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To Mr. Levin  
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UNIVERSITY OF CALIFORNIA EXTENSION



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MATERNAL AND CHILD HEALTH/  
FAMILY PLANNING PROJECT

For

THE KINGDOM OF LESOTHO  
SOUTHERN AFRICA

\*\*\*\*\*

FINAL REPORT  
(March 31, 1977)

Prepared by: James A. Franks  
Director  
International Programs

Robert L. Minnis  
Assistant Director  
International Programs

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## TABLE OF CONTENTS

PREFACE

INTRODUCTION

SECTION I                    Maternal and Child Health Project/  
Lesotho  
March 1972 - December 1976

SECTION II                   Regional Maternal and Child Health  
Project/Lesotho (Health Education  
Component)

SECTION III                 Part I KAP (Knowledge, Attitudes  
and Practices) Survey of Doctors and  
Nurses in Lesotho  
November 1973

SECTION IV                 Part II KAP (Knowledge, Attitudes and  
Practices) Survey of Doctors and Nurses  
in Lesotho  
July 1976

SECTION V                   Retrospective Survey of Contraceptive Acceptors  
in Lesotho, 1972 - 1974

SECTION VI                 Model Village Baseline Survey of Ha Phechela  
Tsakholo Demonstration Project  
January 1976

SECTION VII                Tsakholo Village Leaders Survey - 1972

## PREFACE

### INTRODUCTION

The purpose of this preface is twofold: Part 1 serves as a guide to readers so that they can more easily locate information that is of special interest to them.

Part 2 relates in a concise manner the major observations and recommendations of the University of California Extension (UNEX) administrative staff regarding the replicable aspects of this project. Some of the pitfalls, successes, and recommendations for the future are related below. Part 2 begins with a letter from Dr. Carl Tjerandsen, Dean of University of California Extension/Santa Cruz, to Mr. Leonard Pompa, OIC Southern Africa which capsulizes our contributions to improved MCH care in Lesotho and expresses our concern and recommendations for future program assistance in this area.

This letter is followed by a summary of recommendations.

### PART 1

The Introduction relates in a chronological order the sequence of reports and developmental activities prior to the beginning of the project in Lesotho. To accomplish this in a complete manner, several project reports have been included. Some of these are repetitions but for purposes of documentation they have been included. The introduction contains the following reports:

1. A summary of a "Population in Transition" (PIT) report written by Ernest Neal. (Pages 1 and 2)
2. An AID set of guidelines entitled "Terms of Reference for Potential Contractors." (Pages 2 through 6)
3. A "Report of the Exploratory Site Visit Team for the MCH Extension Project" by Ernest Neal and Liz Hilborn. (Pages 6 and 7)
4. A brief summary regarding the "Proposal for a MCH/FP Project for Africa" submitted by UNEX. (Page 7)
5. A brief summary of the "Feasibility Study for Conducting an MCH/FP Project in Africa" submitted by UNEX. (Pages 7 and 8)
6. A "Non-Capital Project Paper" (PROP) prepared by AID. (Pages 8 through 17)
7. A "Maternal and Child Health Extension Proposal for The Gambia, Dahomey and Lesotho," prepared by UNEX in cooperation with AID and Ministries of Health of the three project countries. (Page 17)

8. Following AID acceptance of this proposal and the awarding of contract AID Afr-799 to the University of California, UNEX prepared a Work Plan working closely with the three involved Ministries of Health. The Lesotho portion of this Work Plan is contained on pages 17-46.
9. To solidify the contributions and understandings between UNEX and the Ministry of Health of Lesotho a 'Memorandum of Agreement' was drawn up between the two organizations. This memorandum is presented on pages 47-51.

Section I contains a report prepared by Ms. Patricia Goodale, a UNEX public health advisor, on MCH activities in Lesotho. The document attempts to share the experience of Tsakholo as the government's Demonstration Center in Maternal and Child Health, 1972-1974, and as a Training Center in Rural Health 1975-present. Tsakholo is a focal point in the Ministry for Maternal and Child Health. The report is necessarily detailed as its primary purpose is for use by those who continue their efforts in this country. This report points out that this project began and remains under government auspices and country nationals in the Ministry of Health and as such represents a unique rural health development project in the country.

Section II contains a report prepared by Mr. Sunny Fong, a UNEX Health Education advisor, on the Regional Maternal and Child Health Project/Lesotho. (Health Education Component) The UCSC Project came at a time when the First Five Year Plan was being implemented. The objectives of this project were to assist the Ministry in assessing health education needs, to organize education programs about health for the nation, to select and train local staff to develop and implement educational programs within the Ministry and to reach out to the people.

This report relates how a health education unit was established by Health Internal Circular No. 67 of (September 12, 1972) and gives details about the activities carried out by this unit.

Section III is a survey report on the knowledge, attitudes and practices of doctors and nurses in Lesotho. The report was conducted in November, 1973 to establish baseline information at the inception of the UNEX project. The survey was conducted prior to any major in-country training amongst professionals regarding family planning within Lesotho. The objectives of the survey were to:

1. Determine the general level of knowledge, attitudes and practices amongst professionals engaged in or likely to be engaged in family planning education and services particularly in rural Lesotho.
2. Stimulate thinking in related subject areas.
3. Determine the acceptability of and need for family planning content in formal and informal educational programs in the country.
4. Learn from professionals their experiences with and patient demand for contraceptives, infertility and related education counselling and/or services.

5. Determine significant relationships between professional status and institutional background and their effects on subsequent responses.

The survey was done in conjunction with and prior to a country-wide training program carried out by the Ministry of Health and the University of California Extension/Santa Cruz, Maternal and Child Health Project team. The questionnaires were anonymous, and their administration and completion was supervised by the training team. Prior to the first day of training all doctors and nurses participating in the training program received, in their districts, personal instruction on completing the questionnaire.

Section IV reports the results of a follow-up KAP survey conducted in July, 1976 among doctors and nurses in Lesotho. This second Knowledge, Attitudes and Practices (KAP) Survey of medical professionals in Lesotho was conducted following three years of in and out-country training amongst Basotho regarding family planning and maternal and child health. The objectives of the survey were to:

1. Compare the general level of knowledge, attitudes and practices amongst professionals engaged in or likely to be engaged in family planning education and services particularly in rural Lesotho.
2. Stimulate thinking in related subject areas.
3. Monitor the impact of family planning content in formal and informal educational programs in and outside the country since 1973.
4. Learn from professionals their experiences in and patient demand for contraceptives, infertility and related education counselling and/or services.
5. Determine significant relationships between district responses.

The survey was done in conjunction with and prior to a country-wide training program carried out by the Ministry of Health and the University of California Extension/Santa Cruz, Maternal and Child Health Project team. The questionnaires were anonymous, and their administration and completion was supervised by the training team. Prior to the first day of training all doctors and nurses participating in the training program received, in their districts, personal instruction on completing the questionnaire.

The findings presented in Lesotho's 1973 KAP Survey of Doctors and Nurses serves as baseline data to this survey. From lists of participants it is known that 95 percent of the government nurses and 50 percent of the non-government nurses had been administered the questionnaire previously in a controlled situation in 1973. Since that time the questionnaire has been a classified document of the UCSC/MCH Project except at the time of administration again in 1976.

Section V reports the results of a Retrospective Survey of Contraceptive Acceptors in Lesotho (RSCAL). The study which at the request of the Ministry of Health was undertaken in April, 1975, was directed toward women who accepted and used contraceptives during the period 1972 to 1974. The general purposes of the survey were to:

1. evaluate existing medical record systems,
2. establish the pattern and extent of contraceptive acceptance and use in Lesotho during the three years 1972 to 1974,
3. provide information for program planning of health services disseminating contraceptives,
4. provide baseline data which can be utilized for comparison with future descriptive and/or analytic surveys in Lesotho.

The subject in Section VI is the Model Village survey taken in the village of Ha Phechela in the Tsakholo Demonstration area. Early in 1974 the health team at the Ministry of Health's Tsakholo Demonstration Maternal and Child Health Project indicated concern about the applicability to villagers of certain demonstration efforts carried out at the clinic site, such as poultry production, communal garden project, etc. This team consisted of a collaborative effort of health personnel, various extension workers from the Ministry of Health as well as other government and private groups and members of the community. The team believed that the idea of a demonstration would be most relevant and would "snow-ball" to the villagers if it took place in a village itself rather than at a prescribed institutional setting. The team began to meet regularly to determine how such a scheme might be accomplished.

The following purposes for a "Model Village" were agreed upon: It was desired to:

1. Motivate the people in the village to become aware of their broadly defined health needs (i.e., improved crop methods, use of clinic, etc.),
2. Motivate the people to take measures to promote a healthier environment and to carry out health practices for themselves and their children,
3. Provide a learning model for other villages through the effort of the village itself.

Some assumptions were defined. It was assumed that:

1. The people are interested in improving the status of their own health.
2. Community health can be improved in large measure by the efforts of the community itself.
3. Agencies and individuals working in health and health related fields (agronomy, livestock, nutrition, etc.) can use teamwork

and motivation effectively to carry out the above objectives.

- 4) This effort would bring better organization and utilization of health resources but not increase cost or manpower requirements.
- 5) Demonstration in the village is more effective than demonstration at the health centre or outside the village.

Section VIII is a report on the Tsakholo Village Leader survey conducted in 1972. A determination of villages within a walking distance of the Tsakholo Health Centre were identified and listed. It was expected that the survey itself would help in defining the demonstration zone. The survey comprises a total of 135 reported villages, and a total reported population of 21,399.

The broad objectives of the survey were to:

- 1) Gain understanding of the community's knowledge, attitudes and practices in regard to health, as viewed by village leaders.
- 2) Identify socio-cultural factors influencing health.
- 3) Identify traditional practitioners, the services which they provide and their training needs.
- 4) Provide a foundation for planning health centre services including health education to the community.
- 5) Establish rapport with and secure the cooperation of village leaders.

The findings of this survey provide a valuable and interesting insight into village life in rural Lesotho.

PREFACE  
PART II

January 25, 1977

Mr. Leonard Pompa  
Afr/ESA  
Room 6849 (New State)  
A.I.D.  
U.S. Department of State  
Washington, D.C. 20523

Dear Mr. Pompa:

After some five years of active work our program of Maternal and Child Health in Lesotho, conducted pursuant to an agreement between the University of California (through University Extension) and the Ministry of Health of the Kingdom of Lesotho, has drawn to a close effective December 31, 1976. It is not without regret that we see our project end, although we are certain the work itself will go on under the aegis of the Ministry.

The project purpose, as stated in our contract and work plans, was to assist the Lesotho Ministry of Health to reduce preventable maternal and child morbidity and mortality by establishing or improving basic maternal and child health services and by introducing family planning services. This was to be accomplished by directing activities toward the rural populations of Lesotho with the limitation of not substantially increasing Ministry budgets for facilities, personnel or operating costs. A major area of emphasis was training of various community health workers. We approached this goal with a program designed to create a staff of mid-level health professionals who would be capable of supervising, coordinating and delivering maternal and child health services including family planning.

Our participant training program concentrated on training nurse-midwives as family planning nurse practitioners. To this end, we enrolled four nurse-midwives at the Downstate Medical Center program in Brooklyn and trained eight in our Santa Cruz program. In addition, we conducted special administrative and management programs for the chief matron and the acting coordinator of MCH services in Lesotho. All the participants at Santa Cruz were enrolled in a Training of Trainers program designed to develop their program planning and training skills. Thus, we have successfully trained a cadre of mid-level health workers who with a minimum of outside assistance can now organize and conduct their own in-service training programs in MCI/FP.

A new direction in our participant training program was launched last year with the training and certification of four family planning nurse practitioners in Lesotho. It is our opinion that this in-country training program should be continued and expanded so that Family Nurse Practitioner training can become institutionalized in Lesotho with some outside consultative, material and logistical assistance.

At the request of the Lesotho Ministry of Health we have assisted in the creation and development of a Health Education Division. One of the main functions of this Division is to raise the level of health awareness of rural populations, thus supplementing and supporting the clinical MCH/FP service and training programs. We have provided training for the Director of this Division which led to his receiving an A.S. degree in Health Education. We have sent a member of the Health Education staff to Meharry Medical College for nutrition training and other staff have traveled to Ibadan, Nigeria for family planning training. We believe that the Health Education unit can now function effectively without further donor assistance, particularly when the director returns from additional training in the United States.

A second area in which we concentrated our efforts in an attempt to improve basic MCH services was at the health delivery level. Tsakholo in the Mafeteng district of Lesotho was selected by the Lesotho government as a site in which to create a model rural health center and to develop it into a national rural health training center. Our project was able to:

- 1) assist in the improvement of the health facilities at Tsakholo,
- 2) provide medical supplies, equipment and library materials,
- 3) train clinical staff as nurse practitioners,
- 4) provide logistical support such as vehicles and radio transmitters,
- 5) provide technical advice in developing child-spacing services, high risk assessment of women and children, nutrition and health education and improved curative services.

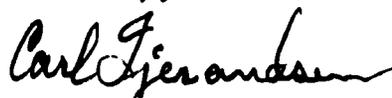
Through this input, the hard work of the Basotho and international donors, Tsakholo has become an exemplary rural health center and has become, to a degree, a national health training center. Because of a lack of housing for trainees at Tsakholo, our former staff house is now being used as a temporary dormitory. This allows six nurses at a time to have residence training at Tsakholo.

Over the past two years efforts have been made to expand comprehensive maternal and child health services and health education activities to other rural areas. Most rural health clinics have been reached with in-service and health education training programs, and several rural centers such as the one at Mphaki have significantly modified and improved MCH services.

All of this is good, and we feel proud of the work done by our staff and their Basotho counterparts; but the surface has only been scratched in providing comprehensive MCH service nationwide in Lesotho. We are therefore naturally interested in future U.S. foreign assistance to Lesotho. We believe that any currently planned projects which include support of MCH care in Lesotho must contain a strong component of rural family nurse practitioner training and a component consisting of training for village health volunteers and workers. If this is not included, the accomplishments of the past five years will certainly begin to be lost. This type of continued support must be set up quickly or provided on an interim basis. A gap in nurse practitioners training of up to eighteen months would certainly result in a serious loss of momentum.

We believe the timing was appropriate to remove our two field staff because the Basotho have demonstrated competence in the areas in which we were assisting them. But, there is still a strong need for institutional support like that given by Dr. Ben Major who coordinated the recent nurse practitioner course conducted in Lesotho. The stage is set to expand nurse practitioner and village health worker training in Lesotho. Any delay in providing assistance in this area would be counter-productive. Let me add that we would be pleased to offer our services in any way we can to assist in the transition to a new program.

Sincerely,



Carl Tjerandson  
Dean

CT/hb

cc: Minister of Health - Patrick Mota  
Lou Gardella  
Paul Struharik  
John Keen  
James Franks

RECOMMENDATION

The University of California Extension/Santa Cruz (UNEX) was charged under this contract to introduce MCH/FP services in Lesotho that the country could afford and could replicate. The reason for the success of the project lies in large part to the dedication of mid-level Basotho staff. Despite three changes of Ministers of Health and two changes of Permanent Secretaries of Health, the staff at the service and implementation level continued their work and supported the goal and objectives of the project.

The University staff, working in close cooperation with their Basotho counterparts, has recommended that:

- 1) Outside consultative, material and logistical assistance should be identified as needed to continue:
  - a) localized family nurse practitioner training,
  - b) monitoring of the village health volunteer or Traditional Birth Attendant Program at Tsakholo,
  - c) development of a coordinated Family Health Council.
- 2) Institutional support should be sought for medical input (OB-Gyn., Pediatrics, etc.) for the localized nurse practitioner training program.
- 3) Local full time administrative capability should be designated to assist in the continued development of the infrastructure for Tsakholo as a national training facility in rural health. To meet the needs of future health projects and local training programs, the Ministry must develop the Tsakholo Rural Health Training Center in a practical way that should include permanent staff, logistics, and housing for students.
- 4) The School of Nursing should be assisted as requested with tutorial staff as well as curriculum advisers while local nursing faculty are updated in family nurse practitioner skills.
- 5) The Ministry should continue to evaluate and modify health education programs in accordance with national development.
- 6) When the government policy permits, the Health Education Unit in coordination with other service sectors should implement a more liberal family planning education and service program.
- 7) To implement MCH services more effectively, the Ministry should establish a unit within the Ministry to plan, coordinate, and evaluate MCH activities.
- 8) The Ministry should capitalize on the experience gained from the UCSC Project for the planning and implementation of future health projects.

## GENERAL RECOMMENDATIONS

1. In reviewing the health system of Lesotho, we believe it is not good planning to concentrate most of the health delivery system in Maseru. Donor agencies are planning to expand or build a new hospital in Maseru and to provide technical assistance in the area of planning. This has proven to be a mistake in other countries, i. . the John F. Kennedy Hospital in Liberia, because this concentration drains the national health budget and leaves little left over to improve rural health services. Since these nations have limited resources, better utilization of facilities and manpower must be made to improve rural health. Midwives, nurses and public health nurses must be given additional training within their own country, in their own schools so that they can eventually provide family health services within the capability of a family nurse practitioner. These family nurse practitioners should also be able to do health education

These health professionals are already providing this service but their skills should be upgraded through a locally developed training program. This would eliminate the necessity of developing a new cadre of health technicians.

2. It has been proposed that the MOH develop a plan to train "Health Education Assistants" and deploy them to each district so that they can carry out the day-to-day health education activities. This again is a service that should be provided by a family nurse practitioner already assigned to the district.

3. The overall recommendation that we can make is that the health planning be directed toward maximizing impact in the rural area given limited resources. This is the charge of many donor agencies but they often fall victim to developing urban health facilities or expending resources in extensive planning activities.

## SPECIFIC RECOMMENDATIONS

1. Development of a Rural Health Training Center

It is feasible to develop a training center in a rural area provided that the Government is willing to provide:

- 1) Staff housing
- 2) Classroom space
- 3) Student Housing  
(British funds have been available for several years for a dormitory but these funds have never been utilized.)
- 4) Training Materials
- 5) Food
- 6) Adequate Training Staff

The Government must be willing to recognize the training at a rural center as necessary and valid in career development, Trainees should be guaranteed placement within the government health service and be properly equipped and placed at a facility where they can utilize their skills. For example, if a student is taught FP techniques she should have the facility and supplies to be able to offer FP services.

2. All nursing and midwifery students should have segments of their training at a rural training center. This will acquaint the students with the problems and needs of the rural population. Health delivery in the rural area is different from delivery in the urban area simply because of backup support being available in the urban area. A rural based nurse midwife or nurse practitioner is often required to deliver full family health services. It is important that new health professionals be acquainted with this reality.

3. Because of problems of acceptability to both the Government and the population, family planning should be promoted as an integral part of MCH services. This concept is acceptable and favored by those health professionals, paraprofessionals, and villagers with whom we have had contact. Additionally, free-standing family planning clinics represent an additional expense that a developing nation such as Lesotho can ill afford.

4. Vehicles and a transportation system to support rural MCH activities were introduced by this project. The system functioned during UCSC's presence in Lesotho, but we are skeptical that the Ministry will be able to maintain the system with its limited resources. Once providing gasoline became the responsibility of the Ministry severe mileage restrictions were placed on the vehicles. The maintenance of American vehicles, Chevrolet Blazers and Suburbans in this case, was difficult but possible because parts and service were available in Ladybrand, R.S.A. Supplying similar vehicles in other project countries should be carefully examined so that the vehicles do not become a liability rather than an asset.

A combination of horses and low maintenance Combis that do not require excessive petrol, can meet transportation needs in rural Lesotho. The use of expensive, gasoline consuming, four-wheel drive vehicles should be carefully examined. They probably are not necessary and again tax Ministry resources.

#### 5. Medicines and Supplies

Numerous medicines and supplies were provided on a trial basis during the life of this project. These proved vital to introducing improved MCH services in the pilot area. A decentralized supply system utilizing district hospital supply storage facilities should reduce the likelihood of rural facilities running out of medicines. Because of budget limitations and the irregular flow of supplies into Lesotho, efforts need to be continued to insure a well-running supply system. Donor agencies should play an important role in providing medicines and supplies and helping to insure their adequate and timely distribution. A.I.D. can play an important role in insuring an adequate and constant supply of contraceptive supplies until a suitable commercial or other system is developed.

#### 6. Equipment

Delivery tables were shipped during the early stages of this project. This proved to be expensive and unnecessary because they can be cheaply constructed locally. When feasible, locally constructed items should be favored over commercial equipment shipped in from outside. In general, emphasis was placed on supplying diagnostic and educational equipment. These items proved to be extremely important to the project. We would recommend a generous budget in future projects for items such as projectors, felt boards, pelvic models, local graphics, films, slides and diagnostic equipment such as, oto-ophthalmoscopes, sphygmomanometers and stethoscopes.

7. Development of a demographic and health data collection system.

This project conducted several small surveys that provide valuable information about the service population. We believe that extensive, complex and expensive survey information is unnecessary and of little value. Simple surveys such as those contained in this report can be of use to Ministry of Health personnel and future donors interested in improving rural health in Lesotho. Surveys should also be conducted, as these have been, by working closely with the Bureau of Statistics, health personnel, University students, staff and faculty, Ministry officials and other donor agency personnel. In this way, there is local ownership and understanding of the data retrieved through the survey.

8. Participant Training

Nurse midwives were brought to Santa Cruz and to Downstate Medical Center to expand their clinical family planning and training skills. The purpose of the participant training component of this project was to develop a cadre of health professionals who could conduct training similar to that which they received in the United States. At the close of our project a local training capability had been demonstrated. We believe that participant training is another vital component of a project of this type. The number of trainees brought out of country should be determined by such factors as the existing local training capabilities, and the number of trainers required to establish and maintain a new or expanded training program such as a nurse practitioner program.

TABLE OF CONTENTS  
INTRODUCTION

Inception of the Project

	<u>Pages</u>
1) A.I.D. Preliminary Diagnosis: The Neal Report (Summary)	1
2) A.I.D.'s Terms of Reference for Potential Contractors	2
3) Report on A.I.D. Exploratory Site Visit Team (summary)	6
4) University of California Extension, Santa Cruz Feasibility Study	7
5) The A.I.D. "Non-Capital Project Paper" (PROP)	8
6) University of California Extension, Santa Cruz Plan of Action - Lesotho	18
7) Lesotho - The Project Setting	28
8) University of California Extension, Santa Cruz Memorandum of Agreement with the Lesotho Ministry of Health	47

## INTRODUCTION

### Inception of the Project

#### Need

A significant gap is growing between the rural and urban centers of Sub-Saharan African countries. According to a major statement of USAID's involvement in Maternal and Child Health and Family Planning ('An Approach to Population Planning in tropical Africa'), by Ernest E. Neal and Ain H. Kivimae, while rural areas retain their traditional tribal influence, urban centers are becoming economic and political centers, the avant garde of social change. Though urban growth is necessary for the development of Sub-Saharan Africa, the increasing rate of rural migration to urban centers creates a potential for economic and political disruption.

This "population in transition" (PIT as Neal referred to it) has, it should be emphasized, a growth rate much higher than the total population increase for any of these countries. This population could pull limited government resources from alternative projects if employment opportunities and social welfare and health provisions become inadequate. It is highly unlikely that present or future government resources would be available in sufficient amounts should discontent from unemployment, poverty or ill health cause mass frustration and political instability.

The idea of family planning, with a major thrust toward the population in transition and groups at the subsistence level, presents itself as a possible solution to this problem. The population and health problems of the cities and the rural areas cannot be disconnected from each other. It is the marginal nutrition, poor sanitation, and low health standards characteristic of the rural subsistence level groups that are driving them to the cities and transforming otherwise stable rural populations into transitory populations. Though the tribal society might provide a safety valve and a secure social haven until strong, prosperous cities develop, there is little hope of stemming migration unless rural conditions are improved. Family planning in rural areas can serve to reduce population growth rates at the same time as it increases health services and thereby improves the quality of life.

On a continent where there is little pressure of population on the land, where primitive subsistence farming requires many hands, and where up to 50% of the children die before they reach the age of five, there is limited support for programs which would control or reduce population growth. However, there is widespread concern about the high death rate of mothers and children, health officials recognize the interrelationship between too frequent pregnancies and the health of mothers and babies, and all health officials accept the principle that child spacing for high risk mothers is an essential element in good maternal and child care.

According to Neal's report, "In Africa there is still time to develop policies and programs designed to reduce the rate of rural-urban migration and to reduce the fertility rate of the population in transition. If this cannot be accomplished in the next decade, the cities of Africa will become not centers of civilization and development, but centers of mass human

misery and breeding grounds for political upheaval and chaos."

The University of California Extension/Santa Cruz became involved in developing a Maternal and Child Health/Child Spacing project through the invitation of USAID, which had received requests from several African countries for assistance in improving programs for maternal and child health. In October, 1970, AID requested that the University of California Extension submit a proposal for such a project and also sent guidelines within which the proposal should be developed. These guidelines are entitled "Terms of Reference for Potential Contractors." These terms of reference are quoted below.

## TERMS OF REFERENCE

### Summary

The objectives of this proposal are (1) to contribute to the reduction of preventable maternal and child deaths and the improvement of the quality of life of African mothers and children, (2) to promote awareness and acceptance of the values of child spacing, and (3) to initiate child spacing services without necessitating the political development of a national policy on population matters. This will be accomplished by the expansion of MCH services to include nutrition and family care education, the identification of women for whom pregnancy would constitute a serious medical risk, and the provision of contraceptive services for these women.

The project will assist interested African countries to initiate or improve dispensary services to mothers and children. It will operate in existing dispensaries with personnel already on the job, supplemented by selected village women volunteers. It will provide the field training, field supervision, and clinical supplies needed to enable these workers to give minimal but effective MCH and child spacing services within the limited health resources of rural Africa. Based on pilot experiences in three or four countries, other African countries will be encouraged to initiate similar programs and this project will provide training for their national trainers and supervisors.

### The Situation

While African interest in population problems is not widespread, there is general awareness and concern about the high death rate of mothers and children. Although each country is striving to provide basic maternal and child health services, these services are frequently limited to urban populations, emphasize curative more than preventive measures, and include minimal nutrition and little or no child spacing activities. The only health services available in large parts of rural Africa beyond the care given by indigenous healers and untrained midwives are mass immunizations

which are given by mobile teams, and dispensary care provided by minimally trained dispensers. Present and projected budget allocations for health provide for a limited expansion of basic health services each year, but other new programs requiring additional facilities or training and employment of new cadres of health personnel are unrealistic.

Malnutrition, preventable infectious diseases, poor home hygiene, frequent pregnancies, inadequate care during pregnancy and delivery, and hazardous cultural practices associated with childbirth and infant care are major contributors to the high morbidity and mortality of mothers and children. Each of these could be influenced by an MCH service which is less than complete and which can be given by auxiliary health workers.

Simple laboratory techniques and medically sound indices for identifying high risk women are available and could be used by dresser level auxiliaries after short intensive in-service training. Provision of a simple screening service followed by treatment, contraceptives, and/or referral as indicated could serve as a stimulus for beginning other basic MCH services and for teaching better child care and nutrition.

At least one central African country is successfully experimenting with the use of volunteers to give primary health care in villages which have no other health service. Similar volunteers could be taught to give basic MCH clinic services, to demonstrate and teach simple child care, and to encourage and interpret child spacing practices.

### Strategy

- This project is designed to meet both U.S. and host country objectives by:
- 1) contributing in a practical, visible way to the improvement of MCH services which have been given high priority by each country's health administration;
  - 2) providing a non-controversial medical basis for the introduction of child spacing and family planning;
  - 3) demonstrating a service which can be extended throughout the country and the region without substantial increases in facilities, personnel, or operating costs; and
  - 4) actively involving village people by inviting them to select and sponsor their own volunteer family health workers.

