

CLASSIFICATION PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol U-447

1. PROJECT TITLE Botswana Health Services Development	2. PROJECT NUMBER 633-0078	3. MISSION/AID/W OFFICE USAID/B and RHDO/Swazi
	4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) <u>1</u>	
<input checked="" type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION		

5. KEY PROJECT IMPLEMENTATION DATES	6. ESTIMATED PROJECT FUNDING	7. PERIOD COVERED BY EVALUATION
A. First PRO-AG or Equivalent FY <u>78</u> B. Final Obligation Expected FY <u>85</u> C. Final Input Delivery FY <u>85</u>	A. Total \$ <u>7,253,000</u> B. U.S. \$ <u>5,531,000</u>	From (month/yr.) <u>Nov. 1979</u> To (month/yr.) <u>Feb. 6, 1981</u> Date of Evaluation Review <u>26/1/81-6/2/81</u>

B. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
1. If clarification of roles for health administrators is not accomplished, then other ways to strengthen this component should be sought and financial input for this area reprogrammed.	MOH, MLGL, AID	Aug. 1981
2. The services of a short-term consultant should be secured to work with the project technicians (and related Ministry personnel if they desire) on improving educational communications.	MSCI	July 1981
3. The health educational planning which is now being accomplished within the Unit will allow for some additional funding for essential services, consultancies not previously foreseen or selected commodity purchases. These areas should be detailed, costed and related to specific objectives prior to being reviewed and authorized.	COP and AID	Sept. 1981
4. Upon departure of the current Project Coordinator, the position should revert to that described in the PP and be filled by a Motswana.	MSCI and AID	Jan. 1982
5. Incoming personnel should be selected so that an individual capable of serving as Chief of Party as well as having necessary technical skills is hired.	MSCI	Feb. 1982
6.(a)The health education unit has made sufficient progress so that it should be able to function without outside support at the conclusion of the present technician's tour.(b)Upon the completion of the Senior Nurse Educator's tour, a review should be conducted of her revised job description, and the necessity of an additional Nurse Educator re-evaluated. (continued on attached page)	MSCI, AID, MOH	Feb. 1982

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

<input type="checkbox"/> Project Paper	<input type="checkbox"/> Implementation Plan e.g., CPI Network	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Financial Plan	<input type="checkbox"/> PIO/T	_____
<input type="checkbox"/> Logical Framework	<input type="checkbox"/> PIO/C	<input type="checkbox"/> Other (Specify) _____
<input type="checkbox"/> Project Agreement	<input type="checkbox"/> PIO/P	_____

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

A.  Continue Project Without Change

B.  Change Project Design and/or  Change Implementation Plan

C.  Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

Anita Mackie, REDSO/EA *A.M.*

Connie Collins, USAID/S *C. Collins*

Ndiki Ngcongco, MOH

Thaelo Kebaagetse, MFDP

12. Mission/AID/W Office Director Approval

Signature *Louis A. Cohen*

Typed Name Louis A. Cohen

Date JUN 4 1981

8. Action Decisions Approved By Mission Or AID/W Office Director-Continued

7. The permanent support services promised by MOH April 1981  
MOH for the Nursing Component, typist and  
drivers should be secured as soon as possible.

## SUMMARY

At the end of the first operational year the project has made good progress towards meeting its objectives. The first classes have commenced for training family nurse practitioners and public health nurses. The curriculum for the enrolled nurses has been strengthened with particular attention to improved teaching from enlarged guidelines, and is now being tested at one nursing school. The building has been completed for the Health Education and Nutrition Units and has opened in time for the first class to train Health Education/Nutrition Assistants in a two-year program. The technical advisors have completed the curriculum and are assisting with its teaching. The human nutritionist has strengthened this component of all teaching programs for paramedical personnel as well as at the primary school level. Assistance has also been given to the National Food and Nutrition Committee.

The component which has not advanced is to train health administrators for senior level positions in hospitals and local government staffs at the Institute for Development Management. This objective remains important, and every effort should be made to solve the current problems of appropriate roles, salaries and job descriptions for the graduates. The project would also be strengthened by improved communications both among team members and with interacting agencies.

