tracer studies.</li> </ul>	<p><b>A4 Goal Assumptions:</b></p> <ul style="list-style-type: none"> <li>- Other donor funds available as required for capital costs of health system development.</li> <li>- Sufficient GOS funding of recurrent costs of system.</li> <li>- Population able to afford health services.</li> <li>- Doctors and other health workers provide necessary supervision, support and delegation of responsibility to auxiliary health workers.</li> <li>- Trained personnel continue to be used in appropriate positions.</li> <li>- Trained personnel willing to work in rural areas as needed.</li> <li>- Nurse auxiliaries trained by Good Shepherd Hospital are adequate in number and quality for health system's needs.</li> <li>- Population willing to accept services offered by auxiliary workers.</li> </ul>

Earlier LOF

Swaziland Health Logical Framework

466

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p><b>B1 Purpose:</b></p> <ol style="list-style-type: none"><li>1) Train nurses and other auxiliary personnel for MOH health services.</li><li>2) Institutionalize training capacity.</li><li>3) Strengthen planning and administration of MOH health services.</li></ol>	<p><b>B2 Purpose Indicators:</b></p> <ol style="list-style-type: none"><li>1) By EOP, TF* enrollment and attrition figures indicate that TF production of graduates will match quantitative requirements and employment capacity projected in ten year plan.</li><li>2) At EOP, permanent TF faculty are training students who fulfill criteria set for evaluation of their skills and knowledge at each stage of their training.</li><li>3) At EOP, the MOH planning and administration functions required for implementation and appropriate revision of the ten year plan on schedule are being carried out adequately and with due consideration of needs and of available resources.</li></ol>	<p><b>B3 Purpose MOV:</b></p> <ol style="list-style-type: none"><li>1) Review of TF enrollment and attrition data and projection of production of graduates.</li><li>2) Review of testing methods and results of evaluations of students' skills and knowledge against predetermined objectives and criteria.</li><li>3) Review of MOH plans, planning activities, plan implementation, and administration/management, especially regarding the rural health infrastructure.</li></ol>	<p><b>B4 Purpose Assumptions:</b></p> <ul style="list-style-type: none"><li>- New positions for faculty and planning, administrative and management personnel established as required.</li><li>- GOS funds available for new and upgraded positions.</li><li>- Trained personnel continue to be used in appropriate positions.</li><li>- Sufficient numbers of suitable candidates for training available.</li></ul>

\*TF = "Training Facility" (Actual name of institution will be determined by Swaziland Government.)

Swaziland Health Logical Framework

46c

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p><b>C1 <u>Outputs:</u></b></p> <p>1) Training Facility (TF) (completed and equipped physical facility).</p> <p>2) Appropriate curricula and training programs.</p> <p>3) Trained and experienced trainers.</p> <p>4) Trained and experienced planners/administrators.</p>	<p><b>C2 <u>Output Indicators:</u></b></p> <p>1a) TF construction completed and basic physical services installed and functioning, all as scheduled.</p> <p>1b) TF furnishings and equipment installed and operating, as scheduled.</p> <p>2) Designs of appropriate curricula and training programs for all personnel to be trained in the institute completed in sufficient detail for implementation.</p> <p>3) Full time TF faculty, supplemented by part time faculty when necessary, incorporates teaching competence in all areas required for full TF teaching program.</p> <p>4) MOH planners and administrators have adequate training and experience to competently carry out their duties.</p>	<p><b>C3 <u>Output MOV:</u></b></p> <p>1) Review of contracts and records of construction, delivery, installation and testing; on site inspections.</p> <p>2) Review of curricula and of training programs; faculty interviews.</p> <p>3) Review of faculty composition, training, experience and teaching performance; review of student performance; comparison of both with full program requirements.</p> <p>4) Review of training, experience and performance of MOH planners and administrators and comparison with job requirements.</p>	<p><b>C4 <u>Output Assumptions:</u></b></p> <p>Trained personnel continue to be used in appropriate positions.</p>