### Course of Action

Phase I of the project will be carried out in selected rural dispensaries (approximately 2) in each of an estimated four countries, both English and French speaking, which have expressed an interest in participating in the project, and which have a suitable health services system to serve as a base for a pilot program. The four pilot areas will include approximately 400,000 people, of whom, available statistical norms indicate, approximately 120,000 will be children under the age of ten and 50,000 will be women of childbearing age. The countries under consideration will be visited to develop a tentative action plan for each pilot program including an assessment of existing MCH services and other programs on which to base

the project in that area, and the inputs required from the host government and external donors.

It is expected that the project development visit will be scheduled soon after the first of the year and that the contractor will participate in this feasibility study.

The Project will be directed by a field-based U.S. Coordinator. A team of two U.S. public health technicians will be assigned to each pilot country. With their national counterparts, they will give dispensary personnel two four weeks intensive training in basic maternal and child health services and health teaching which can be carried out in the dispensary.

The dispensers will also be taught to identify certain medical conditions which make pregnancy inadvisable without prior adequate medical treatment and supervision. They will be encouraged to screen all women dispensary patients of child bearing age and to discuss child spacing and offer contraceptives when medically indicated. The screening process will involve observation, brief history, and certain simple laboratory tests and measurements which the dispenser can perform under field conditions. The Ministry of Health in each country will determine the medical indices to be used and the kinds of contraceptives which can be distributed by the dispenser. Medical conditions which make pregnancy a risk and which can be identified or suspected by the dispenser include:

- less than 24 months interval since last pregnancy
- six or more previous pregnancies
- history of toxemia, difficult delivery or caesarean sections
- under 15 or over 40 years of age
- small pelvic measurements or deformity
- heart disease
- untreated syphilis or other venereal disease
- uncontrolled diabetes
- active tuberculosis
- severe anemia
- high blood pressure
- blood, sugar, albumen, or bilirubin in urine
- high blood sugar or blood urea

In selected areas, villagers will be invited to select a woman volunteer who will be trained by the project staff to assist the dispenser. The volunteers will be taught to make home visits to all new mothers to encourage them to come to the dispensary for health supervision and child spacing services and to explain and encourage the use of contraceptives by all women for whom they are indicated. They will also learn how to weigh babies and distribute food and vitamin supplements, to demonstrate preparation of a high protein weaning food, and to teach simple practices of home hygiene, family nutrition, and child care. The length and nature of the training of these family health aides will be determined by the project team.

The project will develop a suitable records system and will provide each dispensary with the contraceptives, food supplements, additional drugs and equipment necessary to implement the new MCH services and to accommodate the

increase in patients which can be expected to result. A system for delivery of these and other dispensary supplies will be developed.

Follow-up assistance will be given by the project staff to each worker in his own dispensary and in follow-up training conferences to be held at six month to nine month intervals.

A plan for evaluating the effectiveness of these new services will be developed early in the first year. The training program will include instruction in the collection of evaluative data, and the follow-up field visits will provide opportunity for on-site supervision of data collection and for observation of program methodology and effectiveness. In pilot countries where demographic surveys are being carried out, they will be coordinated with this project and will serve both to identify need and to measure results of the MCH/Child Spacing services.

In collaboration with Ministry of Health officials, the team will develop and participate in orientation and training programs for middle and higher level health workers to ensure their support and technical backing for the dispensary program.

During the second year of Phase I, modifications in the program will be made as indicated and a plan will be developed for extension of the services. Emphasis will be placed on the training of trainers and supervisors in each participating country. The project will provide supplies for the dispensaries in gradually smaller amounts, with the host countries assuming total costs and program responsibility at the end of the project period.

## Phase II

During Phase II, in light of the experience gained in Phase I, training of trainers and supervisors will be extended to other portions of the countries already engaged and to other interested African countries. From a regional base, U.S. technicians will assist in the initiation of new programs and the expansion of existing ones. It can be anticipated that more extensive family planning services can be introduced before project phase-out.

## Proposed Inputs

During Phase I (1971-72), U.S. project staff will include a project coordinator and, for each pilot country, a training team consisting of two public health nurse educators, essential vehicles, and supplementary drugs and equipment for MCH services for project dispensaries. The training teams will be supplemented by medical and statistical short term advisors as needed. Technicians in the Francophone countries will be required to have a working knowledge of French.

Each participating country will be expected to provide a focal point in the national Ministry of Health for project development and administration, counterparts for the U.S. trainers, dispenser and volunteer trainees, and the facilities of functioning dispensaries selected to participate in the project. In addition, each country will request UNICEF participation in the provision

of food supplements, clinic supplies, and local training costs.

In Phase II (1973-75), the project will make available four U.S. technicians on a regional basis, and participant training in MCH/FP for national program heads from an estimated eight participating countries. The project will provide drugs, dispensary supplies, and contraceptives in a decreasing amount during this phase of the project.

### Evaluation

Criteria to be used in evaluating project effectiveness will include:

- 1) extent to which program is adopted and supported in African countries,
- 2) reduction of preventable maternal and child morbidity and mortality in populations served,
- 3) numbers of women screened for medical contraindications to pregnancy,
- 4) extent of demand for and consistent use of contraceptives, and
- 5) estimated number of pregnancies delayed or prevented among the target population.

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In order to clarify the possibility of such projects in Africa, Mr. Ernest Neal and Ms. Elizabeth Hilborn, representing AID, visited The Gambia, Benin (Dahomey), Niger, Cameroon, Lesotho, Swaziland and Mali, in order to select three or four countries which would be appropriate for pilot programs. They set out to explore the attitudes of health officials in these countries toward MCH services, their attitudes toward child spacing, and the feasibility of developing a training program and that of AID support, as well as to choose prospective countries.

Their findings, in "Report of the Exploratory Site Visit Team for the Maternal and Child Health Extension Project," October 6 - November 12, 1970, were that these countries had health centers and health programs in various degrees of development. Health services were generally available to urban populations but rural coverage varied greatly. One of their most important findings was the fact that the Ministry of Health in each country was favorable to maternal and child health services including child spacing for medical reasons. The only strong negative feeling was against organized public propaganda programs promoting family planning. With the exception of Swaziland, all the countries visited expressed a need and a desire for maternal and child health services. They especially emphasized the need for training and equipment since lack of funds prevented the hiring of personnel to train field workers and to supply vehicles, drugs and other supplies.

As was expected, health services in these countries decreased as the distance from the central cities increased. One major deficiency in all the countries, especially in the rural areas, was found to be the number of nurse/midwives and medical social workers available. On the other hand, it was found that the participation of the World Health Organization was significant in all of the countries except The Gambia. With the strong support of the Ministries of Health in each country, WHO had been assisting in development of basic health services. Further, WHO representatives indicated that they would welcome AID projects and emphasized the need for close cooperation with existing governments and present WHO activities.

As a result of Mr. Neal and Ms. Hilborn's visit the following recommendations were made: pilot projects should be initiated in six of the seven countries visited (The Gambia, Dahomey, Niger, Cameroon, Lesotho and Mali) at intervals which would allow "a gradual phase-in." If it were not feasible to include six countries in the initial program, then a regional thrust should be undertaken. The Gambia, Dahomey (Benin), Mali and Niger would be defined as one region, while Chad and Cameroon would comprise the central region, and Lesotho and Botswana would be the initial project area for the southern African region. If sufficient funds should become available, programs for each region would be initiated. A third alternative, as stated in the Report, "would be to develop a bilateral Maternal and Child Health/Child Spacing (program) in Lesotho, and to include assistance to the extension of MCH and the introduction of child spacing in the University Center for the health sciences project in Cameroon." Finally, if none of the above projects should prove feasible, then The Gambia, Dahomey (Benin), Lesotho and Niger should be selected as pilot project countries since they are nearing the "take-off point in family planning."

The University of California Extension at the Santa Cruz campus (UNEX), in response to AID's invitation, convened an Advisory Committee on International Programs and a Technical Committee, made up of experts in the area of public health services and administration\*, and formulated a proposal which was submitted to AID (Maternal and Child Health and Family Planning Project for Africa). Major objectives of this proposal were to contribute to the quality of life of African families through increased health services; to promote an awareness and acceptance of the value of child spacing; and to develop a program which would provide child spacing services that could be duplicated throughout the country without a substantial cost increase.

The University's plan emphasized the training of African personnel in more effective MCH services rather than increasing goods and supplies, since the training of personnel rather than the injection of commodities into the countries would have a more permanent effect. It stressed the importance of seeking the advice and consultation of the recipients of the services in order to develop a program relevant to their needs. For example, a major point in the overall strategy was the determination of the role of fathers in these countries and a concentrated effort to include them in the decisions of child spacing. Another aim was identifying women considered to be high risks for prenatal and postnatal morbidity or mortality, and attempting to introduce contraception to this group of women first. Also included in this proposal were plans for a feasibility study, a preliminary estimate of supplies needed, and a preliminary budget. The major purpose of the feasibility study was to refine the original estimates.

The feasibility study was submitted by: Mr. James A. Franks, Program Coordinator at the University of California Extension, Santa Cruz; Doctor Charles Beal, Senior Physician Consultant, University of California, Santa Cruz; Mrs. Carlee Leftwich, M.P.H., Public Health Nurse Consultant, University of California, Santa Cruz; and Ms. Elizabeth Hilborn, US/AID consultant to AID from H.E.W., after a visit to The Gambia, Dahomey (Benin) and Lesotho. These countries were selected as the initial pilot countries in a five year regional project "to improve the health and well being of mothers and children in several countries in Africa by demonstrating an

\* See Page 25 for Advisory Committee.

effective method of expanding government maternal and child health/child spacing services." During Phase I -- the first two years -- the project would be confined to Dahomey (Benin), The Gambia and Lesotho, with a major objective of developing pilot demonstrations to produce models for the expansion of Phase II. The study recommended model health centers as the base of operations where high risk mothers would be identified and treated, and training and health education would be implemented. The expected population base to be served in the three specific demonstration areas was estimated to be 159,000.

US/AID responded to this Field Study with a 'non capital project paper' (PROP) dated June 10, 1971, which proposed that AID 'undertake a regional project to improve the health and well being of mothers and children in several countries in Africa by demonstrating an effective method of expanding government maternal and child health spacing services.' The PROP outlined a project which would be carried out in two phases. During Phase I the project would operate in existing health facilities. It would provide field training and supervision for personnel already on the job as well as clinical supplies needed by these workers to give minimal, but effective, MCH/CS services. The project would also study and help develop necessary backup services for such activities. Finally, after the two year period of Phase I, the activities in the 'pilot experience will be evaluated for their technical, economic, social and political acceptability.'

During Phase II, the project would assist participating countries to replicate successful pilot zone activities in other areas and to integrate appropriate pilot activities in the total government health services system. Emphasis in Phase II would be placed in training nationals as trainers and supervisors. It was anticipated that AID assistance would be given for up to a total of five years in any one participating country, with a total maximum project life of eight years. The PROP provided additional information about project goals, purposes, 'inputs', 'outputs', rationale, anticipated project activities, and a general blueprint for developing a detailed project proposal. (The PROP follows immediately below).

Non Capital Project Paper (PROP).

Country: Africa Regional                      Project No. 698-11-580-358  
Submission Date: June 10, 1971              Original: X  
Project Title: Maternal and Child Health Extension  
U.S. Obligation Span: Fy 1971 through FY 1975  
Physical Implementation Span: FY 1971 through FY 1976  
Gross Life-of-Project Financial Requirements:  
    U.S. Dollars                                  \$3,602,000

A. SUMMARY

It is proposed that US/AID undertake a regional project to improve the health and well being of mothers and children in several countries in Africa, by demonstrating an effective method of expanding government Maternal and Child Health/Child Spacing services. The objectives of the project are (1) to contribute to the reduction of preventable maternal and child deaths and the improvement of the quality of life of African mothers and children, (2) to promote awareness and acceptance of the values of child spacing, and (3) to initiate appropriate child spacing services without necessitating the political development of a national policy on population matters. This will be accomplished by the expansion of MCH services to include nutrition and family care education, the identification of women for whom pregnancy would constitute a serious medical risk, and the provision of contraceptive services for these women.

The Project will be implemented in two phases. During Phase I the Project will assist selected African countries to initiate or improve MCH services in defined pilot areas. It will operate in existing dispensaries and other health facilities with personnel already on the job, supplemented by selected village volunteers. It will provide the field training, field supervision, and clinical supplies needed to enable these workers to give minimal but effective MCH and child spacing services within the limited health resources of rural Africa. It will also study and help to develop the back-up services (administrative and technical support, logistics, training materials, etc.) which are essential to the functioning of each pilot activity. At the end of 2 years, the initially scheduled period for Phase I, the pilot experiences will be evaluated for their technical, economic, social and political acceptability. Based on the evaluation, recommendations will be made concerning replication and expansion of effective MCH/CS activities.

During Phase II, the Project will assist the participating countries to replicate successful pilot zone activities in other areas and to integrate appropriate pilot activities in the total government health services system. It will also encourage other African countries to initiate similar programs. During Phase II, emphasis will be placed on training national trainers and supervisors. The length of time needed to complete this second phase will be determined by the extent and complexity of the replication undertaken. However, it is anticipated that A.I.D. assistance will be given for up to a total of 5 years in any one participating country, with a total project life of 8 years.

To carry out this project, A.I.D. will contract with selected U.S. institutions to provide technicians (2 per country plus field coordination and back-up support personnel), training equipment, essential vehicles, contraceptives, and supplementary drugs and equipment for the pilot area health services. In addition, participant training will be provided for key national personnel. Each participating country will provide a focal point in the national Ministry of Health for project development and administration, counterparts for the U.S. trainers, health services and volunteer trainees, and the facilities, personnel and operating costs of the health services selected to participate in the project. In addition, each country will request other donor participation as appropriate in the provision of such items as food supplements, clinic supplies, and local training costs.

Total project costs per participating country, based on initial feasibility studies are estimated as follows:

	Phase I (years 1 and 2)	Phase 2 (years 3,4, and 5)	TOTAL
Personnel	233,536	417,021	650,557
Participants	17,400	39,266	56,666
Commodities	114,841	125,085	239,926
Other Costs	105,625	147,895	253,520
Total	471,402	729,267	1,200,669

The total funding requirement at this time is \$1,414,200. This will provide for 2 years of assistance to pilot activities in 3 countries.

This overall project PROP is supplemented by attached information and individual pilot activities. Additions may be made by amendment, including revised project cost authorizations, since it is expected that the overall project design will be applicable to a substantial number of African countries.

#### B. THE SETTING

Major health problems of all African countries include very high infant mortality, malnutrition and high incidence of communicable disease, much of which could be reduced through improved sanitation, proper nutrition and better use of presently available health facilities for MCH services. Frequent pregnancies, inadequate care during pregnancy and delivery, and hazardous cultural practices associated with childbirth and infant care are also major contributors to the high morbidity and mortality of mothers and children.

The health infrastructure of each country provides at least minimal hospital and public health service to all the major centers of population and each has a beginning network of health centers and dispensaries radiating out from these centers into the rural areas. There is wide variation in the extent of coverage but in every country large numbers of rural people have no health care except that given by indigenous healers and untrained midwives. Mobile services provide infrequent mass immunization against a few endemic diseases. Health services that do exist in the most remote centers are almost entirely limited to the care of the sick, personnel are inadequately trained and unsupervised, and medications and equipment are continually in short supply. Present and projected budget allocations for health provide for a limited expansion of basic health services each year, but other new programs requiring additional facilities or training and employment of new cadres of health personnel are unrealistic. Roughly 80% of the health budgets are spent in urban areas and 20% in rural areas, whereas from 80 - 90% of the people live in rural areas.

On a continent where there is little pressure of population on the land, where primitive subsistence farming requires many hands, and where 50% of the children die before they reach the age of 5 there is only limited and spotty support for programs which would control or reduce population growth. However, there is widespread concern about the high death rate of mothers and children, and most government health plans give high priority to the development of maternal and child health services. In all of the countries where this project has been discussed, health officials recognize the interrelationship between too frequent pregnancies and the health of mothers and babies and all accept the principle that child spacing for high risk mothers is an essential element in good maternal and child care.

Despite the similarities in major health problems, health service

coverage and attitudes toward population control, there are a number of country or area differences which need to be considered in developing models for the extension of MCH services in Africa. These include the influence of climate and of desert, savannah or forest on health practices and health service delivery; the difference in people - nomadic or settled, traditional subsistence farmers or populations in cultural and economic transition; and the variation in health personnel and health delivery systems between anglophone and francophone countries.

#### C. PROJECT PURPOSE

The goal toward which this Project is addressed is the improvement of the quality of life of African mothers and children through the reduction of preventable maternal and child morbidity and mortality and the acceptance of child spacing as an essential health service. The purpose of this Project is to find and demonstrate simple but effective ways to improve MCH services including child spacing and to extend these services to previously unreached population groups without necessitating substantial increases in facilities, personnel or operating costs.

The expected end of project status is the establishment of basic MCH services which emphasize prevention of illness and death, include child spacing and which are being provided to previously unreached populations.

#### D. RATIONALE

In other regional projects, A.I.D. is assisting African countries to gather demographic data, study the relationships of population growth to economic and social development, train a cadre of leaders in population and family planning concepts and techniques, and develop a few centers of excellence for continuing research and study in the fields of demography and population dynamics.

This Project provides another dimension to A.I.D.'s total population input in Africa in that it approaches the problem at the level of direct services to people. It introduces to them the concept of child spacing as a health service and searches for ways to motivate them to want to space their children. At the same time, it develops feasible ways to extend the local health services through which family planning services can be given.

If child spacing, even on a limited scale, is accepted as an essential part of basic MCH services in countries where these health services are just beginning to develop, it will grow with the health services. Also, family planning services will exist, ready to expand as the demand for them increases.

This Project addresses the following problems: the high level of preventable illness and death of African mothers and children; large numbers of people unreached by present health services which are largely curative and provided by small numbers of inadequately trained health workers; cultural

and traditional beliefs and practices which militate against changed health behavior; political and social objection to population control; and limited administrative and financial resources, both present and projected, for health service development.

Conditions which augur for the appropriateness of the Project include widespread African concern about the high infant and maternal death rate, the high priority being planned for preventive health services, the support being given to basic health services pilot projects, active local community development programs, the growing interest in demography and its relationship to development and the acceptance by health authorities of the concept of child spacing for high risk mothers.

This Project is designed to study and demonstrate, in several settings (rural and urban, desert and rain forest, traditional and transitional) that the role of existing local health workers can be expanded to include giving simple MCH services which will affect the health of mothers and babies. Emphasis will be placed on services which can be provided without necessitating substantial increases in drugs or other recurrent costs and on activities which will motivate people to change their own health behavior. The concept of child spacing will be introduced as a preventative measure for high risk mothers rather than as a means of family limitation. Overall increase in cost to host governments will be extremely modest and should not inhibit pilot area activities from being replicated elsewhere in the country or in other African nations.

Alternative approaches have been considered, but none seem as appropriate as that proposed here. Such methods as mass campaigns against endemic or epidemic disease, construction of more health care facilities and schools or supplying large numbers of health personnel all place an eventual severe financial burden upon the country, and none addresses itself particularly to the urgent need to bring about change in the environment and practices within the home. As to the introduction of child spacing techniques, the approach through the identification of high risk mothers is acceptable to nearly all health personnel, whereas contraception for population control is not. An alternative would be to funnel all funds through voluntary family planning associations. However, voluntary associations historically have concentrated their activities in urban localities and have never reached more than a small proportion of the population. In addition, confining support to private groups could have the effect of deterring the inclusion of contraceptive service as a part of government MCH services. This would violate the basic principle that child spacing is an essential and integral element of good maternal and child care and would deny family planning services to the great bulk of the population for whom the government is the only provider of health care.

This Project recognizes the essentiality of reaching the preponderantly rural population in Africa with family planning services if population growth rates are to be significantly influenced. It provides for child spacing within the context of improved MCH services as the best available means of doing so. Acceptance of family planning is expected to be gradual,

as is the case with all innovations requiring change in deep-seated custom. Phase I will primarily serve to prove out methodology and establish capacity for replication. Assistance to large numbers of people at relatively lower assistance costs is expected to be achieved during the years of expansion thereafter.

Early in FY 71, a visit was made to a number of African countries to explore interest in a MCH/CS project. This was followed by feasibility studies in 6 countries, carried out by consultants from 2 institutions which have tentatively been selected as contractors for the project. Detailed proposals for each pilot activity are attached as appendices to this report. In each of the countries, health officials were enthusiastic in their acceptance of the MCH approach to family planning.

### Course of Action

Phase I of the Project will be carried out in defined pilot areas in representative countries which have expressed an interest in participating in the Project, and which have a suitable health services system to serve as a base for a pilot program. The first 3 pilot areas have been tentatively selected by a feasibility survey team in collaboration with health officials of the participating countries. Each is a defined geographic area with a central health unit (health center, MCH center, or maternity) and peripherally located smaller health units (village clinics, health posts or dispensaries). Populations served vary from 12,000 to 200,000. Areas selected represent a variety of cultural, social, political and geographic milieus which can serve as prototypes.

A feasibility study has been undertaken in three additional African countries with the intention if the study is favorable of initiating 3 other pilot activities during the first operational year of the Project. Additional pilot efforts may be deemed necessary and undertaken as the project develops. However, expansion of project activities to additional areas will entail approval of PROP amendments providing for appropriate revision of project costs.

Two U.S. technicians (public health nurses, nurse-midwives and/or health educators) will be assigned to each pilot activity and 2 public health physicians will serve as regional field coordinators. With their national counterparts, project technicians will:

(1) collect demographic, health status and knowledge, attitudes and practices baseline data in the pilot area;

(2) study existing services and techniques in the pilot area and work with local staff to improve them. This will be done by provision of essential clinic equipment and supplies and by demonstration and training of local personnel in health education of mothers; in techniques of preventive and certain curative pediatric services, and in the identification and treatment of high risk mothers. Personnel also will be taught the techniques of child spacing and the value of offering such services to high risk mothers.

The content of the training for health education of mothers will include family nutrition and particularly the feeding of the weanling child, home and personal hygiene, infant and child care, value of child spacing, and use of available health services for maternity care. Methods in health teaching will include personal counseling, both at the health center and in the home, lectures, group discussion, the use of demonstrations and of appropriate audio-visual aids, and community participation in health projects. Concurrently, and as a part of the training of personnel, a study will be made as to which methods of health teaching are the most effective in the cultural context of the target population.

(3) using the central service in the pilot area as a practice center, provide short-term training for personnel from satellite dispensaries followed by regular on-the-job supervision.

(4) in each pilot area the development of volunteers will be attempted through community action techniques. The volunteers recruited will be trained to teach simple elements of nutrition and child care, the identification of high risk mothers (by history and symptoms) and the benefits of child spacing.

(5) develop a method of regular supervision of pilot zone health centers to assure that MCH/CS services and health teaching are being carried out.

(6) develop an overall plan for the regular re-training of all health personnel.

(7) develop and test health education techniques and materials for appropriateness in the country and other developing countries in Africa.

(8) participate in the development of health records and demographic data collection systems and test them in the pilot area as appropriate.

(9) work with the Ministry of Health to improve supply dispersal systems to the pilot area and other outlying clinics and hospitals.

(10) participate in training programs and professional conferences of all levels of health personnel in the country to interpret and gain support for pilot activity objectives and program and, on request, to provide theory and practical training in MCH/CS techniques and services.

(11) develop a method for technical evaluation of pilot activities and assess project effectiveness concurrently and at the end of 2 years. On the basis of this assessment, make recommendations for the termination of the pilot phase and develop specific plans for expansion.

The initiation of Phase II, as well as its design, will be dependent on the events of Phase I. It is anticipated that by the end of Phase I the MCH/CS services in each pilot area will be adequate to become a model for the replication of those services more extensively throughout the country as well as a center for the field training of nursing students and for in-service

training of other national health personnel. Concurrently, the pilot activity will also serve as a model for the development of MCH/CS programs in other countries. In each pilot area the host country counterpart will gradually assume responsibility for delivery of services and training of national personnel, with the U.S. technicians retaining an advisory role. The U.S. personnel will then shift their major efforts to the development of MCH/CS services in other African countries which request such assistance. Certain health center pilot areas from Phase I may be designated as demonstration centers for training of personnel from other African countries. Emphasis will be placed on the training of trainers and supervisors in each participating country. The Project will provide supplies and equipment in gradually smaller amounts, with the host countries assuming total costs and program responsibility at the end of the project period.

It can be anticipated that more extensive family planning services can be introduced before project phase-out, and Phase II may have a large training component for all levels of health personnel in theory and techniques of family planning.

During the course of the Project counterpart personnel will be trained, both on-the-job and through participant training, to replace all U.S. technicians and to take increasingly greater responsibility in the management of the program. Before U.S. personnel leave, or change responsibilities, every effort will be made to ensure a smooth transition to on-going viable, nationally supported programs.

### Outputs

Expected project outputs in Phase I include:

(1) Improvement of MCH services in the pilot areas as measured by an increasing number of women using trained personnel for maternity care; an increased number of children receiving therapeutic and preventive services, including immunizations; an increased number of high-risk mothers being identified and receiving specific therapy (including child spacing) toward reduction of risk; an increased number of mothers receiving teaching in proper health practices during clinic visits and in group sessions; and an increased number of home visits made by health service personnel and volunteers.

(2) Increasing acceptance of family planning as measured by the numbers of health personnel who advise child spacing to high risk mothers, numbers of mothers receiving this counseling, initiation of family planning services in government health facilities, increase in demand for family planning services, numbers of acceptors, and change in unofficial and official attitudes regarding family planning.

(3) Development of plans for supervision and continuing education of local health workers and implementation of these plans in the pilot areas.

(4) Methods in health education developed and tested, appropriate

audio-visual materials prepared and disseminated, and both being used by pilot area health workers.

(5) All health personnel in the pilot areas trained in basic MCH/CS methods.

(6) Volunteers and other community workers in the pilot areas recruited, trained and effectively carrying out some MCH/CS functions.

### Inputs

During Phase I, AID will provide a field coordinator for each group of participating countries, 2 public health technicians for each pilot activity, general administrative and technical support by the contractor and 5-6 man months of special consultant service per year in such fields as demography, social anthropology, health education and bio-statistics. In addition, AID will provide essential project vehicles, audio-visual and other teaching equipment and materials, basic clinic equipment including family planning equipment and supplies and limited food supplements, vaccines and basic drugs for the pilot area services. Other costs to be borne by AID will include locally procured teaching and demonstration supplies and materials, health survey and evaluation costs, printing, office equipment and supplies, supplementary local training costs, salaries for technician support personnel and, where necessary, initial payment of counterpart salaries or other minimal new costs until the host country budget can be adjusted to provide for them. Expendable commodities and local costs will be kept at a level which the host countries can maintain at project termination and can expand country-wide as indicated by project experience. It is not expected that this Project will provide for any construction costs. Participant training will be provided for 2-4 key personnel in each pilot country.

In Phase II, it is anticipated that the same level of AID technical input will be needed and that commodities, other costs and participant training will increase as program expansion begins but will decrease substantially in the final project years.

Each participating country will be expected to provide a focal point in the Ministry of Health for project development and administration, counterparts for the U.S. technicians, pilot area health facilities, personnel and operating costs, standard drugs and equipment, duty free entry for all commodities, and insofar as possible, local training and technician support costs. It is expected that the health authorities of the host countries will facilitate collaboration with other appropriate country and externally assisted projects and programs and will request other donor participation in the MCH pilot area as the need indicates.