## EVALUATION METHODOLOGY

The evaluation was conducted at the end of the first year of operational activities. The grant agreement was signed on September 28, 1978, but the RFP was not sent out until March, 1979. The first technicians arrived in Botswana in November, 1979. The majority of the team had arrived by January, 1980.

The end of first year evaluation is an opportune time to review the Project Paper (PP), written three years ago, and review the entire Project for its applicability in the light of any internal or external changes occurring. Thus, major attention was paid to suitability of design, policy changes related to the project components, adequacy of inputs, progress on outputs, implementation problems, and adequacy of performance of all parties (AID, the contractor, the advisors and the MOH).

The evaluation team consisted of Dr. Anita Mackie from REDSO/EA, Ms. Connie Collins, Regional Health Development Officer, AID, Mrs. Ndiki Ngcongco, Principal Tutor at the National Health Institute, MOH, and Mr. Thaelo Kebaagetse, Planning Officer in the Ministry of Finance and Development Planning. Dr. Mackie served as Team Leader.

The team reviewed the Project Paper and background documents on the Project. Interviews were conducted with all members of the Project team, most counterparts and related Ministry personnel. The team members were interviewed (by Dr. Mackie and Mr. Kebaagetse, since Mrs. Ngcongco was intimately involved with administrative relationships to the team and implementation of nursing activities). Ms. Collins had made numerous prior professional visits and was already well acquainted with the team members of the project. A site visit was made to the new Health Education and Nutrition Unit, and the AID engineer reviewed its status.

The formal opening was scheduled to occur soon after the completion of the evaluation. In response to a request by the MOH, the entire evaluation had to be completed in two work weeks from January 26, 1981 to February 6.

The team had the advantage of having Ms. Patricia McGrath, Project Manager for Medical Services Consultants, Inc. available as an observer to the team, and of being assisted by Ms. Nancy Pielemeier, Chief of Party who made the logistical arrangements and provided a historical perspective. Both participated in selected areas of the evaluation.

### EXTERNAL FACTORS

The area which had least specificity in the PP was the training for health administrators. The reason was that the scope of work for personnel working in this area had not been defined both in the Ministry of Local Government and Lands and in the Ministry of Health. Additionally, the Institute of Development Management had no prior experience in teaching this cadre.

Both Ministries are aware of the problems caused by lack of a suitable job description and defined interrelationships between the administrator and the technical health staff. A recent investigation of the duties and salary levels of all Civil Servants will partly clarify the hierarchy within which health administrators will work. A committee has been appointed to consider these issues, but after a year has only collected information from various concerned parties and not reached any conclusions or made recommendations.

The need for health administrators does not seem to be an issue with either party. The appropriate training institute exists in-country. The Project is willing to support the training program. If the appropriate roles, functions and salaries cannot be agreed upon within six months by the two Ministries involved, then the MOH and COP should investigate alternatives for reprogramming this funding. It would seem desirable for a subcommittee from the MOH and MLGL to address the problem, make a determination of the broad outlines of a resolution, and delegate the task of working out details to responsible individuals on their staffs.

### INPUTS

- I. Nursing - Inputs appear to be adequate in the nursing component. One FNP was delayed 8 months due to recruiting difficulties however, this has not created a delay in the training plan.
- II. Health Administration - Due to problems in creating a job description and posts for health administrators the inputs for this training may not be used. If these problems are not resolved by the 18th month of the project, the funding will be diverted to other project activities.
- III. Health Education - Inputs are adequate and have been available on a timely basis. Due to an increase in the MOH capacity for Health Education planning, the consultancy time for this activity may have been overestimated. If this proves to be the case, this time will be utilized for areas where there is no technical competency.

- IV. Nutrition - Inputs are adequate. Some inconveniences have been experienced due to the delayed arrival of commodities, however, this has not delayed planned project activities.
- V. Project Administration - There have been no problems with inputs in this component.

See Annex A for further details.

### Nursing Component

2 Nurse Practitioners: 2 FNPS were nominated by MSCI at Project outset. One of them was not accepted by the MOH and MSCI had to recruit a replacement candidate. The subsequent recruitment, nomination, and orientation process resulted in 7 months delay before the second FNP position was filled. However, the second FNP appears to have adjusted to her responsibilities quickly and has substantially made up for the lost time.