Swaziland Health Logical Framework

46d

Inputs	Input Indicators	Means of Verification	Important Assumptions
<p>D1 <u>AID</u></p> <p>TA: Long Term</p> <ul style="list-style-type: none"> <li>- Nurse Tutors</li> <li>- Health Planner</li> <li>- Hospital/Health Services Administrators</li> </ul> <p>TA: Short Term</p> <ul style="list-style-type: none"> <li>- Curriculum Design</li> <li>- Health Statistics</li> <li>- Other</li> </ul> <p>Training: Long &amp; Short Term</p> <ul style="list-style-type: none"> <li>- In areas listed above</li> </ul> <p>Commodities:</p> <ul style="list-style-type: none"> <li>- Lab equipment</li> <li>- Instructional aids</li> </ul> <p>Other: <i>Construction</i></p> <ul style="list-style-type: none"> <li>- <del>Construction</del> training facility</li> <li>- <del>Construction</del> TA housing</li> </ul>	<p>D2 <u>AID</u></p> <p>TA: Long Term = 20 p/y</p> <ul style="list-style-type: none"> <li>-2 Nurse Tutors x 4 yrs = 8 p/y</li> <li>-1 Health Planner x 4 yrs = 4 p/y</li> <li>-2 Hosp./Health Administrators x 4 yrs = 8 p/y</li> </ul> <p>TA: Short Term = 15 p/m</p> <p>Training: Long Term = 15 p/y</p> <ul style="list-style-type: none"> <li>-2 Nurse Tutors x 4 yrs = 8 p/y</li> <li>-4 Nurse Tutors x 1 yr = 4 p/y</li> <li>-1 Health Planner x 3 yrs = 3 p/y</li> </ul> <p>Training: Short Term = 22 p/m</p> <ul style="list-style-type: none"> <li>-Health services admin.</li> <li>-Health planning</li> <li>-Health Statistics</li> <li>-Other</li> </ul> <p>Commodities: \$20,000</p> <p>Construction:</p> <ul style="list-style-type: none"> <li>-Health Training facility</li> <li>-3 houses</li> </ul>	<p>D3 <u>Input MOV:</u></p> <p>Reviews and audits of AID and GOS records (ProAgs, implementation orders, contracts) and examination of other donor contributions.</p>	<p>D4 <u>Input Assumptions:</u></p> <ul style="list-style-type: none"> <li>- Available and adequate A&amp;E and construction firms</li> <li>- Continuing availability of AID funding during project</li> <li>- Other donor inputs available</li> <li>- Adequate T. A. personnel can be recruited</li> <li>- Suitable Swazi candidates for faculty and planning/administration positions available for training and employment</li> </ul>
<p><u>GOS</u></p> <p>Nurse Tutors/Counterparts</p> <p>Participant Training Candidates</p> <p>Established MOH positions</p> <p>Staff housing</p> <p>Furnishings for TF</p> <p>Land for TF</p> <p>Local support for TF and donor TA</p> <p>A&amp;E Services for Construction of TF</p>	<p><u>GOS</u></p> <p>10 Swazi Nurse Tutors (incl. 2 Swazi counterparts)</p> <p>1 Health planning counterpart</p> <p>2 Hosp/Health Services Admin. counterparts</p> <p>Candidates for AID-funded training</p> <p>GOS staff housing</p> <p>Established MOH positions</p> <p>Land appropriated</p> <p>Fully furnished training facility</p> <p>A&amp;E Services Completed</p>		

(TF = Training Facility)

Swaziland Health Logical Framework

465

<u>Inputs</u>	<u>Input Indicators</u>
<u>Other Donor</u>	<u>Other Donor</u>
Nurse Tutors	1 or more Nurse Tutors
Training for Swazi Nurse Tutors	Long term training for 6 Nurse Tutors
Equipment for TF	Training facility equipment
Facilities for student interns at selected rural clinics	Living and training facilities at 1 rural health center

## Annex B-1

### Summary Cost and Financial Data

A detailed breakdown of AID, host government and other donor inputs is made in the fourth (inputs) section of the logical framework matrix and, for the construction component, in annex C. Figures shown in the logical framework for AID technical assistance (OPEX), training and commodity inputs have been projected on the basis of estimated current costs and allowing approximately ten percent for inflation. The same holds true for the other donor inputs in these categories as listed above and detailed in the logical framework. These AID and other donor inputs are foreign exchange costs.