### Evaluation

Development and implementation of technical evaluation procedures

will be one of the major responsibilities of the project field coordinators. Expected project outputs will be used as a basis for the evaluation design for each pilot activity and for the total Project. Early in the Project, existing baseline data for each pilot zone will be assembled and supplemented by appropriate sample surveys and service statistics analysis. The training program for pilot zone personnel will include instruction in the collection of evaluative data, and the follow-up field visits will provide opportunity for on-site supervision of data collection and for observation and concurrent evaluation of program methodology and effectiveness. In pilot countries where demographic surveys are being carried out, they will be coordinated with this Project and will serve both to identify need and to measure results of the MCH/Child Spacing services.

At the end of two years of pilot operation in each country results will be assessed to determine the degree to which expected outputs are being met and the possible need for additional pilot experience. Recurring costs will be assessed in relation to the effectiveness of the improved service and a decision will be made about whether and how to proceed with the expansion envisioned in Phase II. The projected five year life of project activity in each participating country is expected to be long enough to permit measurements of end results of new health services and the design for Phase II evaluation will include resurveys of health status and knowledge, attitudes and practices regarding maternal and child health and family planning.

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Unex responded to PROP with a submission of a 'Maternal and Child Health Extension Proposal for The Gambia, West Africa; Dahomey (Benin), West Africa; Lesotho, Southern Africa.' This proposal limited Phase I project activities to these three countries chiefly because of their similar states of development and their enthusiastic support for MCH programs.

Following contract negotiations between US/AID and UCSC Extension (UNEX) a preliminary Work Plan was developed to serve as a guide for project activities during the two year Phase I of the project. The following section is a summary of that plan and then is followed by a description of Lesotho as a setting when the program began in 1972.

PLAN OF ACTION - LESOTHO

Specific Plan of Action in Lesotho - Phase I

A UCSC Public Health Nurse will be assigned to the Ts'akholo Health Center in the Mafeteng District. Her counterparts will be the head nurse of the health center and the public health nurse assigned to the Mafeteng District. With the additional assistance of WHO personnel the Ts'akholo Health Center will serve as a national model for the effective delivery of MCH/CS and other basic health services. The MCH/CS aspects will be accomplished through the retraining of health center personnel and development of appropriate health education materials and techniques. Content will include nutrition, infant and child care, hygiene, and child spacing for high risk mothers. Health education materials and equipment will be provided. When the program is in action, the Ts'akholo Health Center will be used as a training center for personnel and volunteers from the other centers in the pilot area after which they will be supervised on the job. Eventually, the Ts'akholo Health Center will serve as a training center for students and for the continuing education of all levels of personnel providing health and related services. This training will emphasize the significance of integrated maternal and child health/child spacing services as a means of improving family health and in the various ways in which such services can be prompted and made available within the existing personnel, financial and socio-cultural constraints in Lesotho.

Early in the project the UCSC field coordinator and PHN in the pilot area will initiate a sample survey to assess the health status of the people in the area in order to get baseline data for later project evaluation. Sufficient laboratory supplies are being furnished to the Ts'akholo Health Center to provide back-up facilities. Ongoing morbidity and mortality data will be collected and analyzed, and in the final year of the project, the survey will be repeated for comparative purposes.

A second UCSC technical assistant, a health educator, will be assigned to the Ministry of Health. The Government of Lesotho will appoint a health education trainee to serve as his counterpart. Together, the UCSC health educator and his counterpart will develop and test methods of health education which are appropriate for the pilot area and for all of Lesotho, and which have application to other developing countries. They will assist with the development of the training center in the pilot area.

The UCSC field coordinator will assist in maintaining the base of operation within the Ministry of Health, give consultation to project personnel, and coordinate project activities with other related health activities in the country and with other pilot activities of the regional MCH project.

Out-of-the-country training will be provided for one health educator trainee for one year, and for two or three senior level health workers in public health practice for approximately three months each.

B. Contributions by UCSC during Phase I

Personnel

1. Project Director (1/3 time)
2. One public health nurse.
3. One health educator

Commodities

1. Two vehicles, both large jeep type, at least six passengers, four-wheel drive, with spare parts.
2. Audio-visual and other teaching aids.
3. Office furnishings and equipment for PHN's.
4. Selected medication for the prevention of increased morbidity and mortality in target population (Lower River Division).
5. Medical supplies to help equip model health center as Ts'akholo.
6. Laboratory equipment and supplies for detection of high risk mothers, materials for child spacing activities.

Other Costs

1. Personnel

- (a) One secretary, locally hired.
- (b) Two driver-messengers.

2. Health Training Activities

- (a) Costs of printing, reproduction, and distribution of health education materials developed by Project.
- (b) Conferences and refresher training for Lesotho health personnel.
- (c) Travel and other costs, intra-African conference for UCSC technicians, counterparts, and selected host country officials.

3. Participant Training

- (a) One health educator trainee for one year.
- (b) Two to three senior level health workers in public health practice for approximately three months each.

C. Contributions by the Government of Lesotho during Phase I

1. Designation of a focal point in the Ministry of Health for administrative direction and support of the project.
2. One counterpart, PHN.
3. One counterpart, nurse-midwife.

4. Office space - health educator.
5. All Ministry of Health and clinical facilities in which project operates, including personnel, land, building, equipment, and operating costs.
6. Medical care ("ordinary") of U.S. technicians.
7. Civil liability insurance in respect to vehicles.
8. Designation for use in the pilot area of appropriate assistance from other donors:
  - (a) Collaborative assistance from WHO advisors in Lesotho.
  - (b) Milk and other staples for target population from Catholic Relief Services.
  - (c) Vitamins, vaccines, and certain medications from UNICEF.
9. Health personnel for participant training.

#### D. General Agreements.

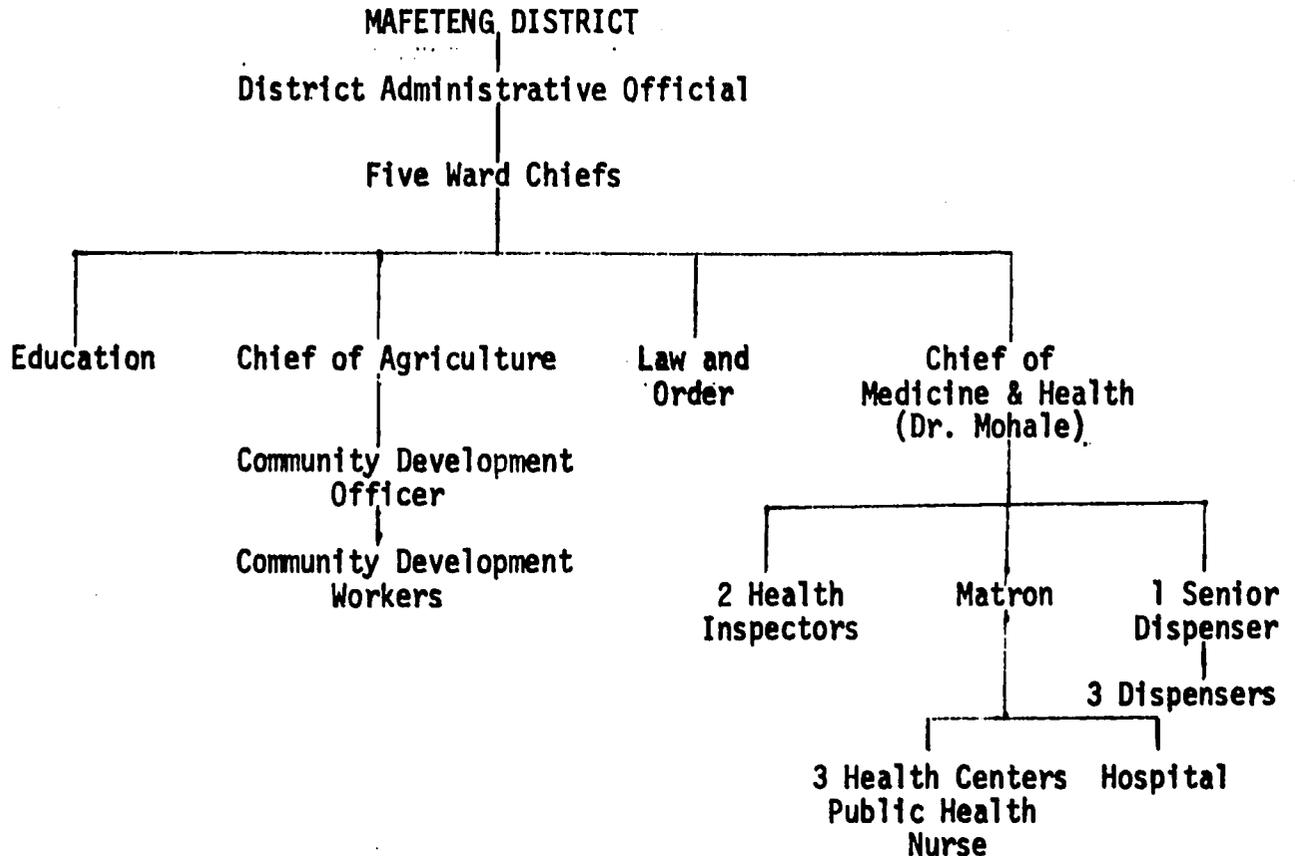
The title to all contractor purchased equipment, material and supplies, shall be in the name of the Government of Lesotho. All such property shall be under the custody and control of the UCSC for the life of the project. At project termination, custody and control of all property will revert to the Government of Lesotho.

The Government of Lesotho shall exempt from import duties all project commodities, household and personal effects of project personnel, including one privately owned vehicle per person and assure that UCSC project personnel will not be subject to double taxation.

As the pilot activity develops, changes or additions to this Plan of Operations which are mutually agreed upon and consistent with the provisions of the Regional MCH Project may be added as supplements to this agreement.

#### E. Description of the Pilot Zone in Lesotho.

Lesotho is made up of nine districts. The Mafeteng District has been selected as the pilot zone. This district has a population of approximately 102,000 persons. The governing body is a district council made up of five Ward Chiefs from each of the major wards in the district. The representative is the "political representative" from his ward, however the final decisions about what takes place in the village still seem to rest with the head man in each village.



The Mafeteng district is approximately 800 square miles with a population density of a 127 square mile. The roads are unpaved and are usable during the dry season. There is a good all-weather highway from Maseru to Mafeteng. The major form of transportation is horseback, for those fortunate enough to have a horse. Most of the local people walk. The population in Lesotho is homogenous and the population in the Mafetang District is all Basutho and all speak Sesotho. The males are polygamous and are the head of the family. However, most males are away from their homes working in the Republic of South Africa in the diamond mines for part of each year.

There is a one hundred bed hospital at Mafeteng, under the direction of Dr. Mohale who is Chief Medical Officer for the Mafeteng District.

Within the district there are three government operated health centers, and other "outposts" operated by religious missions or the Red Cross. Dr. Mohale has a direct responsibility for the three government health centers but has no true jurisdiction over the other health centers or out-stations. The three government health centers in the Mafeteng District are, Ts'akholo, Thabana-Morena and Malealea. The project will be based at the Ts'akholo health center to which a recent survey attributes a population of 15,386 (however, local health workers state that an additional 13,000 potentially use the clinic from surrounding areas). Two pre-school clinics are held each week at the health center, and see between 300 to 400 children. Two prenatal clinics are held each week, seeing between 10 to 17 patients.

Thirty to forty patients (with symptoms of diarrhea and vomiting, pneumonia or typhoid) are seen at the health center each day. The nurse in charge is a nurse midwife. She has two sub-professional assistants. At the present time the nurse midwife is only doing one to two deliveries per month at the health center. Other patients are being delivered in their villages or are going to the hospital at Mafeteng. There are also four dispensers and two health inspectors assigned to the Mafeteng District. The physician is scheduled to visit the health center on a regular basis (supposedly once per week). However, due to a lack of doctors this is not being done regularly. There is a public health nurse assigned to the district who visits the health center on a regular basis.

The health center at Thabana-Morena serves a population of 17,548. The staff consists of one nurse midwife, Rosiland Moeno. Until recently the center saw 150 children per week at the clinic, but at the time of the feasibility study only approximately 23 were being seen.

The Malealea health center serves a population of approximately 13,000. Ministry of Health estimates that approximately 60,000 are served through these three government health centers in the Mafeteng District and the remaining of 42,000 are served by the clinics held under the auspices of various missions such as the CRS or the Red Cross.

The Mafeteng Hospital has twenty-five beds set aside for a mental observation ward. According to Dr. Mohale one of the main causes of mental disturbance is pellegra. The prenatal clinic is held at the hospital by Catholic Relief Service and between 150 and 200 patients are seen per day. There is a shelter for prenatals which will house between 10 and 15 expectant mothers who come from outlying villages. When they are close to term they stay in the shelter awaiting their delivery, rather than returning to their village.

The Lesotho Government has an agreement with WHO which provides for one public health nurse-advisor and one maternal and child health physician-advisor. There is also a commitment from WHO to provide one laboratory technician. The USAID Maternal and Child Health Project and the WHO operations in the country will be both complementary and supplementary to each other. The WHO technical advisors will carry out all aspects of the stated plan of operation with the exception of the area maternal and child health, in the pilot zone, which will be the responsibility of the USAID technicians. The WHO advisors are enthusiastic about the USAID project and it is anticipated that there will be total cooperation. The development of the existing plan of operation in Lesotho is the outgrowth of a very comprehensive study done by Dr. H. C. Berringer, WHO Senior Medical Officer in 1967.

Under the Minister of Agriculture there is a very extensive nutrition education program throughout Lesotho. The Senior Community Development Officer, Mr. T. S. Bofelo, has a responsibility to:

- (1) Help voluntary organizations.

(2) Develop self-help projects, particularly in the area of water supplies and latrines, communal gardens, poultry farming and marketing

(3) Develop adult education programs regarding economic and social change.

The home economic advisor, Mrs. A. M. Hlalele did a national nutrition survey under the auspices of WHO in 1970. This report is an attempt to evaluate the efforts of a UNICEF-FAO pilot project which has been going on since 1962 and which is emphasizing the high protein foods program. Under the home economic advisor there are thirty positions available. At the district level there are three supervising junior home economists and at the village level there are approximately twenty home economic assistants who have had anywhere from two and one half to three years of training. These workers carry out adult education programs, usually three to five days in length, on nutrition and home hygiene. There are also twelve day courses at four farm training centers. When students complete their training they are given two chickens or two calves to take back to their own homes so that they may start their development of protein foods.

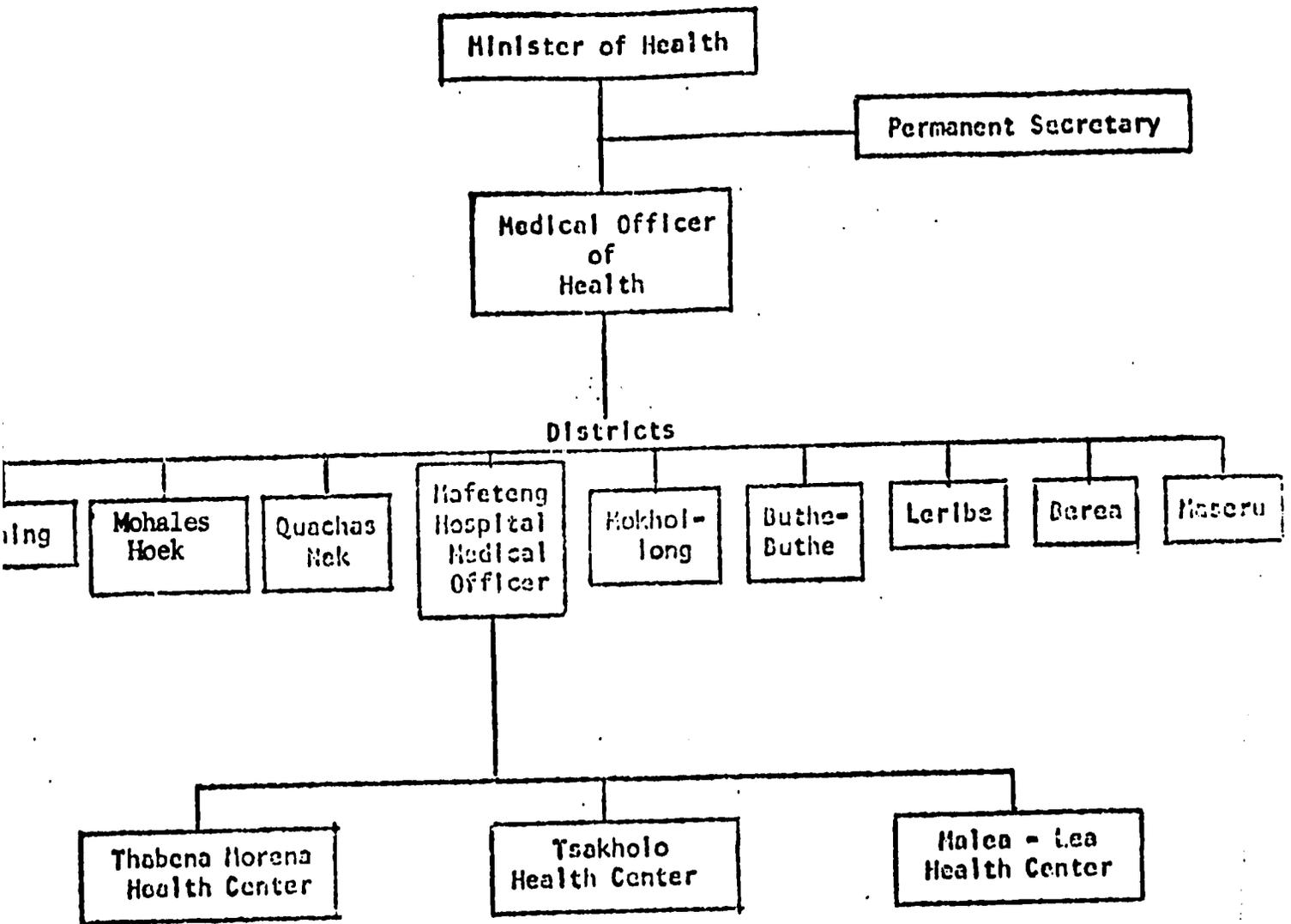
The nutrition officer, Mr. Slerotholia is responsible for the development of fisheries, with technical assistance from China, and for the future development of a dairy.

Catholic Relief Services has a contract to distribute throughout Lesotho supplemental food provided by the United States. In addition, they have a very active program of child clinics which emphasize education. CRS is under the direction of Mr. Peter Cannon. Mrs. Anne Taoli is the senior nurse and there are five or six additional nurses who hold clinics throughout the country.

The School of Nursing is under the direction of Mrs. Gwen Moeletsi. Students can enter upon completion of the tenth grade, however a twelfth grade education is encouraged. General nursing requires four years plus one year for midwifery. A total of fifty students are enrolled at any one time and twelve new students are admitted each year. There is a present enrollment of twelve midwives with six being admitted each year. The faculty consists of one nurse, one nutritionist, a physical therapist and a pharmacist. The School of Nursing is housed in a new attractive building which has the necessary equipment but is short of books, journals, etc.

The Seventh Day Adventist Hospital at Maluti has a small training program where they recruit and educate nurses whom they then employ at their hospital.

F. Lesotho Health Structure



1. Staffing the Project. In order to staff the project, extensive advertising was done through newspapers, medical schools and AID and HEW references to locate applicants for positions. A committee composed of members of the Project Technical Advisory Committee, interviewed seven doctors for the position of the Field Coordinator. Dr. George S. Walter was selected on the basis of his training in obstetrics and gynecology, his extensive experience working in rural undeveloped areas (with Navajo Indians and Eskimos), his administrative capabilities, and his desire to work in Africa. Approximately 50 nurses responded to the job descriptions which were circulated through major universities in the United States and nursing schools in Canada and the United States. Applicants were interviewed to select 5 Public Health Nurses and one Public Health Educator. The candidates were asked to discuss their educational qualifications and work experience, their personal goals and philosophies and how they fit in with those of the project, and the project Prop, after which there was a question and answer period with both candidates and interviewers posing questions. The individuals selected for Lesotho were:

Sunny Fong - Public Health Educator. Mr. Fong had recently returned from a similar project assignment in Taiwan. His assignment there closely parallels his assignment in Africa to develop the health education component for the maternal and child health project.

Patricia Goodale - Public Health Nurse. Miss Goodale has an extensive background in maternal and child health and family planning. This background along with some international experience in the South Pacific and Hawaii makes Miss Goodale exceptionally well suited to the position for which she was chosen.

2. Selection of Technical Advisory Committee. The purpose of the Technical Advisory Committee, which was convened at the request of the Project Director, is to serve as a consulting group to aid in any planning or problem solving that may be required. Members of the Committee are also available to the Project Director and staff individually and in small groups for assistance on specific problems. The committee aids the Project Director and staff by continuing review of project goals and objectives as well as progress toward their achievement, in policy development, in review of training syllabi for staff, counterpart staff and paraprofessionals, and in review of evaluation design and implementation. Since the Santa Cruz campus has no medical school, the cooperation of medical professionals from the Graduate School of Public Health at Berkeley and the Medical School of the San Francisco campus was enlisted. Organizations and individuals outside the University were also asked to participate. Dr. Carl Tjerandsen, Dean of the University of California Extension, Santa Cruz, became Chairman. The membership of the Technical Advisory Committee is as follows:

J. Ralph Audy (deceased)  
Dwight Bissell, M.D.  
Dale Flowers - Secretary  
James A. Franks  
Bill Friedland  
Edwin M. Gold, M.D.  
Ruth L. Huenemann, Ph.D.

Andie L. Knutson, Ph.D.  
Nicholas L. Petrakis, M.D.  
Carlee Spencer, R.N. M.P.H.  
Helen M. Wallace, M.D.  
Benjamin Majors, M.D.

After the first six months of the project's life, it was considered advisable, in order to increase the effectiveness of this Committee, to establish closer communication between the Project Director's office and the Advisors. It was also felt, at that period, that the committee should be convened to consider major policy issues rather than to offer administrative, personnel, or technical advice, and that, because of the short duration and infrequency of the meetings, only problems of a serious nature be discussed. It was found that necessary technical advice could be obtained in individual consultation with committee members when the need arose. The participation of the committee members has not been limited to group meetings.

On the whole, the major accomplishments of the Technical Advisory Committee were considered to be: 1) constructively reviewing the draft proposal; 2) contributing to the development of personnel position guidelines; 3) participation in the personnel selection process; 4) providing criticism and recommendations with respect to the evaluation program; 5) providing technical support; and 6) contributing to the design of the staff orientation training. All of the members expressed their willingness to offer more assistance in the future development and implementation of the project.

3. Planning the Training Program. International Health Services was contacted to supply training information, and each member of the Technical Advisory Committee was also consulted. The final training program was presented to, and approved by, the Advisory Committee. It was felt, however, that more preparation and planning time would have been useful in developing the training program. Four months would have been an optimal amount of time for development and review. More exact knowledge of the professional development of each individual staff trainee would also have been helpful.

4. AID Program Evaluation Seminar. In response to an invitation by Joseph Chimento, Program Analyst AFR-PAC, Agency for International Development, Dr. George Walter, Chief of Party, and John Niemeyer, Administrative Assistant, attended a program evaluation seminar directed by AID during the week of December 13 - 17, 1971. The key concept discussed during the initial sessions of this seminar was the role which evaluation played in program management. Participants studied several projects in order to develop skills in defining project goals, purposes, "outputs" and "inputs." As the seminar progressed, the concepts of quantitative and qualitative indicators, the use of surrogates, and the sources of data were introduced and discussed. During the latter part of the week, problems germane to the Africa MCH project in particular were discussed, and the participants developed the Project Design Summary and a logical framework for the Africa MCH project. The participants gained an increased understanding of evaluation from this seminar, and specifically an increased understanding of the MCH project. It is also important that two key UNEX staff members were able to work with Washington AID personnel, which produced an increased sensitivity and spirit of teamwork. Unfortunately, John Niemeyer resigned shortly after being trained, which left the project with only one staff member having completed the training.

5. Establishing Field Accounting System. Mr. Phil Douglas, an accountant with extensive overseas experience, was referred to us from the UCLA staff. Mr. Douglas went to Africa, set up accounts in each country and made contact with firms which could provide accounting services for the Project.

He also prepared a Field Accounting Guide. As it turned out, Lesotho had no qualified accounting firms, and therefore, services had to be performed in Johannesburg, causing some mailing difficulties. Similarly, Dahomey had no accounting services and accounting had to be done in Accra.

6. Student Employees. The Project has employed graduate and undergraduate students of the University of California since July 1971. This is consistent with University-wide policy of utilizing capable students in selected areas of part-time and summer employment. These students represent a relatively untapped, intellectually skilled labor force, and their employment by the University provides them with an opportunity of applying academic tools to a practical project.

Numerous students have been employed by the Project in various capacities, such as writing background research reports, report writing, budget analysis, using evaluation systems, and low level management. Their term of employment has varied from a month to a full year. All of the students, in response to a survey, have demonstrated that their experience in the Project was worthwhile. Several saw their job as having been a valuable learning experience, two specifically citing their introduction to African subject matter as particularly important. The use of computers, the process of project evaluation, the dynamics of the Project itself, and the function of University Extension were all mentioned as areas in which students felt they had gained expertise and understanding.

7. Purchasing. In the planning meetings held during July and August of 1971 with Accounting, Extension, Contracts & Grants and Purchasing personnel anticipated problem areas for the UNEX African Project were outlined. Lead times were established to assure timely deliveries to project personnel in Africa. It was made clear in these meetings that at least three months lead time was necessary for goods going via ocean freight.

Shipments are hindered by threatened dock strikes at all U.S. ports and by infrequent shipping schedules to Africa. Lykes Lines is the only American-flag company shipping to South African ports from Houston. They ship about every four to six weeks and may delay or accelerate a sailing date depending on how fast they fill with cargo. Usually, they fill quickly and space must be reserved several weeks ahead. Additionally, Houston Export Crating requires cargo five days prior to sailing.

Some delays experienced on initial orders were the result of inadequate lead time and incomplete specifications which necessitated Purchasing personnel developing specifications.

The infrequent sailings to Africa are a fact and can be handled by planning ahead. The purchase cycle takes at least three weeks from the time a requisition is received until it is delivered in Houston. If the requisitions are without adequate description (size, quantity, catalog numbers) it obviously will take longer and we run the risk of shipping the wrong item. To ease this problem, catalogs were sent to the project personnel so that both ends of the ordering were working from the same catalogs.

The work accomplished during the first six months of the project was the most difficult from the Purchasing standpoint. Relationships with an export packer and broker in Houston have been established. Time-consuming foreign documentation has been simplified to facilitate prompt booking and shipment of goods. With adequate lead times all orders arrive near the required date by personnel in Lesotho.

## LESOTHO - THE PROJECT SETTING

### A. Description of Lesotho

Lesotho, called Basutoland until its independence in 1966, is a country of 11, 716 square miles entirely surrounded by the Republic of South Africa. It is a mountainous country, three quarters of which is highlands, rising to 11,000 feet in the Drakensberg Range on the eastern border, making efficient transportation in that direction virtually impossible. Its capital and principal city is Maseru, a city of about 12,000 on the northwest border. Most of the farming in the country is done on the grassy lowlands to the west where, however, erosion is a serious problem. The chief crop is maize. Productivity is limited by an uneconomical but traditional system of land distribution, a problem further aggravated by the fact that many Basotho men work in South Africa and are not available to tend the fields. In addition, the land is overgrazed by cattle.