1 Public Health Nurse: Fielded on time.

2 Nurse Educators: Fielded on time. Planned input of one nurse educator at UBS has been eliminated from the project (of Project implementation Letter 18).

1 Trainee to serve as Nurse Practitioner Educator: Enrolled in FNP program at Emory.

2 SRNMs to be trained as Nurse Educators: One enrolled at University of Nairobi.

2 participants to acquire BSc degrees in Nursing to be followed by Masters degrees in Nursing Service Administration: Activity not yet underway.

Three SRNM participants to acquire Masters degrees in Nursing Service Administration: Activity not yet underway.

### Nursing Commodities

home visiting bags - acquired  
reference books - acquired  
anatomical models - acquired  
audio-visual aids - acquired  
vehicles - acquired

### Health Administration Component

- (1) Scholarships for 32 participants to attend the health and hospital administration program at IDM: Activity delayed due to external factors.
- (2) One BA graduate of UBS to acquire an MS degree in Health Planning; Trainee enrolled at University of Michigan and progressing satisfactorily.

- (3) Four Batswana statistical assistants to receive short-term training in statistics and statistical analyses: Activity not yet underway.

Health Education Component

(part-time) Health Educator/Planner: Not yet requested.

Health Educator/Curriculum Specialist: Fielded on time.

Graphic Artist: UN Volunteer in place.

Trainee for BSc in Health Education: Now at East Tennessee.

Diploma trainee in graphic arts: Now at Pratt-Phoenix

Commodities for HE unit

darkroom equipment: received, but not all functional  
camping equipment: received  
vehicles: received

Nutrition Component

Nutrition Planner: fielded on schedule.

Human Nutritionist: fielded on schedule.

Nutrition Consultants: only about 1 person month of available time used to date.

Candidate for BSc in Nutrition: Now at NYU.

Candidate for MS in Nutrition: Not yet identified.

Commodities for Nutrition Component

visual aids: received  
books: ordered, some delivered

Project Administration

Project Coordinator: fielded on time.

Station wagon for coordinator acquired.

Project office furnished, and staffed with secretary and driver.

Construction

New Health Education/Nutrition unit constructed and occupied. Some finishing details not yet completed (see darkroom).

Technician housing constructed and occupied.

Summary

The quality, quantity and timeliness of such project inputs as commodities,

technical services, and participant trainees appears to be satisfactory, overall. Some attention may need to be given to the identification of ten additional long-term participants to ensure that all may complete their intended courses of study by the anticipated project termination date.

## OUTPUTS

### Nursing for Health Services

#### Logframe Output

#### Progress

- |  |   |
|--|---|
| 1. Curricula for one-year, diploma level in-country training program for SRNM's to function as family nurse practitioners and public health nurses developed, in use and directed by Batswana personnel. | Satisfactory. Both curricula developed. Entering classes of 15 students to FNP program.                           |
| 2. Educator/teaching positions for these two programs filled by Batswana, all of whom are presently in training.   | 5 NP trained overseas now working in hospitals. BSc satisfactory number of candidates available for MSc training. |
| 3. Enrolled Nurse curriculum revised and in use in government and mission EN training schools.   | Satisfactory progress. Curriculum detail expanded and now being used at one school for testing.                   |
| 4. Nurse educator positions for this program filled by Batswana.   | 1 counterpart working with technician for 11 months. BSc Nursing Education candidates being trained at UBS.       |
| 5. Three year BEd in Nursing program at UBS assisted and strengthened.   | Not done by request of UBS.   |
| 6. Foundation established, including curriculum development for possible future transition to BSc in Nursing program.  | Not done by request of UBS.   |
| 7. Nursing service administrators trained to direct the delivery of health care by health personnel on the central, regional and district levels.  | Planned for 1982/83   |

Logframe Output

Progress

Health Administration

1. Health Administrators trained for senior-level positions in hospitals on local council staffs and in the MOH.

1 Motswana in training for health planning. Unsatisfactory progress on IDM training due to lack of role clarification.

Health Education

1. A national health education plan developed and in the process of being implemented.
2. Capability developed to provide training in health education.
3. Training program developed for health educators.
4. Health education positions on MOH Health Education Unit filled by Batswana.
5. New facility for Health Education Unit built and in use.