AID and other donor inputs in the other costs category are local currency costs, as are all GOS inputs. Where construction is involved a ten percent contingency allowance and annual twenty percent compounded inflation allowance have been added. Estimates of GOS contributions allow for fifteen percent annual inflation on all inputs.

Foreign exchange and local currency cost breakdowns by donor are as follows (US\$000's):

Annex B- 1

2.

AID

<u>Input</u>	<u>FX</u>	<u>LC</u>	<u>Total</u>
TA	1,275	-	1,275
Training	261	-	261
Commodities	25	-	25
Other	-	825	825
Sub-totals	1,561	825	2,386

GOS

TA	-	240	240
Training	-	70	70
Commodities	-	100	100
Other	-	435	435
Sub-totals	-0-	845	845

OTHER DONORS

TA	350	-	350
Training	140	-	140
Commodities	100	-	100
Other	-	5	5
Sub-totals	590	5	595
<u>TOTALS</u>	2,151	1,675	3,826

Costing of Project Outputs/Inputs (US\$000's): Swaziland Health Manpower Training

<u>Inputs</u>	<u>Outputs</u>			Total
	Training Facility	Curricula/Instructional Programs	Trainers	
<u>AID</u>				
2 Nurse tutors		240	240	480
1 Health planner				240
2 Health services administrators				480
Short term TA		35		75
Nurse tutor training			156	156
Health planner training				39
Short term training		22	22	66
Commodities	25			25
Training facility capital	750			750
Houses		50		75
<u>GOS</u>				
Swazi TA		80	80	240
Participant trainee salaries			40	70
Furnishings for training facility	100			100
Training facility operating costs	105			105
A and E	80			80
Land	250			250
<u>OTHER DONORS</u>				
Nurse tutors		175	175	350
Nurse tutor training			140	140
Training facility equipment	100			100
Rural health center facility	5			5
<b>Totals</b>	<b>1,415</b>	<b>602</b>	<b>853</b>	<b>3,826</b>

Project Summary - AID Appropriated Funds(US \$000's)

Country : Swaziland

Project : 690-0062

Title : Swaziland Health Manpower Training

Budget Year FY 77

<u>Cost Components</u>	<u>Direct AID</u>	<u>Contract/PASA</u>	<u>Total</u>
U.S. Technicians	360	-	360
2 Health Serv. Admin (4 p/y)			
1 Health Planner (2 p/y)			
Participants	42	-	42
12 p/m long term			
14 p/m short term			
Commodities	-	-	-
Other	825	-	825
Training Facility			
3 Houses			
<b>Total</b>	<b>1,227</b>	<b>-</b>	<b>1,227</b>

Annex - C

CONSTRUCTION OF TRAINING FACILITY.

The following facilities comprise the physical plant for the training facility with a capacity of 150 resident students:

<u>Facility</u>	<u>Quantity</u>	<u>Sq. Ft.</u>	<u>Total</u>
Regular Classroom	2	360	720
Lecture/Demonstration Room	1	1,000	1,000
Classroom with Stove	1	400	400
Multi-Purpose Classroom	1	500	500
Science Laboratory with Storage	1	1,920	1,920
Health Inspector's Classroom	1	200	200
Public Health Nurse/Health Asst. Classroom	1	180	180
Kitchen/Laundry/Dining Room/Assembly Hall	1	3,863	3,863
Library	1	3,000	3,000
Student Toilets	4	180	720
Storerooms	3	180	540
Principal's Office	1	340	340
Nurse Tutors' Offices	9	100	900
Faculty Toilets	2	90	180
Faculty Lounge	1	129	129
Hostels (120 female, 30 male)	2		15,000
Central Office (for secretaries)	1	400	400
Faculty Conference Room	1	225	225
			<hr/>
	Area Sub-Total		30,217