Geogra-  
phy and  
Land Use

The climate in Lesotho varies radically between the lowlands and the mountainous areas. In the lowlands, the temperatures range from 90°F to a low of 20°F, but in the highlands there is a much wider range. Because of the mountains, there is a decrease in rainfall from east to west, with rainfall averaging 24 inches a year along the western border of the lowlands.

Climate

The total population of Lesotho in 1972 was just over one million. It consists almost exclusively of members of the Sotho tribe, known as the Basotho. The annual growth rate is about 2.9%. Of Lesotho's population, about 15% is absent from 3 - 9 months of the year for work in South Africa, and this percentage has been increasing. About 50% of the people live in the lowlands. Cities of more than 5,000, in addition to Maseru, include Leribe, Mafeteng, Mochale Hoek, and Bera.

Demogra-  
phy

The official language, and the language of instruction in secondary schools, is English. The native language is Sesotho, which is taught in primary schools. Literacy is estimated to be 70% in Lesotho, one of the highest rates in Africa. Over 90% of all girls aged 8 - 16 are in school, and about 60% of all boys that age.

Language  
and  
Education

The Basotho are predominately Christian. The French Protestant church is the established church of Basutoland, though almost 35% of the population is listed as Roman Catholic. 22% are French Protestant, 10% Church of England, and 6% are other Christian denominations.

Religion

The Basotho share the chronic bad health of most Africans as the consequence of poor nutrition, causing lowered resistance to disease, and very limited medical care. Malnutrition is the prime cause of the country's high infant mortality rate. Intestinal diseases are common throughout the population and tuberculosis is a national health problem. International organizations--WHO, UNICEF, FAO--have been active in funding health projects and providing medical care at the local level. Both WHO and UNICEF provide funding of the government's Tuberculosis Control Project.

Health  
Care

In 1968 a team of 18 South African doctors began working on a volunteer basis in the new Queen Elizabeth II hospital in Maseru, providing the kinds of medical specialization most needed in Lesotho. Their services have been available, however, only twice a month, when they are flown into Maseru from South Africa. This short-term volunteer assistance deals only with the effects of Lesotho's health problems, not its causes: malnutrition and lack of sanitary facilities.

There is only one doctor for every 21,000 inhabitants in Lesotho and only 12 nurses are registered in the country. There are 17 general hospitals, with a total of 1,356 beds, a small mental hospital and a lepers' settlement.

The Basotho are a homogenous people, with a sense of identity fostered by the precarious existence of their country within the Union of South Africa. Another unifying factor has been the allegiance of all the tribes to the traditional Chieftainship. Acceptance of the authority of the Paramount Chief has defined the Basotho as a people. This institution has provided for governmental responsibility to the populace and an orderly succession of leaders up to 1960, when the present King of Lesotho also became Paramount Chief.

Society  
and  
Culture

The fundamental social unit of the Basotho is the family and immediate relatives, a secondary one being the clan, composed of several family lines, and a third, the tribe. Villages in the lowlands contain up to 500 households, with the average number being 20 - 30. Each settlement is usually under the authority of a single chief.

Though the Basotho have been characterized as a reserved people, not given to dancing or singing, modern Lesotho has produced the first respectable literature on the continent and includes a number of celebrated poets. Lesotho's best known single author was Thomas Mofolo (1877 - 1948).

There are only two all-weather roads in Lesotho, one that runs eastward from Maseru for 82 miles into the mountains, and another linking the upper Orange River Valley with Matatiele in Cape Province. There is a network of roads and rail lines in the lowlands totaling some 1200 miles; Maseru is connected by rail to South Africa. Two more all-weather roads are nearing completion: one that will run 76 miles from Matsieng to Leribe, and one 17 mile section from Leribe to Pitseng. Air travel offers the only means of ready access to the highlands.

Communi-  
cations

The history of Lesotho has been a struggle to sustain its identity within the surrounding territories of South Africa. In 1869, the British High Commissioner in South Africa declared the Basotho British subjects, thus protecting them from the Boers, who sought to expand their independent Orange Free State at the expense of the Africans. Basutoland, as it was then called, was annexed to the Cape Colony by Britain in 1871. This arrangement nullified the power of the local chiefs, and was much resented by the Basotho. It led to the so-called Gun War of 1880, which was inconclusive. However, the Basotho chose to remain British subjects, but under a new system which gave more authority to the chiefs.

History

In 1896-7, Lerotholi became the first true Paramount Chief of the Basotho in quelling a challenge to his position by a number of local chiefs. Because he had enjoyed at least the tacit support of the Resident Commissioner, Lerotholi became, in practice, an ally of the British administration. The Paramount Chief's role of symbolic sovereign was strengthened during Lerotholi's tenure with the establishment of a Basutoland National Council. On one level this council was only the extension of a longstanding tribal custom, the pitso--or tribal meeting--to a national political scale. The establishment of the Council in 1903 gave 99 local chiefs a voice in the established government.

In 1944, nine elected district councils were established to widen the base of the National Council and provide some degree of true popular representation in Basutoland for the first time. At this time, due to an augmentation of its powers, the National Council became more of a legislature than a pisto, an active, rather than merely a consultative body. As late as 1948, the British were toying with the idea of incorporating Basutoland into the Union of

South Africa. However, the triumph in that year of an apartheid candidate in South Africa, united both the British and the Basotho in opposition to any proposal for a merger. In 1966, after the election of a government with power vested in a Prime Minister and his Cabinet on the English model, Basutoland became the independent state of Lesotho. The Basutoland National Party won 31 of the 60 seats in the new National Assembly, and the opposition Basutoland Congress Party took 25 seats. Prime Minister Leabua Jonathan of the BNP took office in July, 1965.

In October, 1970, Jonathan, after an unsuccessful coup, announced that there would be a five-year holiday on politics in Lesotho, during which time he would continue to be the undisputed ruler of the government. Jonathan enjoys the support of both Britain and South Africa. His party is currently the only legal party. He pursues a "good neighbor" policy with South Africa, and maintains strong church-state ties. However, the tenure of the current government is considered uncertain. Lesotho is dependent on South Africa for its economic wellbeing, lines of communication with the outside world, and even water and electrical power. Its own economy is based almost entirely on subsistence agriculture, the livestock industry and the earnings of migrant laborers employed in South Africa.

Politics

Per capita income in Lesotho for 1971 is estimated to have been about \$80. Lesotho is dependent for her continued economic existence on grants-in-aid from great Britain and the United Nations. After Lesotho had experienced a severe and prolonged drought, the United Nations, in 1970, declared Lesotho to be famine stricken and thus eligible for emergency food supplies. More profitable than the country's agriculture is the keeping of livestock. The Basotho, particularly those who live in the highlands, have been known as a "people on horseback," tending the large tribal herds of sheep, angora goats and cattle which have provided the country's major exports. Unfortunately, animal husbandry suffers from the same inherent limitations as agriculture--lack of arable land--and overgrazing has become a major problem threatening to undo concurrent efforts at halting erosion and restoring fertility. The result has been to force increasing numbers of Basotho to seek work elsewhere, usually in South Africa. Though the absence at any one time of more than 1/3 the adult male population creates some hardships at home, the money brought back from South Africa is a vital prop to Lesotho's economy, a fact which has made Lesotho directly dependent on South Africa's continued good will.

Economy

Lesotho belongs to a complex customs union headed by South Africa and including Botswana and Swaziland, in which its exports and imports are included in those of the larger country. The customs union provides that no trade tariff shall exist between the four countries, and South Africa levies and collects the bulk of the customs and excise duties for them.

Trade

In addition to British economic support, American economic assistance to Lesotho in fiscal 1970 was \$100,000 from the Agency for International Development, and \$4.9 million from Food for Peace. One quarter of the AID money is for self-help projects; the remainder goes for Lesotho's share in regional projects such as the University of Botswana, Lesotho and Swaziland. The Peace Corps had 42 volunteers in Lesotho during 1971, working in tractor farming cooperatives, credit union development and secondary school teaching. At the beginning of 1970, a development program was announced in which the national government, the United Nations Development Program, and the Swedish International Development Authority will cooperate with the South African-managed Lesotho National Development Corporation in a \$4.5 million agricultural and industrial park. The Oxbow Scheme, though still in the planning stage, would dam the upper reaches of the Maubanatsu River for the generation

of electrical power. Water and electricity from the project would provide more than enough margin for the future expansion of industry in Lesotho. It has been estimated that exporting electrical power from the project would virtually balance Lesotho's budget and end her economic dependency. The Oxbow Scheme has received British, South African and United Nations funding to determine its feasibility. In 1971 the World Bank agreed to provide some of the capital for the enterprise, but the outlook, as of January, 1974, for the development of this project was not good.

## B. Maternal and Child Health/Child Spacing Services in Lesotho

This description of MCH/CS services in Lesotho, which is based on an analysis of the most advanced of the three pilot areas in the project, may in many ways serve as a model for the application of MCH/CS theory to the practical problems of a given African country.

The basic dilemma in developing an effective MCH/CS program in Lesotho is the limitation imposed by its deteriorating economic milieu. There are further limitations in the governmental sphere: the basic poverty of the government and the low priority given to health in general; the lack of priority for public health; the inadequate infrastructure in rural areas. In addition, one must contend with the strength of old customs and the nature of the Lesotho terrain. Ultimately, however, the fundamental limitation within which one must work is the basic economic poverty of the land.

The Basic Problem

In 1960, J. A. Munoz and M. M. Anderson (WHO, "Basutoland Nutrition Survey"), reported on the nutritional state of the children in Lesotho after a four-year survey. 72% of the children they examined were suffering from some form of malnutrition. There is some evidence that this strain on the health of the nation's children builds up and becomes more evident as the children grow older. A survey of a random population of children in 7 villages 2-7 kilometers from the city of Roma (G. F. Rohrman, Ph.D., P. H. Nkosi and others, "Child Health in Lesotho, March 31, 1971," Department of Biology, University of Botswana, Lesotho and Swaziland), found that 16% of its subjects from 1-4 years were malnourished, 29.1% of the subjects from 4-7 years were malnourished and 58.2% of the subjects 7-10 years were malnourished.

Maternal and Child Health Conditions

The main deficiencies reported by the Munoz and Anderson survey were "of protein-calories, resulting in kwashiorkor and marasmus, vitamin deficiencies resulting in a high incidence of pellagra, and iodine deficiencies, which result in goiter." A final effect of a diet lacking enough calories, protein (particularly animal protein, vitamin A, riboflavin and nicotinic acid) is that 2/3 of the school children are retarded two to three years in growth. Another effect is an increased sensitivity to disease and to the endemically unsanitary living conditions. Examinations of the record of child deaths at St Joseph's Hospital in the city of Roma, for example, show that 70% resulted from pneumonia, gastroenteritis and "malnutrition" (Rohrman and Nkosi). Other hospitals show respiratory infections, and tuberculosis also as major killers (Dr. H. C. Beringer, WHO Senior Medical Officer, "Report on a Survey of Health Facilities in Basutoland," 1966). Malnutrition existed as a complication in a large proportion of these deaths (67%) were of infants under one year of age.

The ultimate expression of these statistics is in the mortality figures. Some variance exists in the data, ranging to 250 deaths and over per 1,000 children to 4 years of age. The number of deaths in the first years per 1,000 live births has been reported as between 114 and 181 (U.N. Demographic Yearbook,

1970.) The population increases at a rate reported between 2.0 and 2.8%. The considerable infant mortality rate as well as the high rate of population growth add up to a heavy burden of high parity among Basotho women. Exact figures are lacking as to the average family size and the maternal mortality rate. Raising children, according to the First Director General of the World Health Organization, Dr. Brock Chisholm, is "the largest, most important, and most precious task in the world. When mothers bear their children already malnourished themselves, this task becomes a debilitating and often an unsuccessful one."

In a land as poor in resources as Lesotho, seemingly small choices involving expenditures take on extra importance for health. This is as true for the Basotho woman who must choose between a large and inexpensive bag of corn and a smaller, more expensive, more nutritious bag of beans as it is for a government when it must set its developmental priorities. Unfortunately, precious resources in both the family and government are often wasted.

Economic  
Poverty

Not all the poverty and ill health we have discussed has been imposed upon the people by economic deterioration. Cultural attitudes and practice have played a part. The people till open slopes when terracing and erosion control is in their power. They often keep one piece of land for one crop every year because their grandparents have always done so, without supplementing cultivation with the manure that is available. Sheep have been allowed to freely mate and this has caused deterioration in the quality of their wool. While it is true that poor people cannot afford to buy good food, and will tend to buy the cheapest foods, such as carbohydrates, there are numerous culturally determined dietary restrictions which impose an unnecessary burden on the health of the people, especially the mothers and children. Contagious diseases do not have to spread through the house and the village, although when the disease is believed to have originated in the anger of relatives, effective precautions are difficult. Nor is it inevitable that water supplies be contaminated with E. coli. More often than not, latrines do not exist for families or for schools. Animals are allowed to wander about freely to contaminate the water people must drink. Much of the erosion, the malnutrition and the disease that the people fatalistically assume to be part of life, originates, in fact, in themselves.

Cultural  
Attitudes

In the government and in private agencies active in health care, there is also waste. Like the people, the government, the missions and international agencies have assumed that gastroenteritis, respiratory infections, malnutrition, tuberculosis, VD, diseases of the digestive organs and eyes, are their inevitable plague and burden.

The Ministry of Health maintains an arbitrary and unequal division between curative and preventive services. Curative, and especially hospital services, receive the lion's share of the tiny, one million Rand budget. Health staff at all levels remain to be convinced that preventive measures reaching volumes of "well" patients could do much to prevent expensive future hospitalizations. Staff and facilities are minimal and often maldistributed and isolated from support, and partly for that reason are largely overburdened.

Better use, therefore, can be made of family, community and governmental resources for improving the health of the nation. Better agricultural practices, better nutritional sanitation, and wiser care for the mothers and children can evolve within present resources. We also hope that a more effective health system can develop within the limitations of government budget, staff and facilities. However, education in these matters is needed both among the people and in the government. The potential for education in support of health is, in fact, great. Lesotho has one of the highest literacy rates in Africa with 90% of the children now attending school, the people can be approached through one culture and one language, Sesotho, and in higher government circles, there is an increasing awareness of the importance of public health.

Need for  
Education

There have been several attempts to establish modern, comprehensive MCH services in rural areas of African countries. These projects have emphasized repeated antenatal and postnatal visits with mothers and continued contact with infant and preschool children. The ideas of continuity and return visits is basic to these schemes. Such repeated contacts offer opportunity for health education and the changing of important related attitudes and practices. Nutritional guidance and education, advice on other related health habits, such as child care and weaning and the use of health facilities, are seen as an important part of these contacts. Recent foreign-inspired model clinics have laid particular emphasis on "child spacing" advice and motivation in clinic visits, on the assumption that repeated and unplanned pregnancies are one of the major problems in MCH. High risk mothers, facing the possibility of complications in their next pregnancy, are seen as a particularly important target group regarding motivation for the use of contraceptives. Special emphasis is also given to the screening of high risk mothers already pregnant at the risk of serious illness, and to their referral to the local hospital. However, comprehensive MCH services must be defined and demonstrated within the limitations of staff and facilities existing throughout rural clinics and dispensaries in Lesotho.

First of all, plans for replicating MCH services cannot depend on many highly trained clinic staff members. For the 42 clinics in the country in 1967, there were 40 nurse/midwives, 6 single qualified nurses, 5 health assistants, 4 dispensers and 14 ward attendants. The 37 doctors in the country were all stationed in 17 hospitals, and visited the clinics, at most, several times a month. Therefore, any MCH program will have to depend largely on the nurse/midwife.

MCH Within  
Local  
Limitations

Secondly, none of the present units in rural areas have facilities or staff for inpatient care. cursory outpatient MCH care, mainly antenatal visits, is now given in many of the health centers. Catholic Relief Service has also set up a network of outpatient "Under-Fives" clinics in Lesotho. Lack of facilities for inpatient care, especially for deliveries and emergencies, will necessarily limit the scope of clinic activity. Without facilities and accommodations for delivery, for example, mothers will not walk long distances for help.

Special training will be needed to prepare a nurse/midwife for her future role as captain of the MCH clinical team. The clinic nurse must assume the responsibility for deliveries and emergencies, diagnosis, treatment and the insertion of IUD's. She must learn how to organize her time to give priority to education and other preventive measures. Special efforts are needed to relieve her of the many clinical duties which do not require special training yet which often take up much of her time. Less qualified aids and auxiliaries can prove valuable in providing simple first aid, organizing patients, dispensing harmless medicines and supplements, and giving simple demonstrations for health education, as well as in keeping the clinic clean. Locally trained women may also have a role in home visiting and followup.

However, the nurse/midwife will need further support. The nurse in an outpatient clinic in rural Lesotho is, typically, isolated from support from the district capital, mother hospital and the national government. There are both physical and administrative causes for this isolation. Roads are scattered and unpaved. Even the 228 miles of main roads, chiefly in the lowlands, are not always usable in the rains. Some mountain area clinics are completely inaccessible by road. There is a chronic shortage of jeeps in the Ministry of Health, and few of them have 2-way radios although they were recommended by WHO as far back as 1966. Inadequate supervision at the district level also contributes to the isolation of peripheral units. The Medical Officer in the District Hospital is at the same time the Ministry of Health for the district. He and the District Public Health Nurse are responsible for all curative and preventive activities in the district, and both are too busy with periphery and as contact with the capital. They lack the assistance of clerical staff to lighten these administrative pressures. The consequence of these difficulties is "a vacuum between the Ministry of Health and peripheral centers, followed by a feeling of isolation in the periphery" (Beringer).

### Isolation

This isolation of peripheral centers from both district and national capitals results in a continual problem of logistics. Communications with peripheral units and the national capital are poor. Transport costs mount disproportionately the further you are from the towns. Finally, there is a "lack of an effective system to submit and answer requests for supplies, proper inventory techniques and prompt purchasing of supplies, efforts to rotate and restock supplies, and a responsive manner to supervise the system" (S. Fong, Project Health Education technician). Transfer of supplies between agencies and ministries is further complicated by separate financing and slow administrative processing. As a result of all these factors, "clinics and even hospitals are without essential supplies for weeks, and sometimes for months" (Fong).

A further problem is that the referral of emergencies, and of mothers and children, to adequate facilities may itself entail serious risks since, even with a clinic jeep, the drive to the district hospital may be long and rough. This problem has been given considerable attention in the field of MCH. The screening at the rural level of those patients who need a kind of treatment not available at the clinic is of little use if they cannot be transported to the local hospital.

Finally, peripheral isolation is felt in a lack of supervision. Even the top priority Rural Health Center at Ts'akholo receives only two visits a month from doctors at Mafeteng Hospital. Visits from the district PHN come only every second or third month. Furthermore, nurses in rural

clinics were never called back for retraining and reorientation until the three-day orientation course for nurses at the Queen Elizabeth II Hospital in Maseru in 1972.

As a result of these and other factors, nurses are continually transferring from their units after short stays. And it should be noted that a stay of six months to a year means barely enough time to be known by the community and to assume the leadership necessary for a nurse in an MCH clinic.

In the present centralized health care system, the District hospital should function as a depot for supplies, the point for referral of patients and the base for clinic supervision of staff retraining. Both physical and administrative difficulties have confounded this scheme. The basic point of breakdown in the district hospital/rural clinic relationship is the difficulty of the terrain, plus the lack of roads, vehicles and two-way radios. Improvement of this basic problem can only be achieved on a large scale with an allocation of funds far beyond present resources and priorities.

Isolation of peripheral centers is, therefore, a permanent fact in rural health care. Rural ingenuity and self-reliance must be developed at the clinical level. Nurses must be taught to anticipate supply shortages by ordering months in advance. They should be aware of the seasonal variations of gastroenteritis, chest infections, and malnutrition to help them anticipate these needs. Nurses should be taught how to handle general and obstetrical emergencies and have facilities on hand to help. They should know how to organize community help for clinic projects without having to wait for outside assistance. Eventually, rural health centers with facilities for inpatient care, deliveries and emergencies would be ideal for Lesotho. In this way health care could be decentralized from the district hospital to the rural health center which, in turn, could serve as a center for the supply, referral and supervision of small satellite units. Until the district hospital-clinic relationship is strengthened, peripheral units should be developed to become effective in their independence.

Technical problems associated with the present infrastructure and total dependence on solitary nurse/midwives without adequate support from the District hospitals demand that "comprehensive MCH care" be limited in scope--broad and simple. Health education, immunization, nutritional and family planning services, are more adapted to isolated outpatient clinics than are extended treatments.

Scope of  
MCH

Simple demonstrations of health practices at the clinic site should have top priority. Experience has shown that "impact of lecture and poster is negligible . . . especially when much of the advice is not practiced in the center itself" (J. P. Stanfield, "The Luteete Family Health Center: Nutrition Rehabilitation in a Comprehensive Rural Development Strategy",

in Tropical Pediatrics Printout, 1970). The maintenance of clinic facilities are especially important. Local materials and labor should be used to demonstrate that simple sanitation measures are within the resources of the people. Participation in this labor will be an educational experience, and will demonstrate community involvement, as well as independence from the slow and unreliable help of the government. The installation of a continuous water supply may be an especially difficult problem in the lowlands. It was solved at T'sakholo only with a pump from the Department of Community Development.

Gardens and poultry-animal projects at the clinic site can be an important extension of a clinic's demonstration to the community. Staff and local villagers should be encouraged to maintain a garden near the clinic site when water is available. From a medical point of view, the clinic should be concerned to demonstrate effective cultivation of a more varied and healthy diet from local crops and should consult local agricultural agents for advice. The Basotho diet too often consists primarily of maize and sorghum, while beans, wheat, peas and garden vegetables are now grown, or are sold for cheaper food. The people lack animal protein in their diet, often avoiding chickens and eggs because of longstanding cultural taboos. Chickens, however, are especially adaptable to Lesotho, because they grow quickly with little care. Milk from cows and goats is another important source of protein. Produce from the garden and livestock projects can be used at the clinic for the staff and for demonstration meals with the patients. More important to the clinic, however, is the concrete demonstration of a means to a more balanced diet.

Staff attitudes, and practices in their own families, are vitally important in health education. The staff can demonstrate basic health and MCH practices in their homes by keeping them clean and by using latrines; by breastfeeding their own children and carefully weaning them, by practicing child spacing, and by bringing their children to the clinic regularly for care. These efforts will be more effective if clinic staff have involved themselves in local village life.

Writing of an "Under-Fives Clinic" in the Maluti Mountains of Lesotho, Nicholas Cohen emphasizes that effective clinical activities "depend upon the regular attendance of both child and mother, since the opportunity of offering health education to the mother is essential to the concept" ("An Under-Fives Clinic in the Mountains of Lesotho", Tropical Doctor, July, 1972).

Continuity  
of Contact

The importance of waste disposal and the protection of water supplies, the contagious nature of diseases, and general nutrition should be targets in every clinic visit. Much of the preventable mortality and morbidity has its roots in ignorance and lack of concern regarding these matters, and longstanding habits cannot be molded and reinforced in short, cursory clinic visits, or without continual contacts.

Older women and "at-risk mothers" should be the initial target group for the child spacing because they face the greatest danger at the next birth. Mrs. Ivy Monoang, Staff Nurse/Midwife at T'sakholo, has noted that there will be pressing communication problems with the community. People know little about sex and the female reproductive cycle. They are often too shy to openly ask questions relevant to their own reproductive problems. Moreover, convincing the wife may not be enough in a land where husbands are the decision makers. Communication between husbands and wives may be poor, especially in matters such as their sexual life. This community background makes repeated contacts all the more necessary.

Various cultural factors favoring spacing of children should be reinforced in educational efforts. In Lesotho, people desire large families, and couples marry early with this in mind. On the other hand, it is considered disgraceful to have children one after the other. During the months between a delivery and the next pregnancy, the wife is encouraged to breastfeed her baby. Intercourse during nursing is believed to affect the mother's milk, causing the baby to develop kwashiorkor. Also, husbands are often absent for long periods to work in the mines and farms of South Africa. Therefore, child spacing and abstinence may be more to the point in Lesotho than "family limitation".

Once contraceptives have been started in use, some degree of followup care is needed to insure continuance. IUD's must be checked, injections be given and the new cycles of pills obtained. Contacts are also needed to quiet worries about side effects and rumors, and to solve communications problems in the home.

Repeated visits during the antenatal period have particular importance in terms of dietary counselling. Pregnant women are subject to severe dietary restrictions. They "are not supposed to eat eggs and are to live mainly on liquid and semisolid diet (often mealy-meal and corn porridge) to make sure that the baby does not grow big" and cause a difficult delivery, according to Margaret Mokhothy, a nutritionist in Lesotho. This practice should be seen in light of the fact that the father often eats the best of the meal and the young women are discouraged before marriage from eating eggs or the insides of animals. In consequence of these restrictions, women often prematurely deliver low-weight babies. Antenatal visits are also important for screening "at-risk" pregnancies.

Contacts with the mother should be continuous from the antenatal period to the postnatal period. Immediate postnatal visits are important to check the condition of mother and child and to insure that breastfeeding has successfully begun. The topic of spacing the next birth is highly relevant at this time. The mother may be more highly motivated and receptive to education at the immediate postpartum period than at any later time. Contact at this time is also important for keeping track of the child's nutritional progress through weight charts, since a particular problem in Lesotho is the nutritional deterioration of children after weaning, as noted by Rohrmann. Children are weaned to foods far inferior to breast milk and suffer, accordingly, from progressively severe undernourishment and growth retardation. In addition, babies are often weaned abruptly because of the belief that the mother's milk is contaminated both by internal illness and by sexual intercourse, according to Miss Mokhothu. Miss Monoang points out that special educational efforts for the mother are also needed to help her prevent and treat diarrhea after weaning from foods containing contaminated water. Immunization for TB and measles should also be carried out at this time. The importance of sustaining contact with the mother after delivery should be obvious.

However, continuity from antenatal to postnatal care, and repeated visits, is an unrealistic expectation. Deliveries occur almost universally in the home, with the attendance of traditional midwives and witch doctors. In the T'sakholo area, for example, only about .5% of the expected deliveries in the clinic area took place with the help of trained midwives. When mothers are universally lost to the clinic at the time immediately before, during and after delivery, continuity between antenatal and postnatal periods is very difficult to obtain. In these circumstances, no clinic can expect to

Problem  
of Impact

have immediate impact.

Furthermore, each health facility has an effective sphere beyond which people cannot be expected to walk or ride for care. The radius of this sphere is especially small in this often mountainous and sparsely populated land during the rainy months or during times of severe drought or cold. Special motivation and faith in a clinic is needed to bring the mother and her child over long distances, leaving the many responsibilities a Lesotho mother carries at home, especially when the traditional midwife and herbalist live close by.

It has been the T'sakholo experience that distance is not the only factor limiting clinic use. "Women who live right next to the health center grounds," writes Public Health Nurse Pat Goodale, "fail to make use of the facilities." Traditions influencing MCH remain so strong that the local herbalist and midwife is still more relevant to the village woman than the clinic nurse. Lack of facilities and staff at the clinic also discourages its use. The Health Center staff should make every effort to relate to the community and associate it with its activities, for a lack of trust in the Center would also discourage both first and followup visits.

As a result of these factors, the community may see the clinic's role as a station for "last resort" treatment, and define its own health needs entirely in terms of such curative services. Long lines of patients come demanding cures, not lectures and demonstrations. Overburdened staff are unable to give much time to educational preventive measures. We must realize, therefore, that successful "integration of curative and preventive care", and "continuity of care" within the present limitations of staff facilities may be difficult to implement. Immediate results cannot be expected from clinical activities alone.