Plan being developed by health education staff.

Senior health educator returned from training and functioning in unit. 2 trainees away.

Curriculum developed. Class of 10 expected.

On schedule.

Building completed, being furnished. Staff moved in January 1981.

Nutrition

1. Nutrition research conducted with the results analyzed and considered in the design of nutrition programs.
2. A national nutrition program developed and in process of implementation.
3. Nutrition positions in the MOH Nutrition Unit filled by Batswana.
4. New facility for Nutrition Unit built and in use.

In progress.

National Food and Nutrition Committee meets regularly with technical assistance provided.

Motswana Home Economist is functioning on Unit staff.

Building completed, being furnished. Staff moved in January, 1981.

PURPOSE

- a) Definition - "The purpose of this four-year project is to increase the capacity of the GOB Ministry of Health to provide comprehensive health services to the people of Botswana, with an emphasis on the rural and peri-urban populations."

(BHSD Project Paper, p. 17)

b) Progress toward each End of Project Status (EOPS) condition -  
Conditions expected at the end of the project include:

- EOPS (1) "a reorientation of nursing training in Botswana to produce a nurse cadre effectively prepared to provide comprehensive health services to the rural and peri-urban population."
- EOPS (2) "nurse practitioners, public health nurses, nursing service administrators, and clinical specialists in place, supervising primary health care workers, and performing preventive and curative services within the health delivery system, in accordance with the personnel targets in the Fourth National Development Plan."

Progress toward the achievement of EOPS conditions 1 and 2 has been substantial, and if it continues at the present rate, both conditions will be substantially attained. Training of nursing service administrators will have lagged behind other programs, but by the COP the MOH should be in a position to achieve their goals in this area.

Post Basic Nursing Courses

- Curricula for two one-year, diploma-level in-country training programs for Family Nurse Practitioners (FNPs) and Community Health Nurses (CHNs) have been developed. Care has been taken to ensure that these curricula are suited to the Botswana health context and the role anticipated for course graduates in Botswana's nursing service. Rural clinical practice will be an important part of training.
- Thirteen SRNMs have begun training in the CHN course.
- Fifteen nurses have been accepted for the FNP course, and are to begin their training 1 February 1981.
- Two Botswana counterparts, one for the FNP program and one for the CHN program, have been involved in the development of the two post-basic programs, thus enabling them to carry on the programs after the termination of the U.S. nurse educators.
- Physicians serving various parts of Botswana have been engaged to serve as preceptors for the clinical training of the FNP students, and numbers of the tutors at NHI and other MOH personnel have volunteered to give lecture series or serve as resource persons for the program. These arrangements are expected to continue after the departure of the U.S. nurse educators. In Botswana FNP counterpart began a two year Master's degree program in Family Nurse Practice at Emory University in September, 1980.
- Another Botswana nurse began a two-year diploma program in Nursing Education at the University of Nairobi in October 1980.

Enrolled Nurse Education

- The Enrolled Nurse curriculum was reviewed and found to be appropriate for the needs and activities of the EN cadre; but teaching in the EN schools was found not to reflect the objectives set out in that curriculum.

- The Project Nurse Educator TA, her counterpart, and the Principal Tutor at NHI have been developing a syllabus more in accord with the EN curriculum. A format for course outlines was developed, and half of the courses have been completed and are being tested at the Molepolole demonstration site. Completion of the as yet unfinished EN courses is scheduled for early 1981.
- The Nurse Educator TA has made and maintained contact with all seven schools and plans to develop a newsletter in 1981 to further reinforce communication between schools.
- The Nurse Educator TA developed and administered a training needs questionnaire among EN tutors and delivered in-service training sessions in the areas of expressed need at the Molepolole site. She also helped to develop a public health practicum, and nutrition workshops for EN students.
- The Nurse Educator TA assisted in revising recruitment and selection procedures to improve the caliber of candidates admitted for EN training.
- The Nurse Educator TA has also promoted the use of teaching/learning aids and the use of library resources.