Cost Sub-Total  $30,217 \times R 10.1/\text{sq.ft.} = E 305,102 = \text{₱}350,071$   
 (E 1 = ₱1,15)

Site Preparation	15,000
Utilities Connections	4,000
Fencing	5,700
Landscaping	5,000
Access Roads/Walks	<u>5,000</u>

Sub Total 339,892

Contingencies 10% 34,000

Cost-Sub-Total E373,108 = ₱429,074 373,892 = ₱429,976

20% Inflation Factor Compounded to Construction Years (1977-78):

Total Dollar Cost at late 1977 Prices = ₱619,165

Total Dollar Cost at late 1978 Prices = ₱742,998

Rounded Estimate = ₱750,000

Areas of Linkage Between R.N.s, Auxiliary Nurses and Health Workers  
Within the Context of the Total Health Manpower Structure of G.O.S.  
Health Delivery System

- 1 - The Ministry of Health has a Minister (MOH) and a Permanent Secretary (P.S). The Chief Medical Officer (C.M.O) is the Senior health professional and has responsibility for curative services. The Senior Medical Officer of Health (SMOH), under the C.M.O. is responsible for preventive services.
- 2 - The staff of the Government hospitals and the Public Health Center nurses supervise and support 28 rural clinics which provide both curative and preventive services. These clinics are staffed by a live-in staff nurse; some also with a second nurse or a nurse aide.
- 3 - The four urban hospital-based Public Health Centers offer only preventive care. These centers will be staffed by
  - 3 Public Health nurses
  - 1 Medical Officer
  - 2 Auxiliary nurses and
  - 1 Dental Hygienist.These public health center nurses will also visit the Rural Clinics and provide support to the school health service. At present lack of transport as well as insufficient staff are the two main hindrances in this work.
- 4 - Three Rural Health Centers will be built. They too will be geared to preventive services primarily. However, they will also have 12-14 maternity and holding beds.

2.

The staff will include

- 1 Medical Officer
- 3 Public Health nurses
- 3 Auxiliary nurses
- 1 Dental Hygienist
- 1 Laboratory Auxiliary
- 1 Pharmacy Assistant

This staff will supervise and support the rural clinics and school health service. They, and the rural health centers they work out of, provide linkage between rural staff and rural facilities and the urban support structure (hospitals, health centers, central stores, MOH).

- 5 - The Rural Health Visitors, with only 3-4 months training in simple health education, first aid, nutrition, child care and family planning, will function as part time workers in their home area. Each will be responsible for 40-50 homesteads. Their main functions will be communication of basic health education and promoting the use of modern rural health services, particularly in MCH/FP/nutrition areas. The supervision of the rural health visitors and liaison with the public health center staff will be provided by the rural clinic staff.

Annex - E

Current and Projected Training  
of Health Personnel in Swaziland

This annex provide additional information in outline form on present and planned health training activities, by category, in Swaziland. The PID, pages 10-12, is also helpful in defining the substantiative distinctions among the various personnel categories in Swaziland 's health system.

I. Raleigh Fitkin Memorial Hospital

- a) Continue to train Registered Nurses - Approximately 15 annually.
- b) A community health training program is to be included in the nurses' training.
- c) Midwifery and Family Planning (called Responsible Family Life) are part of the curriculum.
- d) Service 16 missionary clinics - 8 new clinics projected for the future.
- e) Main services offered at clinics:
  1. Ante-natal care
  2. Well baby care - referred to government clinics for most immunizations.
  3. Family planning services and education.
  4. Nutrition education

2.

II. Mbabane Government Hospital

1. Conducting a one year course to up-grade enrolled nurses to registered nurses.
  - a. Train 25 annually
  - b. Have completed second year
  - c. Projected for 3 more years.
  - d. 2-3 hours of lectures a day in hospitals, observe in Public Health Clinics.
2. When registered these nurses will be available for work in outreach clinics - Public Health/Family Planning.