The Health Center should also extend its efforts into the surrounding community. Extension work in the form of satellite clinics, home visiting for followup and education, and community education and organization for support, is necessary to support clinical activities.

Extension  
of Clinical  
Activities

The present system of clinics and dispensaries in rural Lesotho is marked by uneven distribution. Some kind of extension of clinical activities is necessary to the peripheral sphere of these units if patient contacts in these regions are to be increased. An effective response to this situation might be a system of "satellite clinics", centered on the rural health center itself, rather than on the district hospital. The most practical system of satellite clinics would be one built on static peripheral sites combined with mobile health center staff: "a landrover with one or two boxes of equipment and drugs, and a couple of health workers can go further, more quickly, more dependably and do better work, than an elaborate van complete with its own facilities" (see Jelliffe and Williams). A given place with a central location would provide a center of operations for the mobile staff. A respected member of the community should be involved to prepare the site of the clinic and inform the people of its activities. A local villager can also play an important role in assuring that those asked to reattend indeed do so, and can, further, refer Health Center staff to immediate health problems in the area. In short, this kind of delivery system can be very simple in structure.

Again, the type of care given at the peripheral clinic should be "broad and simple": immunizations, child spacing, health education,

followup of patients and the improvement of local water and waste disposal systems. Health workers should be either brought from the central clinic or recruited locally to assist with this work. They can leave the clinic site for the followup of child spacing defaulters, high risk mothers and children, and the investigation of reported health problems in the area. With adequate facilities for inpatient care at the central health center, patients can be brought back for delivery or rehabilitation, or for referral on to the district hospital.

The system of satellite clinics must be based on the development of the central clinic. Extra nurses and health workers at this clinic will be necessary to accommodate loss of staff to the periphery. The necessary vehicles will also result in an increase in status. Ideally, the central clinic should be developed into a "health center" with equipment, rondoval and beds for inpatient care. These facilities are necessary for an effective referral system from the periphery. Poor communications with the district hospital necessitate that health care be further decentralized in this way if it is to be further extended.

In addition, some kind of extension is needed from the actual health center or satellite into the surrounding homes. An effective system of home visiting would greatly increase potential for health education and help to maintain continuity with individual patients. Such home visits would present an opportunity to know the home environment of individual patients and relate health education to individual needs, to offer education and motivation for child spacing with the attendance of the father in a more intimate environment, to offer motivation for use of the clinic and followup, and to allow followup for the newborn, the weaned child, the sick child.

Village  
Extension  
Workers

Village extension workers could also play a role in village sanitation projects, meeting with groups for education, and for the spreading of awareness of clinic activities. Such workers could also add to the "family file" new information obtained on visits which could, in turn, help to dictate further activities of the clinic. Although accurate records are not completely essential, some data is needed to mark families which are in need of special attention.

The extension worker should be intimately tied to the community as well as to the clinic. Ideally, local people would be trained for this work: respected, married and experienced village women and a few men, well oriented in the activities of their local clinic, should be given salaries. The importance of such workers lies in their ability to interpret ideas of better MCH simply and in the language and medium of the local people. These ideas--better sanitation, nutrition and MCH practices--are simple, and extensive training is unnecessary and even undesirable. Since the major benefit of local workers is their ties with the local community and clinic, they should be trained preferably in that setting.

Traditional midwives and witch doctors can eventually also be incorporated into an extension program, though they would have to be educated intensively to the point where they can receive salaries and incentives for escorting patients to the clinic, home visits and work at the clinic itself. Understanding has to be exercised in order to clarify their roles in the community and their practices and ideas for health. Midwifery in the village is most often done free of charge by respected older women for their relatives and

neighbors. The witch doctor, as opposed to the midwife, has a greater influence on general health. He charges fees often far greater than the price of the clinic service. In all probability, the witch doctor will feel the apparent conflict with the clinic most strongly and will be the hardest to educate and involve.

In Lesotho a clinic cannot be founded without the support of local chiefs and the community they represent, nor will it be effective without community knowledge, acceptance, and support. Ideally, the clinic should be the community's health center, serving its own felt needs. According to E. M. Petlane, a Masotho Health Educator, village leaders are often anxious to have better health facilities in their areas. However, they often have conceptions of their own health needs different from more progressive programs emphasizing preventive measures. Special efforts are needed to understand their "felt needs" in order to tactfully use their desire for better facilities towards support for a curative/preventative program, especially among village opinion leaders.

Education  
and  
Organization

Throughout rural Lesotho, particularly in more isolated areas, the chief is the main channel of communication with the outside--including the national government--meeting outside agents and interpreting their wishes to the people. The government is still so weak in isolated areas, that the chief is the authority for settling minor judicial questions, allocating land and planning village events. There is traditional hierarchy of chiefs in Lesotho society, from the village chief and his advisors to the War Chief with authority over several villages, to the Principal Chief with authority over him, up to the Paramount Chief of the Basotho, which no one trying to increase involvement in local community efforts can ignore.

If one gains the cooperation of the local chief, the village is opened to the extension worker for education and organization. The strength of the chief himself should be used to maximize the impact of these efforts. Common to village Lesotho are the pitsos, in which people gather in an open place to discuss local problems in the presence of the local chiefs. These meetings are characterized by an open discussion period. Pitsos are now being held by the Health Education Staff of the Ministry of Health, in cooperation with local leaders, for the purpose of health education and of propagating ideas for sanitation projects in support of T'sakholo clinic. After the pitso, followup visits are important to insure that pit latrines are dug, springs protected, and committees formed in the manner proposed in the pitso.

Local committees are a second major community resource open to health workers with the support of the chief. As a remarkably literate and political people, the Basotho spontaneously form committees to solve local problems. According to Mr. Petlane and Mrs. Monoang, in the T'sakholo area there are several committees, of which the village development committee and the health committee are the largest. The health committee was formed as a result of a pitso held with clinic staff to cooperate with them for the improvement of village health. Local agricultural, soil conservation, fishery, nutrition, and home economic agents, as well as clinic and health extension staff, have also organized, and meet in a committee tangential to the village committees. It is hoped that local agents and the community can thus cooperate toward common goals.

Mutual cooperation and self help is a longstanding tradition in the village where family ties, clans, and village feeling remain strong. The extended family's older children and grandparents help with the smaller children, brothers alternate positions in the mines and plow each other's fields when they are away, and work is freely exchanged between fellow clan and village members, with neighbors freely helping with the building of a ~~centre~~. Once the community comes to understand and support the local MCH clinic, there exists considerable potential for assistance in this tradition. In T'sakholo, village women have given valuable assistance in the completion of its rondovals and classroom, and in the construction of a model chicken farm, as well as with general clinic maintenance, without remuneration. Village health pitsos have also met with spontaneous efforts towards the building of latrines in the T'sakholo area. Volunteers in these projects are open to further education after their work, and can thus be further involved in health activities. Finally, community extension in support of MCH activities should aim toward the orientation and coordination of local teachers, and agricultural and nutritional agents, as well as health staff. The local religions' priests and pastors can be important towards this end. About 73% of the population follows a particular blend of native animism and various Christian sects, Roman Catholic and French Protestant among the largest. The Missions own and administer the nation's schools with government support, and have also played an important role in health care. In 1967, 8 of the 17 hospitals, 12 of the health centers and all of the dispensaries were run through the Missions. Obviously, the local pastor and priest can provide an important link to other health and educational staff through Mission schools and health facilities.

Ideally, all of these cadres, including health staff, should be able to meet and cooperate for the development of the community as a whole. The greatest support that could be given to the nurse and her aide at the clinic is the economic development of the community around her.

Foreign technicians and money have been given for the development of T'sakholo into a demonstration/training center of the kind we have been sketching, one which will become a health center that will eventually support satellite clinics. There are now two public health nurses--two staff nurse/midwives, a nutritionist for the preschool clinic run by CRS, a health assistant, and several clinical aids. A water system has been developed to supply the needs of the extra rondovals built to house staff and students at the clinic for inservice training. Rondovals have also been built to house patients and to provide space for educational purposes, and the government of Lesotho has approached the British for financial help with the building of a dormitory. Technicians from the Health Education section of the government have also given T'sakholo primary priority, and have provided valuable assistance toward the education and organization of the community and government agents for support work at the district and national levels. T'sakholo has, therefore, received national attention and priority. It has become the showpiece of the Misistry for foreign visitors and politicians from Maseru. The question is whether this support for T'sakholo has made it irrelevant to conditions facing nurses in the rest of the rural clinics. If T'sakholo becomes over-developed and over-supported, nurses and auziliary staff at the model facility will find comprehensive MCH services irrelevant to the conditions of shortage and isolation they will inevitably face. "Too often", write Jelliffe and Williams, "demonstration centers become show centers, demonstrating only that they are too elaborate, isolated, expensive, or atypical to be reproduced anywhere else" (Mother and Child Health: Delivering the Services).

Model  
Demonstration  
Center

Rural MCH services need a broad and effective foundation of support in the government. This must begin in Maseru with the support of important leaders and the formation of a broad and effective administrative structure at the national and district level. District support for local efforts must be improved, and coordination with educational agricultural agencies must be started. The governmental hierarchy runs from top officials in the capital and Ministry down to the district officials who, in turn, play an important role in the coordination and support of local agents. The chiefs in the traditional village, the missions, teachers, and the government agents are the leaders at this level. Any new idea must be founded on educational efforts within this hierarchy. Writing of communication in support of development in Indonesia, E. Childers noted that the necessary communication paths:

The Foundation  
of  
Commitment

do not begin with "mass communication" -- but rather, literally outside the doors of central planners and departmental chiefs in the government corridors in the capital city. It is no exaggeration to state that the first required, especially planned and designed support communication program may be entirely with the civil service of the capital city -- from outside those top-level doors, downward through the same department, and between them and other departments whose synchronized action, based on real understanding and intensive briefing and orientation, will "make or break" the project there and then . . . long before what is usually thought of as "reaching the people" by mass communication.

From the central government network of civil service, a further whole series of communication paths for each development program may be traced outside to provincial levels to the next steps in what needs to be a sustained, intensive total communication process ultimately reaching the communities at large. ("Outline Specifications for an Indonesian Development Support Communications Service," Bangkok: Development Support Communications Service, January, 1966, pp. 6-7, in Wilbur Schramm, Ph.D., Communication in Family Planning, Reports on Population/Family Planning, No. 7, April, 1971).

We must start from the top and work down.

One basic problem hindering the development of enthusiastic support among the Basotho leaders for MCH is a conflict between the assisting organization and the government of Lesotho concerning "family planning." Developmental assistance in MCH often comes with the stipulation that "family planning" services be implemented. High officials in the government, as well as in the Ministry of Health, on the other hand, are generally hesitant to support any program which claims "family planning" as one of the primary goals. This is illustrated by the fact that the private, IPPF supported "Lesotho Family Planning Association" has been closed down six times by the Ministry of Health and its British founders deported. LFPA is now ignored and remains tiny and ineffective and outside of MOH facilities. The reluctance of high officials concerning family planning is rooted in an initial negative interpretation tainted by a feeling of outside coercion in family life. This "threat" is especially distasteful when instigated by the organizations of white foreigners. As a consequence, the issue becomes a politically sensitive one.

Top  
Officials

Outside organizations, like US/AID, must use a considerable amount of tact in their "population policy". The only viable approach in the circle or top officials, as well as in the village life, is child spacing for the

protection of the health of mother and child. The concept of child spacing will be particularly persuasive when presented in terms of protection of "high risk mothers".

Even along this tact, patience is required. A firmer understanding and support for public health in general is needed among top officials before the preventative value of contraceptives can be enthusiastically accepted. Officials must first see the value of health education, immunization, and nutrition before they can understand child spacing in the context of MCH/CS. In a ministry which itself has low priority among the other 13 countries, the Ministry of Health has historically given low priority to preventive measures, arbitrarily separating these services from the infrastructure devoted to curative care. Recently however, the MOH has been reorganized to give more weight to preventive measures in accordance with the increased priority given to public health in the present five-year plan.

With the support of national leaders will come the organization of a national administrative scheme for MCH/CS which, in all probability, will be established in the Division of Public Health along the pattern of the recently organized section of Health Education. This section is located under the Senior Medical Office of Health, in such a way that the technicians find themselves among small divisions of the Public Health Section. Unfortunately, the immediate authority of the Health Education Section is unable to make necessary decisions involving other departments without consulting higher officials in the Ministry.

National  
Administration

An MCH/CS program, as well as the Health Education Section, should have an administrative position which allows direct or easy access to top officials. Three top officials are especially important in this regard: the Director of Health Services, the Permanent Secretary of Health, and the Minister of Health and Education. The DHS's responsibilities are principally with technical problems in the Ministry and he can, therefore, give essential assistance with problems concerning staff, supply, etc. The Permanent Secretary of Health can provide important contacts with top officials of other ministries as he has done for the Health Education staff. Support from the Minister of Health and Education is essential for contact both within and without the Ministry and for purposes of establishing priority. All out support for child spacing has not been given by these present officials and should not be expected. Furthermore, any one of them could be dismissed or transferred at any time, so that in general, heavy reliance on any one official for support should be avoided.

Special efforts are needed within the Ministry of Health to help remove the isolation felt by peripheral units without expensive improvement of roads. District hospital-clinic communications should be improved, and hospitals should become the district centers for the support of the periphery rather than becoming lost in day-to-day clinical duties. Staff must try to limit hospital duties to provide more time for supervision training of peripheral staff and administration. The district hospital should be the center for the retraining of rural health staff. Special supervisory and clerical staff will be needed at the district for the support of MCH/CS activities. Special training is needed to develop nurse/midwives with administrative skills to fulfill these duties. The district's officers must also be trained or retrained and closely supervised so that peripheral clinics are not continuously lacking important supplies. Two-way radios

District  
Level  
Support

could do much to alleviate supply, referral and supervision problems in the periphery. Along with salary incentives, these improvements could do much to make peripheral assignments more attractive to nursing staff.

All departments of the government are represented by separate offices at the district capital level. However, all divisions are coordinated by the district administrator, who acts as a representative for the national government. The district administrator is, therefore, an important communication link to district officials in other sections of the government and should be approached for support of MCH/CS clinical activities. He should call together representatives from the local developmental projects in the various agencies for joint meetings at the district capital as is done at Mafeteng. These meetings have provided an effective means for the T'sakholo Health Center staff to approach other development agencies for teamwork at the local level. Support at the district level from the district administrator and other officials has made possible similar meetings of local development agencies at T'sakholo itself. The result has made concerted efforts with the community successful, which might otherwise have disintegrated.

At the end of the hierarchical ladder of communication in the government are the local agents: the nurses, the health inspectors, the health assistants, teachers, agricultural agents and nutritionist. They should be approached and their support enlisted. From the nation's health staff, first priority should be given to the training and retraining of these local agents.

Local  
Agents

Retraining of nurses began for the first time in 1972. By December, 1972, 260 nurses throughout the country had received a 2-3 day inservice education course at the Queen Elizabeth II hospital in Maseru. Since December, 1972, inservice training courses, with particular emphasis on MCH/CS and public health, have also begun for local clinic staff at the Mafeteng hospital as part of an effort to develop two clinics into extensions of T'sakholo activities. Oreintation courses are important to relieve peripheral isolation and to initiate an understanding of general public health.

Preparation for leadership of a comprehensive MCH clinic, however, requires more extensive training. Heavy priority is needed in rural health care and PH/MCH/CS in the present nursing curriculum to better prepare student nurses, nurse/midwives, and public health nurses. In 1972, MCH/CS was added to the three-month public health orientation course at the Queen Elizabeth II Hospital. Training at the hospital now also includes a 10-week course in health education. Inservice training at an MCH/CS clinic for Basotho nurses is still lacking, but it is hoped that sufficient practical training will soon be offered for nurses at the rural health center at T'sakholo.

It is also essential that the small number of health assistants, health inspectors, assistant health inspectors and public health nurses, who bring health care into the community, be thoroughly oriented in MCH/CS public health and community education, and organization techniques. Since the number of public health extension workers in Lesotho is so grossly inadequate, community people should be oriented to assume some of these activities.

Agriculture and nutrition agents should also be approached for support of public health activities. In 1972, a 20-week health curriculum was designed for 20 students at the Thaba Khupa Fair Training Institute, and in December a course for 180 students was initiated at the Lesotho youth center

outside Maseru. It is hoped that when these students return to their villages as model farmers, they will also demonstrate new ideas of health, and support local clinic activities.

Such health and MCH orientation should also be given to local teachers so that through them the children can be influenced toward better health practices. Before December, 1972, a series of 2-3 day training courses were given in the various districts. The conclusion which emerged from these sessions was that something must be done to improve the sanitation facilities of the schools before teachers could be expected to effectively teach health. Schools are universally without latrines and sanitary water sources. Special efforts are needed to clean up the schools and make them a better demonstration for new ideas of health.

Civil servants, administrators, and agents at the various levels of the government constitute an elite group, better educated, more nationally conscious, less traditional and more forward looking than the rest of the population. It is among this group that permanent changes in attitudes will logically start. They are the logical model group for the demonstration of new attitudes to the people, whom we cannot expect to change if their leaders cling to the old sanitation, nutrition, and MCH practices.

Effective government support for clinic activities rests on a whole ladder of support through the government hierarchy. Steps in this communication ladder must not be built too hurriedly. At an early stage, priorities should remain higher up the communication ladder, emphasizing a sound national and district structure, and agent orientation and training should not be rushed, overextending structure by moving down to the community level too quickly. It is hoped that such an effort will lead to a permanent and Basotho program.

In recent times, international organizations like WHO, UNICEF, The Food and Agriculture Organization, and US/AID have been active in providing funds and technical assistance to health projects. Too often, however, these efforts have been uncoordinated with each other and with the government. The result has been that "the quality of health services offered in the country shows great variations from place to place" (Dr. H. C. Berringer, WHO Sr. Med. Officer). Basotho staff and facilities, therefore, have not been used maximally for a unified and permanent program. The aim of assistance in MCH/CS should be to develop a permanent, self-generating program in the Ministry, using present staff facilities in coordination with other help and development work.

Place of  
Foreign Aid

Foreign money and advice should serve as a catalyst, creating not a need for more money and advice, but the capability to carry on without assistance. Foreign technicians are needed to initiate communication through the ranks of government and to organize a more effective support system for rural health. These cadres should have the experience in health education, MCH/CS, program management and the training to help generate government interest and priority to use this interest in creating an effective district and national structure. Foreign technicians are also needed to initiate the retraining of health staff in rural MCH/CS services and in community organization and extension.

It is essential, however, that these technicians give immediate priority to the replication of their own skills and goals in Lesotho counterparts. Primary importance must be given to training Basotho who can soon take over and carry

on the work of the foreign technicians. Foreign aid should come primarily in the form of this technical assistance. Replication must be given highest priority over the building of expensive and well-equipped facilities, because foreign aid cannot be assumed to come forever. In the words of Dr. Alfred Neuman, Project Director of a rural MCH Project in Ghana, "well intended projects have operated with apparent success until extranational funding was withdrawn, and then it was discovered too late that the operation was too expensive for the host nation to carry on" ("The DANFA, Ghana Rural Health and Family Planning Project," University of California, Los Angeles, School of Public Health, February, 1971).

\* \* \* \* \*

Once the contract between the University of California, Santa Cruz and US/AID was signed, Project Director James Franks travelled to Africa in order to negotiate agreements between the University and the Ministries of Health of the Governments of The Gambia, Lesotho and Dahomey. It is of major significance that the agreements were between the Regents of the University of California and the Ministries since US/AID policy had previously been to negotiate such agreements directly government to government. These agreements delineated the project purpose, plan of action and major commitments in supplies, personnel and services by UNEX and by the three African countries. A copy of the Memorandum of Agreement with the Lesotho Ministry of Health follows below:

MEMORANDUM OF AGREEMENT

BETWEEN

THE MINISTRY OF HEALTH, GOVERNMENT OF LESOTHO

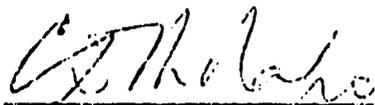
AND

THE UNIVERSITY OF CALIFORNIA, SANTA CRUZ

DEVELOPMENT OF MCH PILOT ACTIVITY IN MAFETENG DISTRICT

Because of their mutual interest in the development of health programs which will accelerate the improvement of the quality of family life and the health of mothers and children, the Ministry of Health of Lesotho and the University of California, Santa Cruz have agreed to establish a Maternal and Child Health (MCH) pilot activity in Mafeteng. This pilot activity will be a part of a Regional Maternal and Child Health Project which the University of California, Santa Cruz is developing in collaboration with the health authorities of several African governments. Funds for the project are being provided through a contract between the University of California, Santa Cruz and the United States Agency for International Development.

In accordance with their conversation of September 20, 1971 regarding the Regional Maternal and Child Health Project Pilot Activity in Mafeteng, the undersigned accept the terms and conditions as outlined in the attached Plan of Operations and agree to proceed with its implementation.



\_\_\_\_\_  
for the Ministry of Health  
Government of Lesotho  
C. D. Molapo

\_\_\_\_\_  
for the Regents of the University  
of California

PLAN OF OPERATIONS

REGIONAL MATERNAL AND CHILD HEALTH (MCH) PROJECT

PILOT ACTIVITY IN MAFETENG DISTRICT

PROJECT PURPOSE

The goal of this project is to assist in the improvement of the quality of life of African mothers and children through the reduction of preventable maternal and child morbidity and mortality. Working within existing government health services, the project will study and demonstrate simple but effective ways to improve MCH services including child spacing for medical reasons and to extend these services to previously unreached population groups without necessitating substantial increases in facilities, personnel or operating costs.

The expected end of project status is the establishment or improvement of basic MCH services which emphasize health education and prevention of illness and death, include child spacing for medical reasons and which are being provided to previously unreached population.

GENERAL PLAN OF ACTION

Phase I of the project will be carried out in defined pilot areas in 3 African countries which have expressed an interest in participating in the project, and which have a suitable health service system to serve as a base for a pilot program.

Two University of California, Santa Cruz (UCSC) technicians (public health nurse, nurse-midwives and/or health educator) will be assigned to each of the three pilot activities and a public health physician will serve as regional field coordinator. With their national counterparts, project technicians will:

- (1) collect demographic, health status and knowledge, attitudes and practices baseline data in the pilot area.
- (2) study existing services and techniques in the pilot area and work with local staff to improve them. This will be done by provision of essential clinic equipment and supplies and by demonstration and training of local personnel in health education of mothers; in techniques of preventive and certain curative child health services, and in the identification and treatment of high risk mothers. Personnel also will be taught the techniques of child spacing and the value of offering such services to high risk mothers. The content of the training for health education of mothers will include family nutrition and particularly the feeding of the weaning child, home and personal hygiene, infant and child care, value of child spacing, and use of available health services for maternity care. Methods in health teaching will include personal counseling, both at the health center and in the home, small group discussions, and the use of demonstrations and of appropriate audio-visual aids. Concurrently, and as a part of the training of personnel, a study will be made as to which methods of health teaching are the most effective in the cultural context of the target population.

(3) using the central service in the pilot area as a practice center, provide short-term training for personnel from satellite dispensaries followed by regular on-the-job supervision.

(4) in each pilot area the development of volunteers will be attempted through community action techniques. The volunteers recruited will be trained to teach simple elements of nutrition and child care, to recognize and refer mothers and children with health problems, and to assist in other MCH activities.

(5) develop a method of regular supervision of pilot zone health centers to assure that MCH services and health teaching are being carried out.

(6) develop an overall plan for the regular re-training of all health personnel.

(7) develop appropriate health education techniques and materials.

(8) participate in the development of health records and demographic data collection systems as needed in the pilot area.

(9) work with the Ministry of Health to improve supply dispersal systems to the pilot area and other outlying clinics and hospitals.

(10) participate in training programs and professional conferences of all levels of health personnel in the country to interpret and gain support for pilot activity objectives and program. Provide theory and practical training in MCH/Child Spacing technics and services if requested.

(11) develop a method for technical evaluation of pilot activities and assess project effectiveness concurrently and at the end of 2 years. On the basis of this assessment, make recommendations and develop specific plans for Phase II.

The initiation of Phase II, as well as its design, will be dependent on the events of Phase I. It is anticipated that by the end of Phase I the MCH services in each pilot area will be adequate to become a model for the replication of those services more extensively throughout the country as well as a center for the field training of nursing students and for in-service training of other national health personnel. Concurrently, the pilot activity will also serve as a model for the development of MCH/CS programs in other countries. During Phase II the UCSC personnel will shift their major efforts to assisting in the extension of MCH/CS services to other parts of the country and to other African countries which request such assistance. Emphasis will be placed on the training of trainers and supervisors in each participating country.

It is anticipated that UCSC assistance will be given for a maximum of 5 years in each participating country, contingent upon the availability of funds, and that host countries will assume full responsibility for continuing successful project activities after this time.

SPECIFIC PLAN OF ACTION IN LESOTHO - PHASE I

The Mafeteng District has been selected as the pilot area in Lesotho.

A UCSC public health nurse will be assigned to the Tsakholo Health Center in the Mafeteng District. Her counterparts will be the head nurse of the health center and the public health nurse assigned to the Mafeteng District. With the additional assistance of WHO personnel, the Tsakholo Health Center will serve as a national model for the effective delivery of MCH/CS and other basic health services. The MCH/CS aspects will be accomplished through the re-training of health center personnel and development of appropriate health education materials and technics. Content will include nutrition, infant and child care, hygiene, and child spacing for high risk mothers. Health education materials and equipment will be provided. When the program is in action, the Tsakholo Health Center will be used as a training center for personnel and volunteers from the other centers in the pilot area after which they will be supervised on the job. Eventually, the Tsakholo Health Center will serve as a training center for students and for the continuing education of all levels of personnel providing health and related services. This training will emphasize the significance of integrated maternal and child health/child spacing services as a means of improving family health and in the various ways in which such services can be prompted and made available within the existing personnel, financial and socio-cultural constraints in Lesotho.

Early in the project the UCSC field coordinator and PHN in the pilot area will initiate a sample survey to assess the health status of the people in the area in order to get baseline data for later project evaluation. Sufficient laboratory supplies are being furnished to the Tsakholo Health Center to provide back-up facilities. Ongoing morbidity and mortality data will be collected and analyzed, and in the final year of the project, the survey will be repeated for comparative purposes.

A second UCSC technical assistant, a health educator, will be assigned to the Ministry of Health. The Government of Lesotho will appoint a health education trainee to serve as his counterpart. Together, the UCSC health educator and his counterpart will develop and test methods of health education which are appropriate for the pilot area and for all of Lesotho, and which have application to other developing countries. They will assist with the development of the training center in the pilot area.

The UCSC field coordinator will assist with maintaining the base of operation within the Ministry of Health, give consultation to project personnel, and coordinate project activities with other related health activities in the country and with other pilot activities of the regional MCH project.

Out of the country training will be provided for one health educator trainee for one year, and for 2 or 3 senior level health workers in public health practice for approximately 3 months each.

CONTRIBUTIONS BY UCSC DURING PHASE I

Personnel

1. Project Director (1/3 time)
2. One public health nurse
3. One health educator

Commodities

1. Three vehicles, two large jeep type, at least six passengers, one truck type, all four-wheel drive, with spare parts and operational costs during Phase I.
2. Audio-visual and other teaching aids.
3. Office furnishings and equipment for public health nurse and health educator.
4. Selected medication for the prevention of increased morbidity and mortality in target population.
5. Medical supplies to help equip model health center at Tsakholo.
6. Laboratory equipment and supplies for detection of high risk mothers, materials for child spacing activities.