#### Evaluation and Reorientation of Basic Nursing Course

- A literature review of nursing curriculum evaluation was carried out by the Senior Nurse Educator in the first half of 1980.
- A modified Slater Competency Scale was developed and administered to third and fourth year students and analysis of the results is underway.
- A faculty interview schedule was developed and is being administered to faculty at NHI.
- Observation of teaching and learning at NHI and at affiliated clinical settings has been undertaken.
- The Senior Nurse Educator has been engaged in teaching activities at NHI throughout the year.
- The Senior Nurse Educator served as the Project Nursing Team Leader through the first ten months of 1980, and as liaison between the project nurses and the Principal Tutor and Chief Nursing Officer, as specified in her job description. She also provided technical support for the nurse educators developing the post-basic courses, and will assist in their teaching.
- The Senior Nurse Educator has been unable to assist or strengthen the three-year Bachelor of Education in Nursing Program at the University because UBS declined to accept her services. This planned project activity was in the process of implementation by a Botswana national and a U.S. technician hired under an OPEX contract before the Senior Nurse Educator arrived. (See project implementation letter 18, June 30, 1980, for the revised job description). The timing of this technician's tour remains 24 months under the job description.

Other Comments on EOPS Condition 2

Nursing Service Administration - the five participants scheduled for graduate training in nursing service administration will depart later in the project as no candidates will be available until the first class of UBS Bachelor of Science in Nursing Education candidates graduates in 1981. Due to the shortage of qualified participants, this training will be phased over the next three years of the project.

EOPS (3) "administrative capacity for providing health services increased by placement of approximately 90 percent of health administrators required at the central, regional and local levels."

To this end:

- a UBS graduate began a two-year masters program in health planning at the University of Michigan in August, 1980. Her first semester academic record gave her a B+ average, and it is expected that at the end of her course she will serve in a planning capacity at the central level of the MOH.
- Local training programs for the 32 Health Administrators (HA) have not been developed mainly due to problems in defining the role of the health administrator under the Ministry of Local Governments and Lands, where the majority of the HAs will be employed. As the MOH has little control over this situation, alternate ways in which health administration can be strengthened will be explored if the situation is not resolved.

EOPS (4) "preventive and promotion health services improved through health education (programs implemented and staff in place)."

- The Health Educator TA, in cooperation with his counterpart, the project nutritionist, nutrition planner, and an Advisory Committee, has developed a two-year training program in health education and nutrition. The program is designed to follow a competency-based model. A schedule of classroom and field experiences has been completed and specific activities developed for the first part of the course, which will begin in February, 1981.
- 35 training candidates applied from Botswana's health assistants and enrolled nurses, and 12 candidates have been accepted for the first course.
- The Health Educator has also provided in-service health education training for a variety of health cadres in Botswana.
- A Motswana employed in the Health Education/Nutrition Unit completed an MPH degree in Health Education at the University of California at Berkeley, and will soon resume professional responsibilities in the Health Education Unit.
- A Motswana from Francistown began a BSc course in Health Education at East Tennessee State University in January, 1981.
- A Motswana employed in the Health Education Unit began a two-year course in illustration at the Pratt-Phoenix School in New York in

August 1980. It is anticipated that she will return to the Health Education Unit with an enhanced capability for health education, communication and outreach activities.

- Health education planning is an ongoing activity in the unit and outside consultants are not needed at this time.

EOPS (5) "a national nutrition program planned and in process of implementation by trained personnel."