III. Good Shepherd Hospital

1. Continue to train auxiliary nurses (formerly called nurses' aides). Approximately 25 trained annually. Majority employed by government.
2. Course recently expanded to 18 months to include significant Public Health and Family Planning components.
3. Some to be retained by the hospital to function as members of a missionary Public Health Team who:
  - a. visit 14 clinics - 1 visit/<sup>every</sup>two weeks - 60-70 patients per visit.
  - b. Do immunizations, teach family planning and give service, do ante-natal and well baby care, teach nutrition, community development and low-grade literacy and health education

IV. Health Assistants (Rural Sanitarians)

1. Taught by W.H.O. team sanitarian.
2. 10-12 graduates anticipated from first of 4 classes.
3. Each class to receive 12 months training
4. Students live and study in the rural areas - 6 months of theory and 6 months of practical and demonstration work.
5. Duties:
  - Malaria and T.B. Control
  - Assist in Construction of wells, latrines and incinerators.
  - Teach environmental sanitation.
  - Assist in surveys and studies.
6. Will be attached to Rural Health Clinics.
7. Will be brought to new teaching facility for 1-2 months of theory - perhaps in core curriculum with other categories of students.

4.

#### V. Rural Health Visitors

1. To be trained in the field - 3 to 4 months-800 plus programmed.
2. Will bring elementary primary care and health promotion/disease prevention to a large segment of population now without such basic health service. Each "visitor" will be responsible for 50 homesteads in home area.
3. This cadre of workers will be supervised by the nurses at the rural clinics.
4. Duties:
  - a) Teach health concepts to the rural population - first aid, child care, nutrition and family planning.
  - b) Detect first symptoms of common disease and refer the patients for care. (Possibly taught some simple treatments).
  - c) Be a family planning motivator.
5. These students may also be brought to the teaching center for selected lectures and/or demonstrations.

#### VI. Health Inspectors

1. Presently 10 foreign trained inspectors with additional inspectors to be trained over the next 10 years at government training facility.
2. Training period - 3 years. Eight students will be admitted to each of three courses now programmed.
3. Duties:
  - a. Environmental Sanitation
    - (1) Rural Water supplies and Rural Sanitation techniques throughout the country.

(2) Assist in programs for eradication of Malaria, Bilharzia.

- b. Assist in planning sanitation programs
- c. Instructing, and giving demonstration assistance to Health Assistants posted in their designated area.
- d. Supervision of above noted Health Assistants.

VII. Registered Nurses and Public Health Nurses (at new training facility)

1. Training

- a. Definitive curriculum not yet written.
- b. Broad proposed training plan
  - 1. Utilize core curriculum (shared with other trainees).
  - 2. 3-year basic nursing curriculum.
  - 3. 1 year post-basic specialty training (in, e.g., Midwifery, Public Health, or Pediatrics/MCH for some graduates.
  - 4. Emphasis on diagnosing and prescribing treatments in order to enhance the care of the rural population.
  - 5. Emphasis throughout training on public health, prevention and rural work.
  - 6. Experience in working with "rural health visitors" included in the training of basic nurses and the public health nurses.

2. A. Duties of Public Health Nurses

- a. Help shift health focus from curative to preventive care to broaden health care to the rural population.
- b. Diagnose and treat patients in order to enhance services in the rural areas.

- d. Organize, demonstrate and supervise preventive care programs in the rural clinics.
- e. Supervise MCH/FP care in all clinics in their areas.
- f. Supervise communicable disease control services in the rural clinics; i.e. smallpox, malaria, T.B. and bilharzia.
- g. Supervise the R.N.'s in the rural clinics.
- h. Teach, give direction and support to auxiliary nurses in the rural clinics.
- i. Supervise and support the school health program in their areas.
- j. Participate in carrying out seminars, in-service training programs and field support activities for the government's health program.

**2.B. Duties of Registered Nurses**

- a. Work in hospitals
- b. Work in Public Health Centers
- c. Work in Rural Clinics and Rural Health Centers.
- d. Supervise, instruct and support auxiliary nurses, rural health visitors and other paramedical workers in their designated area.

**Training Programs Projected for the Future**

- 1. Pharmacy Assistants and Dispensers.
- 2. Dental Technicians.
- 3. Laboratory Technicians.
- 4. Laboratory Assistants.