Other Costs

1. Personnel
  - a. One secretary, locally hired.
  - b. Two driver-messengers.
  - c. One higher executive officer.
2. Health Training Activities
  - a. Costs of printing, reproduction, and distribution of health education materials developed by project.
  - b. Conferences and refresher training for Lesotho health personnel.
  - c. Travel and other costs, intra-African conference for UCSC technicians, counterparts, and selected host country officials.
3. Participant Training
  - a. One health educator trainee for one year.
  - b. Two - three senior level health workers in public health practice for approximately three months each.
4. Housing
  - a. Health educator will pay sub-economic rent of \$25.00 (approximately R. \$17.50 per month).
  - b. Public health nurse-Tsakholo, will pay rent not to exceed \$125.00 (approximately R. \$87.50 per month).

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SANTA BARBARA • SANTA CRUZ

SANTA CRUZ, CALIFORNIA 95064

MATERNAL AND CHILD HEALTH PROJECT/LESOTHO

MARCH 1972 - DECEMBER 1976

SUBMITTED BY: THE UNIVERSITY OF CALIFORNIA EXTENSION/SANTA CRUZ  
DIVISION OF INTERNATIONAL PROGRAMS, CONTRACT NO. AFR-799  
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

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MATERNAL AND CHILD HEALTH PROJECT/LESOTHO  
MARCH 1972 - DECEMBER 1976

TABLE OF CONTENTS

INTRODUCTION.....	1
I. BACKGROUND	
A. The Intent.....	1
B. The Setting.....	2
II. TSAKHOLO RURAL HEALTH DEMONSTRATION CENTER	
A. Management and Administration.....	4
B. Shelter and Environment.....	6
C. Clinical Services 1972 - 1976	
1. Statistical Tables.....	8
2. Maternal and Child Health Services.....	10
(a) Preschool Services.....	10
(b) Nutrition.....	12
(c) Antenatal Care.....	13
(d) Deliveries.....	15
(e) Postpartum/Family Planning.....	16
(f) Health Education.....	19
D. Community Health.....	20
E. Staffing	
1. Staffing in the Past.....	21
2. Staffing Projected.....	23
III. TSAKHOLO AS A NATIONAL RURAL HEALTH TRAINING FACILITY 1974 - 1976	
A. Professional and Non-Professional Education.....	30
B. Management and Administration.....	31
C. Training Programs at Tsakholo 1974 - 1976.....	32
D. Proposed Development Staffing/Tsakholo 1976 - 1980.....	34
E. Summary.....	35

TABLE OF CONTENTS (cont'd.)

IV. EXPANSION OF MOTHER CHILD HEALTH SERVICES COUNTRY WIDE	
A. Background.....	36
B. Training For Expansion of Mother Child Health	
1. Mother Child Health Family Planning Nurse Practitioners.....	37
2. Training of Trainers.....	37
3. Training of Management Staff.....	39
C. Upgrading Mother Child Health Services Countrywide.....	39
D. Monitoring Impact of Services	
1. Health Statistics.....	40
2. Demographic Data.....	41
3. Supervision of Mother Child Health Services.....	41
4. Research Related to Mother Child Health in Lesotho	
(a) Village Leader Survey 1972 - Abstract.....	41
(b) KAP (Knowledge, Attitudes and Practices) of Doctors and Nurses in Lesotho 1973 - Abstract.....	42
(c) Retrospective Survey of Contraceptive Acceptors in Lesotho (RSCAL) 1975 - Abstract.....	42
(d) Model Village Survey, Ha Pechela 1976 (Tsakholo Demonstration Zone) - Abstract.....	42
(e) KAP (Knowledge, Attitudes and Practices) of Doctors and Nurses in Lesotho 1976 - Abstract.....	42
V. CONSULTANT INPUT - UNIVERSITY OF CALIFORNIA, SANTA CRUZ (UCSC)	
A. Routine Team Consultants	
1. Obsetrician-Gynecologist, Field Director.....	44
2. Administrative Officer.....	44
B. Consultants and Special Programs.....	44
1. Benin Conference.....	45
2. International Students.....	45
3. Training of Trainers (TOT).....	45

TABLE OF CONTENTS (cont'd.)

B. Consultants and Special Programs (continued)	
4. Research Assistant in Family Planning.....	45
5. Biostatistician.....	45
6. Family Planning/Nurse Practitioner Training.....	46
VI. RECOMMENDATIONS.....	47
VII. APPENDICES	
A. List of References Bibliography of selected documents pertaining to Maternal and Child Health in Lesotho, with like numbered references to the narrative of this report.	
B. Targets and Level of Achievement Phase I	
C. Family Planning in Lesotho, Fact Sheets	
D. Outputs, Lesotho	
E. Selected Country-Wide Demographic Data Pertaining to Maternal and Child Health	

## INTRODUCTION

This document attempts to share the experience of Tsakholo as the government's Demonstration Center in Maternal and Child Health, 1972 - 1974, and as a Training Center in Rural Health 1975 - present. Tsakholo is a focal point in the Ministry for Maternal and Child Health, under USAID Contract No. AFR-799, otherwise known in Lesotho as the UCSC/MCH Project. The report is necessarily detailed as its primary purpose is for use by those who continue this country effort. This project began and remains under government auspices and country nationals in the Ministry of Health and as such represents a unique rural health development project in the country.

The project began in February, 1972, a time when Lesotho's Five Year Development Plan reflected improved curative medicine and the intention of recruiting and producing more highly trained and highly paid technical personnel. In contrast, Tsakholo's mandate was public health and training trainers to disseminate health information amongst all existing health and health related manpower - nurses, drivers, volunteers, teachers, traditional practitioners, etc. It began as a low visibility, decentralized effort, at a time when high visibility, job opportunities and personal amenities were only available to health personnel in the centralized settings. It placed the emphasis on and the resources directly into rural health.

In addition, it attempted to create within the government a positive direction for inclusion of family planning as an integral part of public health services. In fact, it helped shape current policy.

Not all of the experiences at Tsakholo are or should be replicated. With well-defined management and continued training commitment on the part of all who have a role in Tsakholo's future as a training facility, rural health in Lesotho should prosper.

### I. BACKGROUND

#### A. The Intent

The goal of the University of California Extension, Santa Cruz/ Maternal and Child Health Project in Lesotho, was to work with the existing government health services and with country nationals to demonstrate activities which would "lead to the reduction of preventable morbidity and mortality in mothers and children," and to do this in ways that were replicable in other parts of the country. These improved MCH services, including family planning and health education, were to be extended to previously unreached population groups. The project was a bilateral agreement between the University of California at Santa Cruz (UCSC) and the Ministry of Health of the government of Lesotho.

Under this broad goal, the project's aim was public health or disease prevention, and the target group, women in their reproductive years, and children. The demonstration phase, 1972 to 1974, focused on the Ministry's rural health center at Tsakholo, where services were

to be studied and updated to include child spacing services, high risk assessment of women and children, and nutrition and health education, in addition to the general curative and preventive activities in progress. The original intent was to incorporate new skills into already existing health manpower or health related manpower in the country, making use of voluntary groups wherever possible.

## B. The Setting

Geographically, Lesotho is a small mountainous country, beginning at 5,000 feet elevation rising to 11,200 feet, about the size of Belgium. It shares all of its borders with the Republic of South Africa. The climate is temperate with fluctuations from a lowland average of 20 F in the winter to 90 F in the summer. Two thirds of the country is mountainous and sparsely populated, whereas the lowland population is more dense. It has been suggested that the number of people per acre of arable land has increased from 0.7 to 1.2 between 1950 and 1970.

Lesotho is devoid of the tropical diseases that infest much of Africa, such as filariases, malaria and schistosomiasis. Neonatal tetanus appears to be absent even though traditions are maintained in rural areas which could contribute to its occurrence. This good luck is fortunate in a country said to be one of the poorest economically in the world, yet which reports one of the lowest infant mortality rates in Africa, 106/1000 live births. A high literacy rate amongst its 1,200,000 inhabitants and a common language, Sesotho, contribute favourably to maximizing impact when change is initiated and acceptable to the people. However, the absence of about 150,000 males in the productive ages at any one time for employment in the Republic of South Africa has a limiting impact on changes requiring their cooperation.

Activities contributing to the outcome of the lives and health of mothers and children are manifest through traditional and modern venues throughout the country, even in Lesotho's urban center, Maseru. One of the initial tasks of the UCSC/MCH Project was to further delineate what these traditional and modern resources meant in the periphery, specifically at Tsakholo, and to build upon these, make available updated services in MCH, and determine some means of measuring impact when new services or changes were initiated.

Consistent with the independent observations of staff working in the area, the Tsakholo Village Leaders Survey conducted in 1972 by UCSC and counterparts in the demonstration zone showed a very high occurrence of persistent cultural traditions affecting health in that area.<sup>1</sup>

As a result of this 1972 Survey, a closer delineation was made of the demonstration zone. The area was defined as Enumeration Areas 38.01-38.03, 38.11 - 38.13, 39.01 - 39.16, 40.01, 40.03 - 40.05, comprising

1. All numbers refer to like numbered documents reference in Appendix A.

a total of 160 reported villages and approximately 25,000 inhabitants according to the 1966 census.

Tsakholo was described as a growth center by the Department of Community and Rural Development, Ministry of Agriculture, in 1971.<sup>2</sup> At the time of initiation of the government's health project several schemes were already introduced into the area.

In 1972 under the Ministry of Agriculture an agricultural irrigation scheme and fish production scheme were introduced about two kilometres west of the clinic. In 1972 the Department of Community and Rural Development started a water scheme for the area one-half kilometre west of the clinic which consisted of a deep borehole, windmill, pipes and storage tanks which were to provide protected piped water to the health center as well as to several villages in the area.

Tsakholo is under the chieftainship of Ward Chief Sentle Mojela and under the overall administration of the District Administrator, Mafeteng camp. Staffing, finances, routine maintenance and immediate supervision of health services are the responsibility of staff in the parent hospital, Mafeteng Camp. These responsibilities were shared with the principal Public Health Nurse counterpart and UCSC technician posted at Tsakholo during Phase I 1972 to 1974. Training was geared towards preparing the parent hospital and counterpart staff for full responsibilities for a demonstration health center with emphasis in rural Maternal and Child Health.

This decentralization of impact directly into a rural area was counterpointed by the centralization of a Health Education component in the Ministry's public health services. These two comprised the UCSC/MCH Project input in Lesotho and both were administered directly under the post of Senior Medical officer of Health, Public Health Section, throughout the Five Year period.

The substance of this report focuses on the development of Lesotho's Maternal and Child Health Project, beginning with Tsakholo and including the applicable educational efforts.

SECTION II

TSAKHOLO RURAL

HEALTH DEMONSTRATION

CENTER

## II. TSAKHOLO RURAL HEALTH DEMONSTRATION CENTER

### A. Management and Administration

#### 1. Setting Objectives

In 1972, UCSC technicians, counterparts, World Health Organization nurses and staff at Tsakholo, developed a set of broad objectives for the First Phase of the Demonstration Center at Tsakholo. Aside from part of Objective 10 (in parenthesis) these were agreed upon by the SMOH in October, 1972. They were:

1. The promotion of health and the prevention of sickness for families to include:
  - a. a safe and plentiful water supply
  - b. hygienic sewage disposal
  - c. adequate food and shelter
  - d. protection from communicable diseases
  - e. protection from accidents
2. Health protection of mothers and children:
  - a. basic maternity care providing for adequate prenatal, natal, and post-natal health supervision including education regarding child-spacing methods, services and/or referral for medical reasons.
  - b. basic midwifery services
  - c. continuing health supervision and basic medical care of all children from birth through childhood and adolescence.
3. The promotion of health for families utilizing health education techniques and demonstration village health projects.
4. Studies of problems affecting the health and well being of mothers and children (to serve as a basis or guide to program development).
5. Collection and analysis of vital data and statistics concerning mothers and children.
6. Establishment of standards of practice and training for health personnel serving mothers and children and for facilities providing for their care.
7. Coordination of MCH service with those of other agencies broadly concerned with the needs of mothers and children.
8. Health education of expectant parents, parents, school children and the general public.
9. Planning and monitoring the efficiency and effectiveness of MCH services including financial considerations.
10. Study and develop new methods or approaches for delivering MCH services such as early identification and referral services for high risk women and children (and exploration of a role for indigenous practitioners).
11. Education and training of professional and auxiliary staff, beginning in the district, emphasizing training of trainers.
12. Collaboration with other programs or agencies concerned with the development of services to mothers and children nationally and at

the district level.

13. Serve as a national demonstration model in the delivery of basic MCH services from a health center facility.
14. Promote community, district and national interest in the recognition and amelioration of problems affecting family health and demonstrate a system of MCH care beginning with the primary rural health center.
15. Establish a national rural health training center for the country.

It was recognized that Tsakholo, as a rural health center, has an important role in curative medicine as well. This was to be maintained and improved as possible but emphasis was put on upgrading public health services particularly maternal and child health.

These broad objectives served as a foundation for reflecting the changing role of Tsakholo in the Ministry of Health.

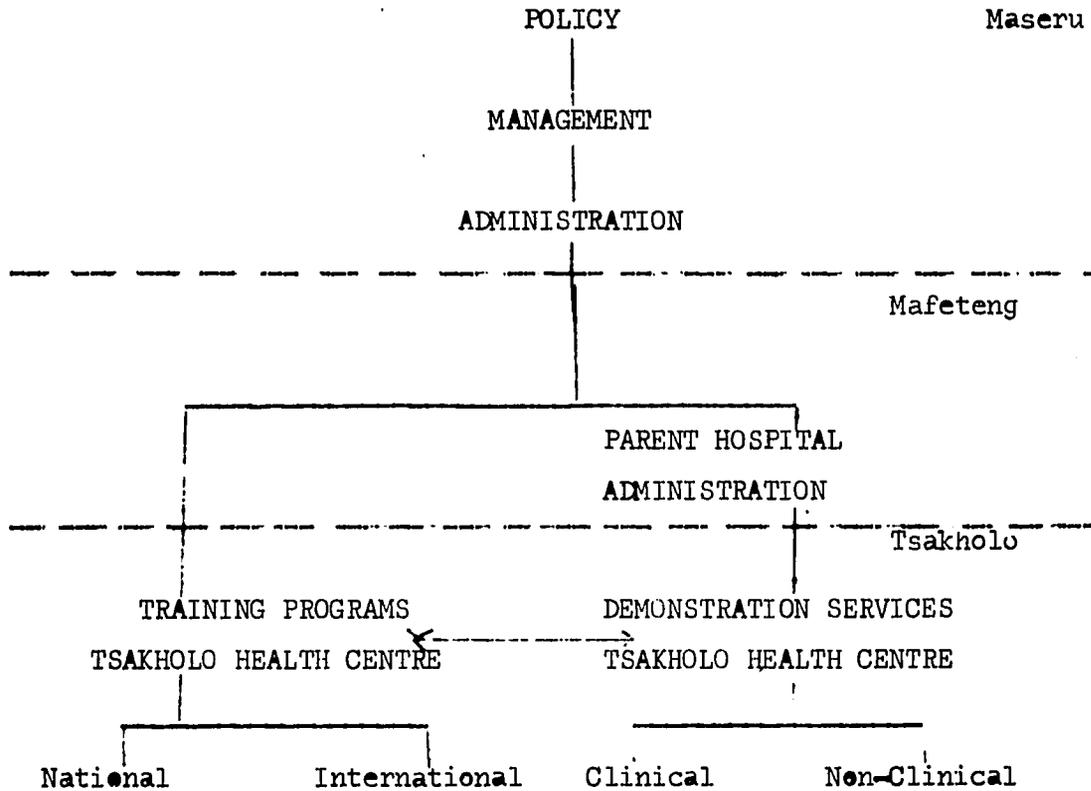
They were translated into measurable targets by the entire health team throughout the demonstration phase. Appendix B summarized the targets and their achievement during Phase I of the Project.

## 2. Organization

As a demonstration center, Tsakholo was to remain under the parent hospital (Mafeteng) as any health center, yet the "Tsakholo Project" was placed directly under the Senior Medical Officer for Health (SMOH). The management tasks of planning, organizing, leading and monitoring the demonstration activities were decentralized to Tsakholo during Phase I under the MCH technician and her principal counterpart whereas administrative roles were assumed by Tsakholo, Mafeteng and Maseru.

The parent hospital staff became a part of the team but critical staff; such as district medical officers, changed frequently. Through goodwill and motivation of all concerned, Tsakholo survived the early years of dual and sometimes triple administrative ties and direct line relationships. By 1974, Mafeteng staff and Tsakholo staff had been trained to work together as a team and functional and line responsibilities were clarified for the demonstration patient services. As Tsakholo began to assume its training role in 1974, the functional relationship agreed upon emerged as outlined below in Figure 1:

Figure 1



B. Shelter and Environment

In March 1972, Tsakholo Clinic consisted of a large four-room clinic building, built in 1964, badly in need of repair. A boarded staff nurse house and a post-office block, built at that same time, were also on the premises. The facility was staffed by one double qualified nurse, a scrubber, an untrained health aide and a part-time health assistant.

At that time two large clinic wings were used for storage of preschool food and broken equipment due to collapse of the ceiling in those rooms. The dispensary room was not used due to collapse of its roof. All health services were conducted from a small poorly lit, partitioned room, with a hand wash basin, adjacent to the reception area. It was obvious, and indeed the staff concurred, that the first "cap" needed was a "builder rennovater cap", not a nursing cap. Simultaneous with the government's construction of a D2 house and two duplexes for staff, self-help funds were obtained from the American Embassy and UCSC to put the clinic into full service. By August, 1972, one of the large wings had been repaired to serve as a preschool clinic. A home economist joined the staff shortly thereafter. By October, 1972, a health assistant, a driver, a Public Health Nurse, and the MCH technician took up residence at Tsakholo with existing staff. By January, 1973, together with a local contractor and another staff nurse, new walls, flooring, and painting had created a delivery room, a treatment room, and an antenatal/multipurpose room. Thereafter followed resurrection of the dispensary, and community volunteer activities to help build a classroom and waiting huts for pregnant women. The latter were made from bricks and thatch purchased locally. New in 1976, one also sees at Tsakholo an additional joined rondavel, with

plumbing, which serves as a faculty or long term student/research assistant accommodation. Tsakholo also has a poultry coop, built by volunteers, of mud and thatch.

### A Safe and Plentiful Water Supply

The borehole 1/4 mile west of Tsakholo is said to be capable of producing 450-900 gallons of water/day. Complete with two 2,500 gallon storage tanks this water supply was completed in 1972 by Community and Rural Development. In the twelve month period, January, 1973 through December, 1973, it functioned for a total of two months. The addition of a diesel pump in 1974 provided a dependable source of water but fell into disrepute due to the reoccurring costs and maintenance required which neither the Ministry of Health nor the community were willing to absorb in total. In 1976, the Ministry of Health resurrected and protected a small spring on clinic grounds which serves as a small but safe and dependable water supply for clinic and staff. The communities, which were to benefit from the windmill supply, remained with an unpredictable source of water until November 1976, when the major repairs were accomplished to put the windmill back in operation.

In July 1975 through July 1976 the Senior Medical Officer of Health approved the use of Tsakholo's "faculty" rondavel for housing a research assistant from Birmingham University, England, as part of a team sent to study rural water supply systems - why they succeed, why they fail. Although it was not the intent of this team to interfere in any way with existing water schemes, it remains to Lesotho's benefit to study the findings of their research, when available, so that proposed water schemes might be more successful than has been the experience at Tsakholo.

### Hygienic Sewage Disposal

Flush toilets and septic tank systems were incorporated into the new housing at Tsakholo. They have been very dependable sewage systems.

A plan was presented by the district health inspector to headquarters for the construction of suitable patient latrines; however, these have never been followed through to completion, resulting in the regular resiting of one inadequate pit latrine to serve the patient population. The magnitude of the problem is enhanced by the realization of an average daily patient population of some 163 individuals. The retirement of the district health inspector and the withdrawal of the health assistant from Tsakholo in January, 1976 were disincentives and priorities urgently need re-examination.

### The Weather

Over the five year period, Tsakholo's weather can be summarized as follows:

1972-73	The Drought (Lake Tsakholo dried up)
1973-74	The Good Year
1974-75	Pula haholo (too much rain)
1975-76	Pula ea na (when it rains it rains)

Tsakholo is considered part of the dry belt and crops succeed or fail accordingly.

C. Clinical Services

1972 - 1976

1. Statistical Tables

TOTAL AVERAGE CLIENT POPULATION AT TSAKHOLO PER DAY/WEEK/MONTH/ANNUM-1976

	Per day	Per week	Per month	Per annum
<u>GENERAL PATIENTS</u>	26	130	565	6,785
<u>ANTENATAL CARE:</u>				
Initial Visits	-	17	68	820
Return Visits	-	38	151	1,810
<u>PRE-SCHOOL CARE:</u>				
Initial Visits	-	15	58	700
Return Visits	58	290	1,158	13,900
P.S. Mothers	60	300	1,200	14,400
<u>MISCELLANEOUS:</u>				
(Post-partum, fam pl. Emergencies Deliveries, etc.)	5	25	100	1,200

AVERAGE TOTAL VISITS (ALL TYPES) Per week = 815  
 Per day = 163 (incl. 60 P.S. mothers per day)

TABLE 1 : ROUTINE SERVICE STATISTICS-TSAKHOLO-1972- 1976

	General Patient Visits	Preschool Initial Visits (n = 1 000/yr.)	Preschool Return Visits	DWT Dose 1	DWT Dose 3	% Receiving Dose 3 (n = 3 859)	Polio Dose 1	Polio Dose 3	% Receiving Dose 3 (n = 2 295)	BCG (n = 5 000)	Antenatal Initial Visits (n=1250/yr)	Percent of Expected Pregnant Population (n = 1 250/yr)	Antenatal Return Visits	Average No. of visits per Pregnancy	No. Supervised Deliveries (n=1200/yr)	% of Deliveries Occuring under supervision
72	4,936	873	9,002	503	246	48.9%	534 (O/S 4 mo)	242 (O/S 4 mo)	45.3%	420 (O/S 4 mo)	401	32.1%	1,011	3.2	26	2.1%
73	5,001	888	11,059	1,073	761	70.9%	794 (O/S 4 mo)	578 (O/S 4 mo)	72.8%	642 (O/S 1 mo)	548	43.8%	1,572	3.9	67	5.6%
74	5,132	1,270	8,248	566	423	74.7%	NIL (O/S All yr.)	NIL (O/S All yr)	NIL	586 (O/S 3mo)	836	67.3%	1,556	2.8	74	6.2%
75	6,028	861	16,630	1,021	884	86.6%	912 (O/S 3 mo)	373 (O/S 3 mo)	40.9%	642 (O/S 6 mo)	786	62.8%	1,880	3.4	99	8.2%
76	6,785	695	13,814	696	557	80.1%	55 (O/S 8 mo)	66 (O/S 8 mo)	100%	1,140 (O/S 1 mo)	810	64.8%	1,803	3.2	40	3.3%
TOTALS/5yr.	27,882	4,587	58,753	3,859	2,877	74.5%	2,295	1,259	54.8%	3,430						

S = out of stock

n = total population expected in that category in demo zone (rough approximation)

## Maternal and Child Health Services

### Background

Targets were established with the Tsakholo team regarding MCH service statistics which they thought could be accomplished by 1974 and by the end of project status, 1976. The statistical parameters used for measurement are those reported monthly by any health center to the statistical unit of the Ministry of Health. The only difference perhaps, is a very clear definition of what we are talking about (i.e. an initial preschool visit versus a return visit, an initial antenatal care visit versus a return visit) and close supervision of the results month by month throughout the five year period.

In conjunction with the above, some rough estimates were made about the target population using fertility estimates and percentage of under fives expected in the 25,000 population in the demonstration catchment area. Due to the male:female ratio in the demo zone (based on figures for Mafeteng District as a whole) the expected pregnancies are felt to be higher than birth rate estimates would yield for catchment areas in other parts of the country.

The following rough estimates are determined for comparative purposes for Tsakholo:

1250	pregnancies per annum
1200	births per annum
1000	infants under 1 per annum
5000	under 5's in this 5 year period.

The year 1976 represents completion of a new census determination for the country and the Ministry of Health is in an excellent position to negotiate for at least a complete age-sex breakdown for the enumeration areas in its demonstration zone.

#### a. Preschool Services

A Catholic relief service preschool program was started at Tsakholo in November, 1971. As in the case of all Catholic relief service programs in Lesotho, this involved the use of donated food as an incentive to encourage preschool attendance. Although an unpopular practice as viewed by some health professionals, there can be no doubt that this has made it possible for a bulk of Lesotho's children to come under reasonable routine health supervision. Donated food tends to function as a disincentive to self-reliance projects such as gardening and poultry production. However, seasonally there is no food available from such self-help projects. In light of the popularity of preschool services in Lesotho as they existed, it became the intent of the demonstration project to not only increase routine attendance but to explore new kinds of roles that preschools could play in the community.

Four principal changes were made:

1. A trained, home economist was employed, instead of the customary double qualified nurse, as person in charge of the preschool (1972-74),

2. With her background in Agricultural extension, a communal garden and poultry scheme were introduced as educational adjuncts to routine activities.
3. Child assessments and referral of high risk children to the nurse in charge at Tsakholo became a routine practice.
4. Children assessed to be seriously malnourished were accommodated at the health center with their caretakers for intensive re-education whenever possible.

In addition to routine weighing of preschool children, health talks stressed the importance of good nutrition, child spacing and understanding the road to health charts (Ilesha grid) which continues to be part of every child's record, kept by the parent. Certain targets were established for preschool, with emphasis on regular attendance and completed immunization. Table 1 shows the achievements over the five year period.

Based upon the target population estimates and routine health center returns, as shown in Table 1, it can be said:

1. About 91.7 percent of the expected under fives in the demo zone registered in our preschool clinic over the five year period, 1972-1976. These 4587 under fives made a total of 58,753 return visits for preschool supervision.

Comments:

(a) Special ceremonies honoring regular preschool attendance were used as incentives to maintain regular preschool supervision. From its inception in 1971 the government initiated use of donated food at the preschool. This incentive was status quo throughout the report period.

(b) Return visits totaled 20,087 in the two-year period 1972-73 and 30,444 in the two-year period 1975-76.

2. Seventy-five percent of the under fives who received dose one of diphtheria, whooping cough and tetanus received dose three of diphtheria, whooping cough and tetanus over the five year period.

Comments:

The target was set at 80% for 1976. In 1976 alone, 80.1% had achieved that target. Seventy-five percent is the five year average, with a baseline of only 49.9% in 1972. Diphtheria, whooping cough and tetanus was in stock throughout the report period.

3. About 67.5 percent of the eligible children (n=5000) in the demonstration zone are fully immunized against diphtheria, whooping cough and tetanus.

Comments:

This is based on 2877 who have completed the initial series and an additional 503 who received a booster diphtheria, whooping cough and tetanus during the report period.

4. About 25 percent of the eligible children in the demonstration zone received their basic series of polio immunizations over the five year period.

Comments:

Polio vaccine was out of stock for a total of 31 months of the report period. This reflected national deficits of the vaccine except for six months in 1976.

5. About 54.8 percent of those who received dose one of polio

vaccine received dose three of polio vaccine.

Comments:

The target was set at 80% completion rate of basic polio series.

6. The availability of vaccine has a strong impact on regular attendance at the preschool.

Comments:

Return visits to the preschool in 1974 were only 8,248 when polio vaccine was out of stock all year. Return visits were 16,630 in 1975 when polio vaccine was out of stock for only three months.