To this end:

- The Human Nutritionist TA has developed syllabi for the nutrition training of all levels of health workers in Botswana, and has actively taught these courses, together with her counterpart, the Head of the Nutrition Unit. Courses have been designed and taught for the following cadres: Family Welfare Educators, Enrolled Nurses, Health Assistants, Laboratory Assistants, basic course nursing students, and midwifery students.
- The Human Nutritionist has also designed the nutrition component for the CHN post-basic course and assisted in the development of nutrition content for the health education/nutrition worker training program.
- The Human Nutritionist assisted with in-service nutrition training in seven health regions and in workshops for Health Assistants, Assistant Community Development Officers, and Village Development Assistants.
- The Human Nutritionist participated in the WHO Inter-country Nutrition Workshop in Gaborone, and helped in the pilot testing of the FAO Field Programme Food and Nutrition Course.
- The Human Nutritionist helped develop the nutrition component of the Botswana primary school science syllabus and completed a survey of nutrition training programs in Africa, the UK, and the U.S. appropriate to the training needs of Botswana.
- A Botswana student began a four-year BSc degree program in Nutrition at New York University.
- The Nutrition Planner TA has helped set up an Interministerial Food and Nutrition Committee and has been involved in a number of projects related to IFNC activities and the development of a national nutrition strategy. These have included:
  - development of a proposal for a weaning food feasibility study,
  - data collection for the Urban II project,
  - research on Botswana's wild growing foods,
  - research and reporting on nutrition surveillance,
  - development of a proposal for a Comprehensive Library of Nutrition Experiences,
  - collaboration on a study of the Consumption Effects of Botswana's Agricultural Policy,

- compilation of data on vulnerable group feeding,
- compilation of height and weight data,
- revision of Nutrition Unit reporting forms,
- computerization of nutrition data analysis.

### Summary

Progress toward the EOPS is satisfactory in every component except Administration, where no progress has been made in defining the role of the health administrators, thus delaying the development of an appropriate local training course and recruitment. As the district level health administrators fall under the health services of the Ministry of Local Governments and Lands (MLGL), the MOH has only an advisory role in this activity. If these issues are not resolved within the next six months the funds for the training should be used for other purposes. Health administration remains a priority area, but if outstanding problems are not able to be resolved in a timely fashion, other avenues should be considered.

### GOAL (SUB-GOAL)

#### Sector Goal

"An improved level of health in Botswana as an important element in a better quality of life." (Logical Framework, Project Paper, Annex H)

There is little doubt that in the long run the Project will have beneficial effects upon the health of the people of Botswana. However, the set of measures of goal achievement selected for the PP may not have been the best available.

- (a) "Decline in infant and maternal mortality rates." This may occur with the improved level of nursing services offered, but is unlikely to do so until well after the conclusion of the 4-year project.
- (b) "Decline in the incidence of endemic and communicable diseases." Decline in the chief endemic disease, tuberculosis, is unlikely to be affected by the health education component in the short run. In the communicable disease area, selected disease incidence and prevalence will be decreased by improvements in the enlarged program of immunizations (not a direct component of this project). Sexually transmitted diseases may be affected by a targetted health education campaign. The increase in community nursing and FNP services will also affect preventable diseases. Patient education about their problems will improve their treatment. The reported incidence may actually increase in the short run, since better case-finding and improved follow-up may find additional cases.

- (c) "A public awareness of social illnesses." The public is aware to some degree now of problems of alcoholism and sexually transmitted diseases, the two chief social illnesses in Botswana. The health education program will hopefully raise the public information on the causes and suggested ways to tackle these problems.
- (d) "Increase in life expectancy." This should take place as soon as the decline in infant mortality occurs.

The following suggestions are made to reflect better measures of goal achievement:

- (a) Decrease in percentage of infants falling below the acceptable range of the growth curve.
- (b) Decrease in reported deaths of infants from 9 to 24 months.
- (c) Decrease in TB patients defaulting on treatment.
- (d) Increased numbers of patients with venereal diseases detected and increased numbers of contacts followed up.

#### BENEFICIARIES

The primary focus of the project involves investment in the development of human resources, and as such has both direct and indirect beneficiaries. At the end of the first year the primary beneficiaries have been those who have been trained abroad. Additionally, counterparts have worked with experienced technicians in-country and gained valuable practical experience on various aspects of implementing new programs. The new training curricula which have been developed are already in use and will upgrade the quality of education in several programs for students ranging from post-basic nursing students to primary school children who have an improved nutrition component.

The second beneficiaries are the people of Botswana who will receive an improved quantity and quality of health services delivered by people trained by the project. These services will include both curative and preventive elements and can be expected to improve the quality of life for both rural and urban people in the long run. The project terminates after four operational years and its effects on the first two measures of goal attainment (decline in infant and maternal mortality rates, and decline in the incidence of endemic and communicable diseases) will probably not be seen for several years after the project's termination date.