7. About 68.6 percent of our eligible preschool population have received tuberculosis vaccine.

Comments:

- (a) The target was set at 80 percent
- (b) Tuberculosis has been out of stock for a total of 15 months of the report period
- (c) Special campaigns organized by clinic staff have boosted the communities immunity against tuberculosis.

b. Nutrition

Twenty-eight cases of malnutrition in under fives were identified by clinical observation at Tsakholo in 1976.

Kwashiorkor, frank or early	10
Marasmus, frank or early	9
Dehydration and underfed, weight loss, poorly fed	<u>9</u>
	28

Table 3: Clinical Diagnosis by month of first visit, 1976

Condition	Jan-Mar	Apr-Jun	Jly-Sept	Oct-Nov	Month Not Stated
Kwashiorkor	2	3	1	2	2
Marasmus	4	2	1	1	1
Dehydration/Underfed	2				
Underfed, Weight loss, Poorly fed	2	1	4	0	
<b>TOTAL</b>	10	6	6	3	3

Two of the marasmus cases in January were brother and sister. The distribution of cases by village is only noteworthy compared to years past. We are now casefinding malnutrition at the periphery of the demonstration zone (11-14 kilometers away) whereas in years past a concentration of cases were in the nearby villages around the health centre (1-5 kilometers away). This is due in part to the opening of an outstation at Sekameng, about 12 kilometers from the health center.

Table 4: 1976 Malnutrition in Under Fives Caretaker by Condition

Condition	Granny	Mother	Caretaker Not Specified
Kwashiorkor	1	7	2
Marasmus	3	5	1
Dehydration/ Underfed	2		
Underfed/Weight Loss, Poorly Fed	4	2	1
TOTAL	10	14	4

Ten of the twenty-eight malnourished children were cared for by their grannies and brought to the clinic by the granny. In three instances the mother had died in childbirth and in one instance the mother was hospitalized with T.B. The six other cases were cared for by grannies due to what could generally be called social problems, such as desertion, abduction, prison, away working in the Republic of South Africa etc. Of interest is that only one of the ten kwashiorkor cases was cared for by granny. Two of the marasmus cases cared for by granny had lost their mothers at birth.

In general, the malnutrition in all 28 cases was associated with weaning "too early," often due to traditional beliefs, followed by exclusive feedings of lesheleshele (porridge); or exclusive breastfeeding at around one year old with no introduction of supplementary food; and/or improper preparation of lactogen formula (too weak, too strong) when artificial feeding was practiced.

Two of fourteen cases with pregnancy history notes were associated with close spacing of pregnancies. One mother with an underfed child 1½ years was pregnant at the time the underfed child was found. A post-pneumonia Kwashiorkor child 1-4/12 years old, not breastfed since birth due to belief in certain customs, had a one month old well-nourished breastfed sibling. If complete histories were available, practice of certain traditions would likely be an influential variable in many of the malnutrition cases. In a 1976 survey of nurses and doctors countrywide, it was reported that at least some of the frank kwashiorkor or marasmus in their districts were associated with traditional beliefs about weaning.<sup>12</sup> Eight of the fourteen cases with pregnancy history notes were grand multiparas having had three or more pregnancies.

c. Antenatal Care

Based upon the population potentially pregnant in a given year (n=1250/yr) and the service statistics from Table 1 we can say:

1. About 65 percent of all pregnant women in a given year in the demonstration zone are registered in our antenatal care clinic. These women are seen an average of 3.2 visits per pregnancy and 62.3 percent are seen initially prior to their sixth month of pregnancy.

Comment:

- a) The targets initially established were 80 percent receiving antenatal care (based on 1973 low estimates of 820 births per annum) and 60% prior to the sixth month of pregnancy.
  - b) We believe that the estimate of 1250 pregnancies per annum is high. This would not be resolved without an accurate age/sex pyramid and/or fertility rates based on the 1976 census for the demonstration zone.
2. Antenatal care visits account for an annual average of 55 visits per week in 1976 compared to the annual average of 27 visits per week in 1972.

Although antenatal care clinics exist under Government, Mission, Red Cross and traditional auspices throughout the country, the service at Tsakholo tested several parameters essential to good antenatal care.

1. A high risk (in terms of another pregnancy) assessment tool was developed in Lesotho and incorporated into a maternal chart which has been made available to all facilities desiring this record. This assessment has been taught countrywide and promoted for continuity of patient care.
2. Routine hemoglobins were done on all antenatal's in 1972 and found to be of little screening value. Low hemoglobins were a very low occurrence amongst antenatal cases at Tsakholo.
3. Routine VDRL's (for detecting syphilis), interpretation of VDRL lab findings and proper treatment of positive cases were taught to staff and students at Tsakholo since January 1973. Poor handling of specimens has resulted in about 50 percent wastage of all specimens sent in 1976 and for part of 1975. If this is to be taught as an integral part of good antenatal supervision, arrangement for transport of lab specs is essential.
4. From random statistics collected in 1976, it is suggested that local traditional practitioners have an important role as a referral base to the health center. Women who went early in pregnancy to certain providers of charms for pregnancy came to the clinic earlier in their pregnancy than those who did not "carry out the customs." Using influential traditional practitioners as referral centers needs more exploration.

d. Deliveries

Based on the assumption that around 1,200 deliveries occur per annum in the demonstration zone, the following statistics on deliveries occurring at the health center are disappointing:

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Table 5: Supervised Deliveries - Tsakholo, 1972 - 1976

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<u>YEAR</u>	<u>NUMBER</u>	<u>PERCENT (n=1200)</u>
1972	26	2%
1973	68	5%
1974	74	6%
1975	99	8%
1976	40	3%

---

The drop in health center deliveries between 1975 and 1976 began to occur in December 1975. Variables such as staff, facilities and fees remained status quo throughout the report period. The presence of a vehicle and driver removed in November 1975 is not replicable and other alternatives to bring more deliveries under supervision had to be explored. Even at its peak, the health center was supervising only 8 percent of all potential deliveries and another 10 percent delivered at Scott or Mafeteng hospitals. This means that more than 80 percent of the deliveries occur in the traditional manner attended to by untrained (in the modern sense) grannies, in spite of significant improvements at the health facility itself.

The conclusion reached in 1974 concerning supervision of deliveries is that traditional birth attendants (TBA's) should be identified by their villages to come for simple training to learn:

1. to refer all cases prenatally, as early as possible;
2. to identify danger signals in management of delivery;
3. to share responsibility (which they are already doing) for safe deliveries in the home.

The staff at Tsakholo has begun this approach at the model village, Ha Pechela, and the village has organized itself, through its chieftainess, with ten traditional birth attendants identified to participate in the training program. Amongst these are the chieftainess herself and a well known medicine man in the area who is known to be very influential and highly paid for his deliveries. They have agreed that their role will not involve remuneration from the government in that they already have a system of remuneration traditionally acknowledged.

It should be clearly understood that Tsakholo is not promoting medicine men and traditional birth attendants to this important role. They are already

heavily involved. What is hoped is that we can help them carry out safe practices in what they have traditionally and currently been doing; and bring them more closely under the supervision of the health center. There is also the obvious advantage that staff and trainees, particularly student nurses and midwives, will learn something about traditional deliveries and be able to have greater influence in this widespread traditional health care system.

e. Post Partum Services

Post partum services began to be offered in 1974 at Tsakholo. As shown in Table 6 these services have very gradually increased over the three year period 1974-1976.

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Table 6 : Post Partum Services, Tsakholo, 1974-1976

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<u>YEAR</u>	<u>NUMBER SEEN</u>	<u>PERCENT (n=1200)</u>
1974	78	6.5%
1975	82	6.8%
1976	119	9.9%

---

This is another service in which traditional birth attendants have an influential and important role. In the 1972 baseline survey at Tsakholo, it was learned that customs surrounding the post partum and newborn period are the most widespread of all practices according to village leaders.<sup>1</sup>

Although it should still continue to be offered, the 4-6 week post partum examination is a departure from "carrying out customs" in that it requires the woman to leave her hut before the traditionally recommended three month period. Traditional birth attendants should learn about post partum complications and health promotive activities that can be recognized and carried out in the home. In addition to the 4-6 week service of postnatal examination and education combined with new born BCG a similar arrangement is promoted at 3-4 months post nately to cover those who prefer to "keep the customs."

Family Planning (Child Spacing)

As in all parts of the world, traditional means of preventing pregnancy exist in Lesotho. Although it is the impression at this time that traditional practices have more impact in Lesotho than modern means, the alternative of modern contraception was a service initiated for the

first time by the government at Tsakholo. The task for UCSC was to demonstrate how this service can be incorporated into up-to-date health services with emphasis on child-spacing for health promotion of mothers and children.

Baseline data concerning this service was collected at Tsakholo and Mafeteng district between 1972 and 1974.

1. A baseline average birth interval of 31 months between most recent pregnancy terminations of women all ages attending ante-natal clinic at Tsakholo was reported in 1972.<sup>3</sup> This birth interval is inclusive of pregnancies terminating in stillbirths, livebirths and abortion.
2. An ideal average family size (for a newly married couple) of 3.7 was reported by 176 village leaders surveyed in 1972 in the demonstration area. These respondents were 74 percent male and their average age was 50+. Seventy-six percent had lived in their villages for more than 21 years.<sup>1</sup>
3. Forty-seven percent of these same leaders said they would prefer two or fewer years between the birth of one child and the birth of the next child.<sup>1</sup>
4. Forty percent of new contraceptive acceptors in the district in 1973 came for the purpose of family size limitation rather than for spacing of pregnancies or pregnancy planning. Of these, 73.4 percent had never had any previous experience with a modern method of contraception.<sup>4</sup>
5. The new contraceptive acceptors in 1973 were on the average around thirty years old, grand multi-parous and, on the average, educated<sub>4</sub> at the highest level up to Standard 4 (lower primary school).<sup>4</sup>

In addition to basic research at Tsakholo, UCSC sponsored several country-wide surveys concerning family planning between 1973-1976:

1. Knowledge, Attitudes & Practices Survey of doctors and nurses in Lesotho, 1973 and 1976.
  2. Retrospective Survey of contraceptive acceptors. 1972-1974.
- These surveys are elaborated in more detail under Section IV, Countrywide MCH Research, page 36 to 42 and some of the findings are summarized in Appendix C.

A more recent survey, "Tsakholo Model Village Survey, 1976" yields some comparable data to original baseline data concerning child spacing/family planning at Tsakholo.

1. An average birth interval of 36.3 months was found amongst recent deliveries of all ever-pregnant multi-parous women aged 25 - 44 years in the 1976 model village survey of Ha Pechela (Tsakholo demonstration zone).<sup>5</sup>
2. In this same survey the younger age group 25-29 years old reported an average birth interval of 38.5 months while their older peers aged 35-39 years reported an average of 28.4 months between their most recent deliveries.<sup>5</sup>

3. Further, it was possible to compare the same woman over time. Very complete pregnancy histories were obtained from the women. Table 7 summarizes the findings:

Table 7 : 1976 Model Village Survey, Ha Pechela, Tsakholo Demonstration Zone: Average Birth Interval in Recent Deliveries of Women Now 35 - 39 Years compared to the Average Birth Intervals of the Same Women Ten Years Prior and Compared to Women Now 25 - 29 Years Old	
<u>GROUP</u>	<u>BIRTH INTERVAL</u>
Women now 35 - 39 years	28.4 months
Same Woman Ten Years Prior	33.8 months
Women Now 25 - 29 years	28.5 months

A very rigid definition was used for these comparisons. Although this represents data from only one village, exact data was obtained from two areas in the Scott Hospital Regional Project but is not yet analysed and reported at the time of this report.

It was independently reported by staff in the demonstration zone that older women in their reproductive years sustain a high fertility during this "at risk" period, just prior to menopause, often to get a child of a desired sex or to compensate for a child who has died. An appreciable reduction in infant mortality will probably be a motivating force in regulating family size amongst the Basotho. Lesotho is already experiencing this reduction in infant mortality from 118/1000 live births in 1966 to 106/1000 live births in 1973.<sup>6,7,8</sup> Basotho are finding that the occasional pregnancy which terminated in perinatal mortality in years past, becomes another mouth to feed, clothe and educate in the present.

Compared to average ideal family size reported by various Basotho groups from six surveys conducted in Lesotho, 1972 - 1976, summarized in Appendix C, the role of modern contraception will be of prime importance over the next 5 - 10 years based on infant mortality reduction alone. In addition, modernization will have an impact on customs and traditions which currently promote a healthier than average birth interval compared to other African countries.

It was concluded in 1974 after two years in the demonstration phase and after countrywide research, that services which provide both a means of child spacing and family size limitation are equally acceptable to the community, providing a solution to already felt needs. The government in its Second Five Year Development Plan states:

- 13.18 "The Second Plan target is to reduce the current rate of population increase, 2.2 percent, to 2.0 percent annually."

The plan states that, "information on contraceptive techniques and supplies will be disseminated as widely as possible and the necessary additional staff trained to extend and improve family planning services."

Service centers outside of Maseru have a very limited client base on which to build a training program for family planning nurse practitioners, however, a facility like Tsakholo can teach management of contraceptive acceptors as a part of rural comprehensive health care to the community. In light of the government's development plan it has been recommended that a family planning fieldworker be requested from LFPA to serve the demonstration area and to function as a regular part of the health center team during the next plan period.

As shown in other countries, promotion of contraceptive services for high risk women or for child spacing only, can lead to a population increase. Hypothetically, reduced mortality accruing to an increased birth interval at Tsakholo and presuming a reduced infant mortality, the demonstration zone may have achieved a higher than average population increase. Without age/sex profiles from 1966 and 1976 Population Censuses, this hypothesis cannot be tested.

#### f. Health Education

Health education techniques were taught to the staff by the members of the health education unit as well as by providing opportunities for the health center staff to participate in relevant training programs being conducted in and outside the country. As an important emphasis in the project, staff members were requested to maintain logs of their educational efforts to groups in the clinic and in the community. Their activities are reported monthly on the routine health service statistics received by the Ministry of Health.

The staff was taught to self evaluate the quality of their educational efforts, realizing that quantity (of people reached) can be fruitless if the message has no meaning for the recipient. The staff initiated many health education activities that allowed the recipient group to participate in the educational effort. For example, school children were provided with materials and information from which to make posters depicting themes pertaining to environmental sanitation. These were displayed by the school children in the clinic during visits by prominent people. The staff in Maseru and Tsakholo participated with the health education unit during the preparation of "training events" by various student groups such as student nurses and student midwives. The techniques were kept simple, to promote replication in other parts of the country. Posters displayed in the clinic were evaluated for their applicability to the message intended and the message perceived by the community. Considerable assistance in the latter endeavor was achieved in cooperation with the staff of the Lesotho Distance Teaching Center, (LDTC) and the Lesotho Family Planning Association. LDTC, following a visit to Tsakholo, requested and received permission to use the Tsakholo health center and staff for periodic testing of some of the training materials being developed by their organization.

#### D. Community Health

In rural Lesotho, there are many individuals who make a significant contribution to the outcome of the lives and health of mothers and children. This "rural health team" takes on a very different appearance than the modern concept of a health team. At Tsakholo, the rural health team includes traditional as well as modern influential people. After participating together in team meetings over the period 1972-1974, the Tsakholo team recommended that a model demonstration of improved health practices might best be accomplished in a village, rather than at the health center. This led to the Model Village concept described in the document entitled "Model Village Survey," referenced under item 5 in appendix A. The importance of this effort lies in the process it entailed. The motivation came from collective agreements reached by the community and fieldworkers from various organizations and Ministry's assigned to that area. It was not a development imposed by people perceived to be outside the immediate community.

The community's initiative in health matters is well represented through traditional venues and the concept of village health workers, or village health volunteers, needs to take this into account. Built upon the process described, the development at Tsakholo, although lengthy, needed careful and regular appraisal. It was only in its initial phase at the completion of UCSC input in the country.

Other community activities involved informal social gatherings at the community classroom on health center grounds. These included sewing and handicraft clubs for young people, film shows and other means of reaching groups with educational material pertaining to health. The health assistant posted at Tsakholo worked closely with staff assigned to the health education unit to organize "pitsos" and other gatherings in the villages in which to introduce health motivation activities. All of these activities became a part of the learning experience for various student groups assigned to Tsakholo.

## E. Staffing

### 1. Staffing in the Past

Personnel who comprised the basic team involved in this development project remained reasonably stable over the five year period.

Dr. K.T. Maphathe, S.M.O.H., 1972-1973, Maseru  
Dr. S. Mohale, S.M.O.H., 1974-1976, Maseru  
Pat Goodale, UCSC Technician, MCH Adviser, 1972-Present,  
Tsakholo-Maseru  
Sunny Fong, UCSC Technician, H.Ed. Adviser, 1972-Present, Maseru  
\* Tsidi Ntsekhe, PHN Principal Counterpart, 1972-1975, Tsakholo-  
Maseru (deceased)  
\* Manthua Seipobi, PHN Principal Counterpart, 1976-1976, Maseru  
\* Mokuba Petlane, H.Ed. Principal Counterpart, 1972-Present,  
(Out of Country)  
\* Taps Raditapole, H.Ed. In-Charge, HEU, 1972-Present, Maseru  
\* Ivy Monoang, Staff Nurse, In-Charge, Tsakholo, 1972-Present  
Vincent Tolofi, Health Assistant, 1973-Present, Tsakholo,  
Mafeteng  
\* Margaret Mokhothu, H.Ed. Nutritionist, 1972-1975, Maseru  
(resigned)  
\* Aa Mopeli, Nutritionist, HEU, Maseru, 1976-1976  
\* Peter Mokoko, Design Illustrator, HEU, Maseru, 1976-1976  
Thoko Maliehe, Staff Nurse, 1972-Present Tsakholo-Mafeteng  
Mantoa Qashele, Home Economist, Preschool, 1973-1976, Tsakholo,  
(resigned)  
Angelina Pakose, Staff Nurse, 1974-Present, Tsakholo-Mafeteng  
Makalebe Maile, Matron, Mafeteng Hospital, 1972-Present  
Tsedu Moshabesha, District PHN, 1972-Present, Mafeteng  
Lismelo Nombula, Staff Nurse, Preschool, 1975-1976, Tsakholo  
(resigned)  
Emme Seepane, Staff Nurse, Preschool, 1976-Present, Tsakholo

### 2. Supporting Staff

Christine Molano, Personal Secretary, 1972-1975, Maseru (resigned)  
Neo Maphike, Project Secretary, 1975-Present, Maseru  
Ben Makakhe, Supply Officer, 1972-1974, Mafeteng (resigned)  
Solomon Nkhahle, Driver-Operator, 1972-1976, Tsakholo-Maseru,  
(resigned)  
Joseph Theko, Driver-Operator, 1972-Present, Maseru  
Paseka Ramaqele, Driver-Operator, 1973-Present, Maseru  
Manuku Mokhothu, Health Aide, 1972-Present, Tsakholo  
Thakane Sikeme, Health Aide, 1972-Present, Tsakholo  
Thakanyane Sikeme, Health Aide, 1972-Present, Tsakholo

\* = designates officially appointed counterparts to Mr. Fong, Ms. Goodale.

In addition to on-the-job training, this core of personnel received in or out-of-country training supported either directly or indirectly by UCSC funds over this five year period as follows:

PERSON	WHEN	WHERE	ACHIEVEMENT
Tsidi Ntsekhe	1974 1975 1975	Lesotho Downstate UCSC	TOT-Cert. Comp. MCH/FP Nurse Practitioner Cert. MCH Coordinator
Manthua Seipobi	1976 1976 1976	Univ. Chic. UCSC UCSC	Management Admin. Workshop Certificate of Completion FPNP Nurse Pract. Cert.Comp. TOT/Community Health Certificate of Completion
Mokuba Petlane	1973-75 1975	UCSC Ibada , Nigeria	Assoc. Degree Health Ed. Cabrillo College F.P. Motivation-Cert. Comp.
Ivy Monoang	1972 1974	UCSC Lesotho	MCH/FP Nurse Pract. Cert. Comp. TOT-Cert. Comp.
Thoko Maliehe	1974 1975	Lesotho Meharry	TOT Cert.Comp. MCH/FP Nurse Pract. Cert. Comp.
Vincent Tolofi	1974 1975	Lesotho Ibadan, Nigeria	TOT-Cert. Comp/ F.P. Motivation-Cert. Comp.
Margaret Mokhothu	1974	Meharry	MCH Nutrition Cert. Comp.
Taps Ralitapole	1974	Lesotho	TOT-Cert. Comp.
Tsidi Moshabesha	1974 1976	Lesotho UCSC	TOT-Cert.Comp. FPNP Cert. Comp.
Angeline Pakose	1975	Downstate	MCH/FP Nurse Pract. Cert. Comp.
Agnes Lephotho	1975	Downstate	MCH/FP Nurse Pract. Cert. Comp.
Nakalebe Maile	1974 1975	Lesotho UCSC	TOT-Cert. Comp. FPNP Nurse. Pract. Cert. Comp.
Solomon Nkhahle	1975	Lesotho	First Aid Cert. Red Cross
Joseph Theko	1975	Lesotho	First Aid Cert. Red Cross
Major Ramaqele	1975	Lesotho	First Aid Cert. Red Cross

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PERSON	WHEN	WHERE	ACHIEVEMENT
Manuku Mokhothu	1974	Lesotho	Lab. Aid Training-Maseru
Nuku	1975	Lesotho	Health Aid Training

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## 2. Staffing-Projected

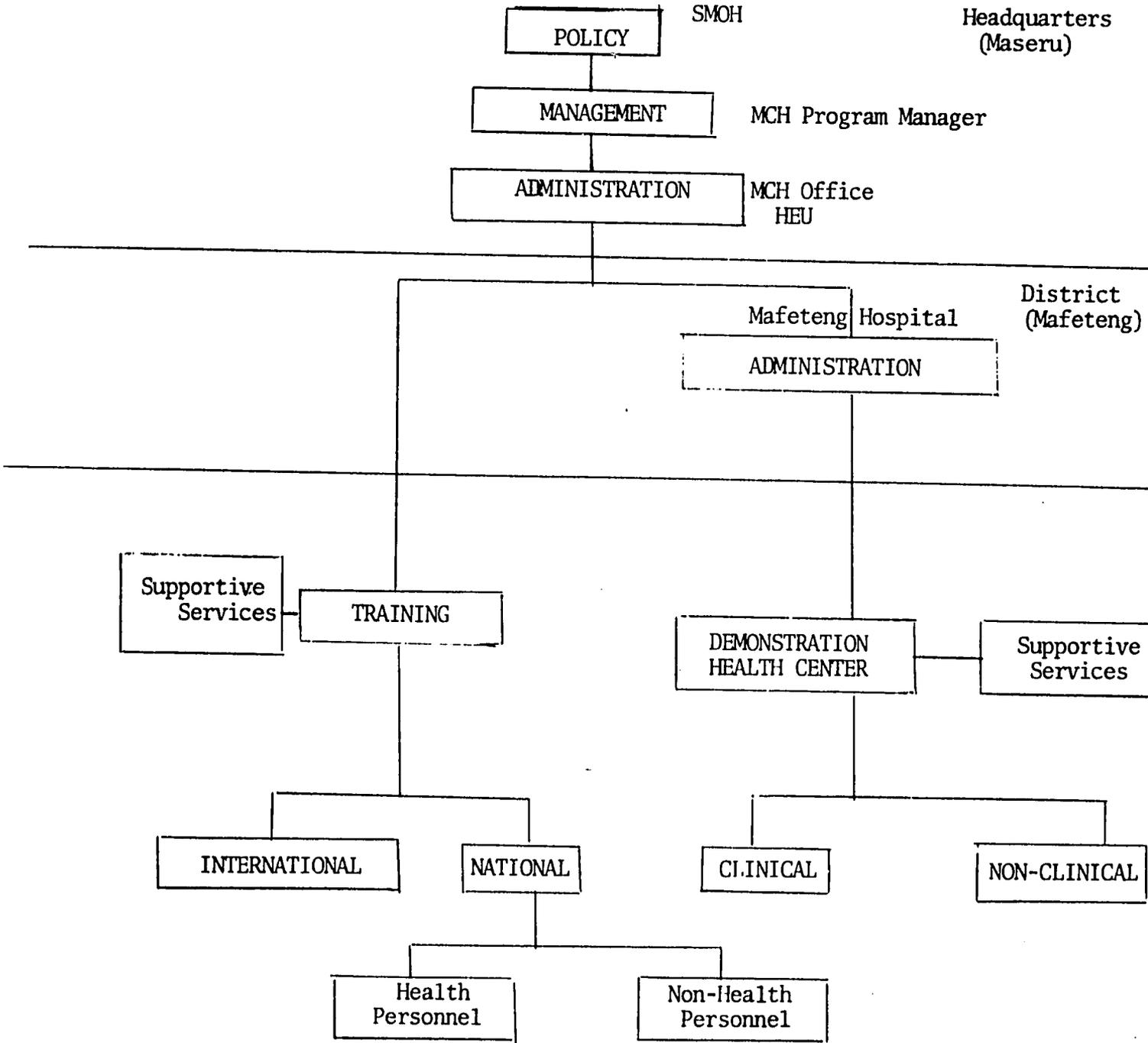
From the beginning, Principal counterparts were prepared to gradually assume full responsibility for the component programs, health education and maternal/child health.

The upgrading of PHN to manage the government's MCH Program was recognized in 1974 as a positive alternative to a medical officer, due to the scarcity of physicians in Lesotho.

In that this requires basic institutional changes in the hierarchies of nursing and medicine, the recognition of this post was less easy to accomplish. A comprehensive 8 months training program was developed for the public health nurse counterpart and funded by UCSC in 1974 following acknowledgement by Ministry of Health Headquarters of the need to develop such a post. Sister Tsidi Ntsekhe completed on-the-job and out-of-country training to prepare her for these responsibilities, returning in April, 1975. As a result of her untimely death in July, 1975, Sister Manthua Seipobi was officially designated as principal counterpart.

She returned from her highly individualized UCSC sponsored training program in July, 1976, to begin to assume her management role. Together with the MCH technician, nursing personnel, health education unit (HEU) and headquarters staff, concurrence was achieved that the following organizational and staffing projections should be built upon over the next development period to continue the government's MCH program in general and Tsakholo Demonstration/ Training Center in specific:

FUNCTIONAL CHART TSAKHOLO



PROJECTIONS FOR TSAKHOLO 1976 - 1980

PERSONNEL - TSAKHOLO

1976

G.O.L. (FULL TIME) TSAKHOLO

2 D.Q. MCH/N. Pract.

1 Health Aid

1 Scrubber

1 Nightwatchman

1 Health Asst.

1 Driver/Operator

1980

G.O.L. (FULL TIME) TSAKHOLO

1 NP Clinic Mgr. (Upgraded post by 1978)

1 NP Tutor (Upgraded post by 1978)

\*1 D.Q. Nurse (Clinical Instruct. appt. by 1977)

\*1 Nurse Asst. (1977)

\*1 Nutritionist (1978)

1 Scrubber (1976)

\*2 Health Aids (by 1977)

1 Sr. Health Asst. (by 1976)

1 Driver/Operator (by 1976)

\*1 Secretary Clerk (by 1977)

\*1 Cook (by 1977)

\*Housekeeper/Laundress (by 1977)

1 Nightwatchman (1976)

\*3 VHW paid supervisors (1 ea. yr. '77 - '78 - '79)

\*30 VHW's (unpaid) 5 - 1977  
10 - 1978  
30 - 1979

1 Handyman/Gardner (1977 - '78)

G.O.L. (PART TIME) MASERU

1/4 MCH Officer (Hdqtrs.)

1/4 District PHN Practitioner

1/10 District MO/Matron

3/4 Personal Secretary (MCH Office)

G.O.L. (PART TIME) MASERU

1/4 MCH Officer (Hdqtrs.)