#### UNPLANNED EFFECTS - NOT SIGNIFICANT

#### LESSONS LEARNED

The lessons learned in this project would primarily improve the design of similar sized projects:

- (a) Development of a team identity and spirit would have been desirable prior to arrival in the field. A week for the team at a suitable conference site in the U.S. would have been desirable. At that time items which should have been clarified include the roles and functions of AID, the contractor, the field support office, the Chief of Party and the Ministry of Health.
- (b) For relatively large projects of a technical nature, the local AID office should be prepared to provide adequate backstopping. In this case regular visits of a health officer are necessary if there are none on the local staff.
- (c) When projects involve numerous parties such as the Ministry of Health (including several interested individuals), teaching institutions, AID, and the technical advisory team regular meetings with an agenda should be convened from the start of the Project.

SUMMARY TABLE  
BHSD PROJECT INPUTS

Project Component	Inputs	Status
I. Nursing	<u>A. Technical Assistance</u>	
	1 Nurse Practitioner (NP) - 48 mos.	Arrived January 1980
	1 Nurse Practitioner - 48 mos.	Arrived August 1980
	1 Public Health Nurse - 48 mos.	Arrived November 1979
	1 Senior Nurse Educator - 24 mos.	Arrived January 1980
	1 Nurse Educator - 48 mos.	Arrived January 1980
	1 Nurse Educator - 24 mos.	ETA January, 1982
	<u>B. Participant Training</u>	
	1 MS in Nursing Education	ETD 1982
	1 Diploma Nursing Education	Departed
	1 NP MA	Departed
	2 SRNMs BSN/MA Nursing Administration	ETD 1982
	3 SRNMs MA Nursing Administration	ETD 1983
	<u>C. Commodities</u>	
	Vehicles	All received
	Books	Partially Received All on Order
	Training Aids	Partially Received All on Order
II. Health Administration	<u>A. Participant Training</u>	
	32 person years of Health Administration Training at IDM Botswana for 32 participants	See Sections 15 and 17
	1 MS degree in Health Planning	Departed August 1980
	Short-term training in statistics for 4 Statistical Assistants	Not Placed

Project Component	Inputs	Status
III. Health Education	A. <u>Technical Assistance</u>	Arrived January 1980
	1 Health Educator Curriculum Specialist - 24 mos.	
	1 Health Education Planner - 15 mos.	Need to be determined
	B. <u>Participant Training</u>	
	1 Masters Health Education	Completed January 1981
	1 Masters Health Education	ETD 1982
	1 BSc Health Education	Placed January, 1981
	1 Diploma Graphic Arts	Placed August, 1980
	C. <u>Commodities</u>	
	Vehicles	Received
	AV Equipment	Partially Received All on Order
	Camping Equipment for Mobile Units	Received
IV. Nutrition	D. <u>Other</u>	
	Construction Health Education/ Nutrition Unit	Completed January 1981
	A. <u>Technical Assistance</u>	
	1 Nutrition Planner - 48 mos.	Arrived January, 1980
	1 Human Nutritionist - 48 mos.	Arrived November, 1979
	Nutrition Consultants - 30 mos.	As Required - 1 Month Used 1980
	B. <u>Participants</u>	
	1 BSc Nutrition	Placed August, 1980
	1 MSc Nutrition	Not Yet Placed
	C. <u>Commodities</u>	
Training Aids	Ordered-Some Received	

Project Component	Inputs	Status
	D. <u>Other</u>	
	Construction Health Education/ Nutrition Unit	Completed January 1981
V. Project Administration	A. <u>Technical Assistance</u>	
	1 Project Coordinator - 48 mos.	Arrived January, 1980
	B. <u>Support Personnel</u>	
	1 Project Secretary	Employed April, 1980
	1 Project Driver	Employed February, 1980
	C. <u>Other</u>	
	Project Office	Supplied by MOH
	Vehicle	Received
	Technician Housing	Available as Required
	Technician Support	USIAD Field Support Office