1/10 Health Planner (Hdqtrs.)

1/4 District PHN (not actualized)

1/20 District MO/Matron

1976

G.O.L. (PART TIME) MASERU  
3/4 Personal Secretary  
.....  
3/4 Administrative Officer  
.....  
Consultants as Needed

CRS (FULL TIME) TSAKHOLO  
1 D.Q. Nurse  
.....  
1 Home Ec. Ext.  
.....  
1 Health Aid

1980

G.O.L. (PART TIME) MASERU  
3/4 Admin. Officer. (MCH. Office)  
.....  
Consultants as Needed

CRS (FULL TIME) TSAKHOLO  
1 D.Q. Nurse  
.....  
2 Home Ec. Ext.  
.....  
1 Health Aid  
1 Scrubber

LFPA (FULL TIME) TSAKHOLO

\*1 LFPA Field Worker 1977 - 1978

CODE: \_\_\_\_\_ = Staff exists, posts upgraded  
----- = Staff exists, posts not upgraded  
..... = Post Vacant  
          = Post doesn't exist

Projected Staffing With Direct Responsibility to MCH Officer

MASERU

- 1 Personal Secretary (3/4 MCH, 1/4 HEU)
- 1 Administration Officer (3/4 MCH, 1/4 HEU)
- 1 Nutritionist
- 1 PHN Program Assistant (3/4 MCH, 3/4 PHN sq.)
- 2 Driver/Operators (shared with HEU)

TSAKHOLO

- 1 NP Tutor (post to be upgraded from D.Q. Nurse)
- 1 Driver/Operator (driver post to be upgraded to Driver/Operator by 1977)
- 1 Secretary/Clerk (by 1977)
- 1 Housekeeper/Laundress (by 1977)
- 1 Cook (by 1977)

Personnel under the MCH Officer will all have shared responsibilities with other divisions or units. Their job descriptions will be up-dated (if not already done so) to reflect their direct responsibilities to this officer.

CONSULTANTS

- OB Gyn 1/5 (WHO)
- MCH Program Consultant (1/4 x USAID?)

DATE: October 13, 1976 (Working Document Source August 1972)

JOB DESCRIPTION: MATERNAL AND CHILD HEALTH COORDINATION OFFICER (MCH Program Manager)

MINISTRY OF HEALTH

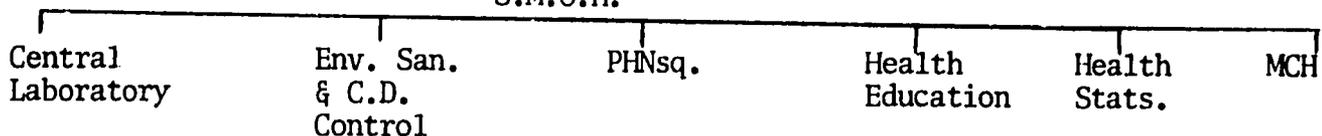
QUALIFICATIONS:

Professional education to the level of Public Health Nurse and at least 5 years demonstrated capability in a post of responsibility for other personnel. Post graduate education as Family Planning Nurse Practitioner and Management and Administration of MCH programs. Demonstrated skills in leadership and training of trainers.

RESPONSIBLE TO:

The post will be defined directly under Senior Medical Officer of Health but may need review in terms of its level of organizational relationship during the next Five Year Plan period.

S.M.O.H.



UNDER THE S.M.O.H. THE OFFICER WILL:

1. Manage the training element of the Ministry of Health's Rural Health Training Center at Tsakholo. (Plan, organize, lead, monitor)
2. Actively recruit trainees (govt., non-govt.) and coordinate all training programs at Tsakholo.
3. In an advisory capacity, assist parent hospital in continuation of demonstration services, personnel deployment, etc. at Tsakholo.
4. Assist in the development of professional education in MCH (Nurse practitioners).
  - (a) Teach management of MCH services to nurses, public health nurses, practitioners.
  - (b) Maintain and up-date professional FPNP educational materials and see to their distribution.
  - (c) Work with tutors to up-date syllabus in MCH.
  - (d) Assist as requested in district or hospital based in-service education programs.
  - (e) Incorporate MCH related data for Lesotho into on-going training programs.
5. Provide a direct linkage between the Ministry of Health and the Private Health Association of Lesotho in development of its health manpower program.

6. Assist Senior Medical Officer of Health (SMOH) and Health Education Unit (HEU) in community education affecting Mother Child Health.
  - (a) Work with the Health Education Unit in the development of appropriate community education materials, radio talks, etc.
  - (b) Actively recruit and train trainers who can provide general community education.
  - (c) Assist in the development of a supervisory plan for volunteer health workers (VHW's).
7. Assist the Senior Medical Officer of Health in recruiting, briefing and debriefing of appropriate candidates for rural health training programs.
8. Assist the Government of Lesotho in planning and coordination of its countrywide Mother Child Health Programs. (CRS, Red Cross, LFPA, WHO etc.)
  - (a) Determine feasibility and need for a Family Health Council.
  - (b) Work with the Senior Medical Officer of Health as pertains to official involvement in this capacity.
9. Assist the Government of Lesotho in its expansion plans for MCH countrywide.
  - (a) Monitor existing MCH service statistics on a regular basis and make recommendations for alteration if necessary.
  - (b) Assist the Senior Medical Officer of Health in the provision of MCH service records for government facilities and see to their distribution and proper use.
  - (c) Assist in the continued development of up-dated comprehensive MCH services.
  - (d) Assist the Senior Medical Officer of Health and the Public Health Nursing Matron in monitoring and supervising MCH activities in the district or region and in definition of future responsibility for this activity.
10. Prepare monthly progress reports for the Senior Medical Officer of Health concerning Mother Child Health and Tsakholo training.
11. Develop a medical advisory committee which meets quarterly to advise on standards of practice in Mother Child Health for Lesotho. (MCHFP nurse practitioners, etc.)
12. Work out a budget for continuation of the Mother Child Health Program.
13. Function as chief Mother Child Health Officer responsible for acquirement, supervision, dispersal and delegation of authority for MCH equipment, medical supplies, vehicles, and personnel acquired under the UCSC/MCH Project and work with the Senior Medical Officer of Health, the Health Education Unit, personnel officer, transport officer in projecting replacements or additional requirements of same.
14. Other duties and responsibilities as delegated by the Senior Medical Officer of Health.

SECTION III.

TSAKHOLO AS A NATIONAL  
RURAL HEALTH TRAINING FACILITY

1974 - 1976

### III. TSAKHOLO AS A NATIONAL RURAL HEALTH TRAINING FACILITY 1974 - 1976

#### A. Professional and Non-Professional Education

From its inception, Tsakholo was envisaged to become a rural health training facility for the country. The contractual agreement signed by the Right Honourable Minister of Health, Mr. C. D. Molapo and the Regents of the University of California at Santa Cruz, dated November 5, 1971, states:

"It is anticipated that by the end of Phase I, 1974, the MCH service in the demonstration area will be adequate to become a model for the replication of those services more extensively throughout the country as well as a center for the field training of nursing students and for in-service training of other national health personnel. Concurrently, the demonstration activity will also serve as a model for the development of MCH/CS programs in other countries."

The Ministry of Health made requests to many donors to acquire assistance with this development. Noteworthy is a letter dated October 25, 1973 to the Ministry for the British High Commission acknowledging their intent to submit a project "for a Training Center in Maternal and Child Health Services, to be built at the Tsakholo Government Clinic." This project was submitted and funded "in principle" by the British Government the following year.

In January, 1974, the Ministry of Health with representatives from Central Planning and Finance, met with UCSC personnel, the local technicians and counterparts, and the USAID/POP representative from Washington, D.C., to draft a proposal for Phase II of the UCSC/MCH Project. The local OSARAC (USAID) desk officers also attended. This document was never signed; however, the MCH Project continued to carry out the agreements reached locally concerning the second phase of what had been started. From a field perspective, there seemed to be confusion encountered at top levels spreading from Washington, D.C., to London, Nairobi, to Mbabane, to Maseru. Fortunately, this had little impact on the district and demonstration center staff who took the initiative to continue to pursue what they had agreed upon. The following training achievements took place at Tsakholo:

1. Her Majesty, Queen 'Mamohato, had dedicated the classroom and waiting huts used for patients and community teaching purposes on November 3, 1973.
2. The D2 house at Tsakholo was vacated by the UCSC technician in July, 1974 and re-equipped to provide temporary dormitory space for from 6 - 8 trainees.
3. A double "faculty rondavel" with plumbing, was completed with UCSC self-help funds.
4. In January, 1974, the government of Lesotho had approved "in principle" the training of the Public Health Nurse counterpart in management of MCH services countrywide as well as management of Tsakholo as a training facility.

5. The MCH counterpart achieved on-the-job and out-of-country training in this aspect of her work, returning to gradually assume full responsibility in April, 1975. Unfortunately she died shortly thereafter in July, 1975.
6. A second MCH counterpart began on-the-job and out-of-country training towards achieving this responsibility, returning in August, 1976.
7. On October 21, 1976, nursing matrons, other senior officers and headquarters staff under the Permanent Secretary for Health concurred with the recommendation that the MCH post be established as envisaged to reflect program management in MCH and management of the continued development of the training element at Tsakholo.
8. Training activities began at Tsakholo in September, 1974. Since that time:
  - a) In 1974, 66 trainees accomplished a total of 1488 man-hours of fieldwork training at Tsakholo.
  - b) In 1975, 88 trainees accomplished a total of 4448 man-hours of fieldwork training at Tsakholo.
  - c) In 1976, 44 trainees accomplished a total of 4368 man-hours of fieldwork training at Tsakholo (through November only).

In 1976 staff deficits (Health Assistant withdrawn in January, 1976, Home Economist resigned in April, 1976) made it impossible for existing clinic staff to cope with the heavy patient caseload plus students. Some of the training programs had to be cancelled. Nonetheless, in terms of man-hours of training, 1976 was comparable to 1975 as trainees were fewer but they came for longer periods of time.

#### B. Management and Administration

On October 21, 1976, concurrence was reached in the office of the Permanent Secretary with Senior Officers and Nursing Matrons to the following management and administrative set up to achieve a full complement of staff and accommodation for Lesotho's Rural Health Training Center at Tsakholo. Although direct country assistance from UCSC will be withdrawn at the close of 1976, it is with trust that this modest beginning will be recognized as critical to countrywide development and will continue to be given the Government support needed to move forward.

C. TRAINING PROGRAMS AT TSAKHOLO 1974-76

mo/yr	Type	No.	Length	Comments
Sep/74	Student Nurses Q.E. II	15	2 days	Deficit, MCH fieldwork for school of Nsg. finalists
Sep/74	Various fieldworkers & staff	30	4 hrs	Orientation to model village concept & surveying
Oct/74	Student Midwives Q.E. II	7	3 days	MCH deficit training for finalists
Nov/74	P.H. Orientation Nurses	5	3 wks	MCH fieldwork including health education and comm. educational activities
Dec/74	LFPS Nurses	4	5 days	MCH/FP Practitioner fieldwork
Feb/75	Student Midwives Q.E. II	6	3 wks	Planned curriculum MCH fieldwork
Mar/75	S/N Scott Hospital	2	5 days	Orientation to management of rural MCH services
Mar/75	Student Nurses Q.E. II	5	2 wks	MCH fieldwork for finalists. An additional 6 finalists were cancelled due to instructor and staff shortage.
Apr/75	Pupil health assistants	10	4 days	Health education & 2-way radio
Apr/75	Mafeteng/Tsakholo staff	7	2 days	Two-way radio communication
May/75	Public Health Nurses	5	3 days	Re-orientation for PHN finalists
May/75	LFPA Nurses	4	3 days	Infertility workup, counselling MCH/FP Practitioners, fieldwork
May/75	Fieldworker-Scott Hospital	1	2 wks	Orientation to demonstration center and community health activities
June/75	Health assistants	6	1 wk	H.H. Enumeration - model village survey
July/75	LFDS Nurses	21	3 days	Demonstration/refresher course
Aug/75	Home Economist Intern (International Student)	1	4 wks	Interned for fieldwork from Swaziland
Sep/75	Health Assistants	6	2 wks	Field examination
Nov/75	Pupil Dispenser	12	1 wk	Field experience rural health team
Dec/75	Survey Interviewers	2	2 days	Field orientation to model village survey
Jan/76	Survey Interviewers x 4	4+1	1 wk	Supervisor and Interviewers conducted model village survey - Ha Phechela

TRAINING PROGRAMS AT TSAKHOLO 1974-76 (continued)

<u>mo/yr</u>	<u>Type</u>	<u>No.</u>	<u>Length</u>	<u>Comments</u>
Feb/76	Student Midwives Q.E. II	6	1 mo	Planned curriculum field-work in MCH
May/76	General Nurses	7	2 wks	Deficit training rural MCH for seven new graduates who had written exams
Jul/76	LFPA Nurses	4	4 days	On-the-job training toward certification as MCH/FP nurse practitioner under Dr. Ben Major
Sep/76	L.N.T.T.C. PCV	1	3 days	Orientation to Tsakholo and rural health
Oct/Nov 1976	Student Nurses Q.E. II	21	6 wks	Deficit training, rural health

D. Proposed Development

STAFFING/TSAKHOLÓ, 1976-1980

Abbreviations

- D.Q. = Double Qualified
- GOL = Gov't of Lesotho
- N.P. = Nurse Practitioner

Headquarters  
(Maseru)

POLICY

S.M.O.H.

MANAGEMENT

'76 MCH Program Mgt.  
(coordinator)

ADMINISTRATION

'76 Personal Sec 3/4 x  
Admin. Officer 3/4 x

District

(Mafeteng)

ADMINISTRATION  
PARENT HOSPITAL  
M.O.  
Matron  
P.H.N. Pract. '78

Tsakholo

SUPPORT SERVICES  
Driver/Op '76  
Sec/Clerk  
House-keeper  
laundress '77  
Cook '77

TRAINING  
N.P. Tutor '78  
Post Upgraded by 1978

DEMONSTRATION CENTRE  
N.P. Clinic Mgt. '78  
Post Upgraded by 1978

SUPPORT SERVICES  
Driver '76  
Scrubber  
Nightwatchman  
Gardener -  
Handyman '77

INTERNATIONAL TRAINEES  
Nutritionists  
Educators  
Nurse Pract.  
Nurse Asst.  
Health Insp.  
Health Asst.etc

NATIONAL TRAINEES  
HEALTH  
Nurses  
Midwives  
Dispensers  
Health Ass'ts.  
Nurse Pract.  
Nurse Assts.  
NON-HEALTH  
V.H.W.'s  
Community Groups  
Teacher Interns  
Home Ec. Ext.  
Nutritionists

CLINICAL  
M.O.H.  
D.Q. Nurse/Cl.  
Instruc. '77  
Nurse Assistant '77  
Health Aides x2  
C.R.S. PROGRAM  
Health Aide x1  
D.Q. Nurse '76  
Home Ec. Ext. x2  
'76

NON-CLINICAL  
M.O.H.  
S Health Ass't '76  
3 VHW Sups(30 VHW's)  
Nutritionist  
L.F.P.A.  
1 Fieldworker

E. SUMMARY

Lesotho's Second Five-Year Development Plan states:

2.32 Among the lessons which can be learned from the experience of the First Plan are:

- 1) A tendency to underestimate the time required to translate ideas into development projects, to negotiate funds and to begin implementation.
- 2) The need for a manpower plan on the basis of which young women and young men can be encouraged to undertake training and education to meet the most urgent national needs.
- 3) The necessity to identify major bottlenecks quickly and to take steps to break such bottlenecks.

Under the UCSC contract, Tsakholo as a national demonstration health center and as a training center set up to "meet the most urgent national needs" has far out-stripped expectations and performance in comparison to other modest fully localized development programs. In addition, three principal counterparts (two PHN's, 1 Health Educator) had achieved skills to the level required for full responsibility for their posts.

SECTION IV

EXPANSION OF MCH SERVICES COUNTRYWIDE

IV. EXPANSION OF MCH SERVICES COUNTRYWIDE

A. Background

UCSC was asked by the Ministry of Health to assist in expansion of MCH services countrywide in January 1974. Several inputs were necessary for this expansion:

1. Training of Basotho nurses, nurse-midwives and other health personnel to a level where they could accept and perform these new responsibilities, in conjunction with their existing workload.
2. Provision of supplies and equipment to carry out the work for which they were trained.
3. A plan formulated by the Ministry of Health, for the expansion of services, which included capital expenditures for up-dating facilities (UNFPA proposal).
4. Organizational changes within the Ministry of Health.
5. Coordination with other government and non-government agencies or institutions likewise concerned with MCH in Lesotho.

## B. Training for Expansion of MCH

### 1. MCH/FP Nurse Practitioners

In November, 1973 at the invitation of the Ministry of Health, UCSC sponsored a countrywide training program in conjunction with a KAP survey of health personnel which provided valuable baseline data on which to plan future training inputs. Eighty-five percent of all government nurses and twenty-five percent of all mission nurses participated in this program along with district doctors, health assistants, ward attendants, etc.

Training materials, developed at Tsakholo, were tested in terms of applicability for countrywide programs. Revisions of professional training materials were an important outcome of this initial countrywide field test.

Another important outcome was realization by the Ministry that deficits existed in the basic curriculum of nurses and nurse-midwives which negated actualization of an expansion plan. It was the intent that deficit training be provided as fast as possible to prepare health professionals, particularly doubly qualified nurse-midwives, for expanded responsibilities and for responsibilities in rural settings in particular. The upgrading of faculty posts in the School of Nursing and up-dating of nurses with an actual or potential role in clinical instruction were recognized as high priorities in achieving this goal, including continued development of a core staff at Tsakholo.

Towards this end scholarships were accepted by the government from a variety of sources for out-of-country training to a level of MCH/FP nurse practitioners. At the same time development of a localized curriculum took place. Firm steps were taken to tie in the activities and upgrade the skills of closely related Basotho organizations such as the Lesotho Family Planning Association (LFPA). Appendix E lists the MCH/FP certificates achieved by Basotho nurses between 1973-1976.

It should be noted that four candidates achieved MCH/FP certificates through completion of a local curriculum. These four nurses, all from the Lesotho Family Planning Association, were awarded certificates of completion in July, 1976, and portions of their curriculum were accomplished "on the job." All four are fully engaged, day to day, in practicing the skills for which they were trained. About one-half of those who were certified out-of-country are currently providing MCH services directly or indirectly within the country.

Given the limitations of nurses available at any one time for training, the continued availability of out-of-country scholarships in MCH/FP tended to act as a disincentive in 1976 to further localization of a certificate program.

### 2. Training of Trainers

It was recognized by the government that deficits would always exist in provision of health education to the public unless a sufficient number of health personnel were up-dated to include health education as part of their existing jobs. The Basotho acknowledge their role as health educators.

However, they lacked skills in understanding the process of education, particularly the techniques of effective community education and planning for the educational needs of patients, community and staff in their regular jobs.

In addition to the activities of the Health Education component of the project, a program of Training of Trainers (TOT) was sponsored by UCSC in Lesotho for twenty Basotho in key positions who would be returning to roles where they could apply the techniques learned. The program was very intensive, lasting two full weeks, and all participants received certificates of completion from UCSC as well as National University of Lesotho, Division of Extra-Mural Services (DEMS).

The impact of this short but effective training input directly into Lesotho has had a multiple effect on the educational efforts in the country. The MCH office and Health Education Unit have incorporated some of the techniques into regular training programs for nurses and others. In addition, some of the participants have proven to be effective planners of decentralized educational programs in their districts or institutions. Two examples of the latter are Thaba-Khupa Farmers Training Center and Lesotho National Teacher Training College, where individuals were identified to be trained as trainers. Their preparation was coordinated through the Health Education Unit and included content preparation and training materials from the MCH Project. This approach has been very effective and is recommended for the future.

With continued support from project staff several districts have since then organized district-based weekend workshops covering a variety of health topics, such as care and administration of vaccine, management of contraceptive services and problems of infertility. This decentralization of effort should continue to be encouraged.

The project has assisted the government in standardizing training requirements that appear necessary for up-dating Basotho staff to MCH responsibilities, in both in- and out-of-country training programs. Successful application in the field is not always achieved. Some of the constraints were:

1. Lack of clarification of (or commitment to) the post for which the candidate was being prepared.
2. Lack of support from immediate supervisory staff.
3. Overall deficit preparation or experience of the candidate. These were not necessarily formal academic or age related deficits.
4. Insufficient time provided for briefing and debriefing candidates prior to and following their out-of-country training. Part of this was to have been orientation at Tsakholo for all candidates.

### 3. Training of Management Staff

Several posts were recognized as key posts in nursing that should receive immediate short-term training in management of MCH services. These were:

1. Chief Matron of Nursing
2. Matron of Public Health Nursing
3. MCH counterpart (MCH program manager or coordinator)
4. Matron of Mafeteng District

All of the above accepted scholarships aside from number two, who declined due to other commitments. In the case of number three and number four the management training was combined with certification as MCH/FP nurse practitioners and TOT (Training of Trainers) certificates.

In addition it was the intention of the WHO program to see that training of public health nurses include the necessary inputs to become capable of planning and supervision of MCH services in the districts. The project worked very closely with the WHO public health nurse to assist in accomplishing these goals. Lack of regular regional or central public health nurse program meetings during the 1974-1976 period however, set serious constraints on the achievement of a country-wide direction for this group of manpower. Nonetheless, three of the districts began to plan and implement specific up-dating of efforts in MCH in their districts and the project through the Ministry of Health was able to respond to their planned requests for assistance, whether with training programs, training materials, equipment and supplies or sometimes just moral support.

#### C. Up-Grading MCH Services Countrywide

Rural Lesotho, in terms of government medical personnel, depends heavily upon expatriate physicians who are usually on two year contracts. Although many are very enthusiastic about planning for improved public health services, particularly MCH, few are in the posts long enough to see a plan through to its implementation. For this reason the project encouraged district medical officers to appoint, officially or unofficially, a qualified Masotho with whom continuity of district health effort can be implemented and monitored. Often the logical person is the district public health nurse or matron or sometimes both. This approach has been modestly successful for health expansion in Leribe (Buthe Buthe), Mafeteng and Quthing districts. Scott Hospital Regional Program created and filled a post of public health nurse for its public health program. Mohales Hoek has a public health nurse prepared for expanding and up dating services in that district; however, staff deficits required her presence in Maseru for a bulk of the 1975-76 period.

Some of the districts have become self-reliant in developing and implementing their plans, using Maseru based staff for consultative purposes. Staff shortages being ever present both in the past and probably in the future, necessitates that decentralized capability be built upon without introducing new manpower in a budget that is barely operable for the support, structure and manpower already defined.

Expanded services not only require manpower but equipment and supplies, transport systems and sometimes capital expenditures to up-date antiquated facilities or to build new facilities. Many proposals and projections from central planning were reviewed by this project for up-grading of facilities. The priorities for expansion appeared to change regularly and the guidelines for this rationale were not always apparent. It became the intent of the project, through the Ministry of Health, to support those districts which:

1. had a plan or wished assistance with a plan for expansion of services in their district.
2. had updated facilities or plans for such facilities which reached large catchment populations or were potentially capable of serving populations where services were not overlapping.
3. had a qualified Masotho in a responsible position in the Ministry of Health who could function as a coordinator for the district plan, including identification of training requirements in her (his) district.

In order to up-grade MCH services countrywide within the constraints of the government budget appropriated for health, it was recognized by all personnel that some existing facilities were not being developed to their maximal potential as service and training resources. These were both private and government sponsored.

The Ministry of Health requested the project to assist in the development, to its full potential, of the MCH Clinic at Queen Elizabeth II Hospital. Also interested in this activity were staff and resources from LFPA. Certain administrative responsibilities, once clarified, led to an active participation by both government and non-government staff in this endeavor, which was in its early stages at the completion of the UCSC project in December, 1976. This activity continues to be coordinated by the Ministry's MCH office.

A similar pattern of government and non-government resources sharing responsibility for comprehensive MCH services in the districts was attempted in Leribe, Mafeteng and Quthing under the umbrella of the government hospitals. Some were more successful than others for different reasons, however in principal, all organizations involved agree to this direction for the future, to avoid the pitfall of single purpose facilities.

As in other parts of the world, single purpose facilities do have a role when specific high quality services are combined with fulfilling community needs for educational or training purposes. This is the premise for assistance extended to LFPA which continues to have a vital role to play when full localization of MCH/FP certification is a reality. They have already been fulfilling a role as clinical instructors when student nurse and student midwife experiences require observation of activities involved in managing contraceptive and infertility cases, and the demand for such clinical experience is likely to increase.

#### D. Monitoring Impact of Services

##### 1. Health Statistics

During the 1974-76 period, the Ministry of Health received assistance from World Health Organization with routine collection of health statistics, including revision of forms used for reporting. Certain criteria had been set by UCSC for monitoring activities in MCH and some of these were reflected in the new forms.

For purposes of comparability, the project continued to monitor health statistics returns for Tsakholo and the figures reported in this document are a reflection of those results.

The project initiated a system for routine collection of service statistics for contraceptive acceptors in Mafeteng district. This was discontinued after the initial pilot effort in 1973-74.

## 2. Demographic Data

Interest in demography was apparent in Lesotho prior to the initiation of the project and Lesotho had a fully qualified demographer in the Bureau of Statistics. It was beyond the scope of the project to initiate a system for collection of primary statistics to the level required for sophisticated demographic analysis. The use of data available and reported was included in the coursework for nurses and particularly the counterparts. Data of special interest in maternal and child health is included in appendix E .

## 3. Supervision of MCH Services

Albeit lacking in support structures to be effective (transport, manpower, and direction) the Ministry of Health had designated in 1968 that this responsibility belonged to public health nurses in Lesotho. The project supported this intent with training programs and guidelines for up-dating their effectiveness. In the absence of medical direction for a Unit of Maternal and Child Health for the country, and with concurrence from the Ministry of Health, the principal public health nurse counterpart was prepared for leadership and management of this responsibility for the country. The level of support structures such as staff and budget had not been clearly committed and documented by the end of project status, however a projected plan had been approved in principle by Ministry of Health headquarters. The extent to which foreign aid would be sought for continued assistance in this major endeavor is obscure.

This is compounded by the local recognition of the need for a coordinating council through which various international donors and local organizations can channel their requests, share their experiences and work towards achieving maximal use of existing and projected program resources. A working committee had begun a voluntary effort towards this achievement, which the principal counterpart chaired at the completion of UCSC input. The extent to which a performance level can be maintained is negligible without local government and non-government commitments and probably necessitates continued outside donor assistance.

## 4. Research Related to MCH in Lesotho

Between 1972 and 1976, UCSC assisted the Ministry of Health with several surveys which served to assist in both planning and monitoring public health services in Lesotho. The following abstracts from the survey reports will illuminate the general nature of each document. These reports are referenced in appendix A :

### a. Village Leader Survey, 1972 - Abstract

The data presented herein from the baseline survey conducted at Tsakholo in 1972, are intended to supplement continuing government surveys and record systems developed for the demonstration zone. A total of 176 village leaders were interviewed about modern and traditional health related matters concerning themselves, their village, and their people. This report includes the results and methodological shortcomings of the survey. Thirty statistical tables are contained in appendix A; a copy of the questionnaire is contained in appendix B.

b. KAP (Knowledge, Attitudes and Practices) of Doctors and Nurses in Lesotho, 1973  
Abstract

During November of 1973, prior to and in conjunction with a country-wide training program, a questionnaire about knowledge, attitudes and practices (KAP) as regards reproduction, contraception and abortion was administered to all available health personnel in Lesotho. A total of 256 questionnaires were collected from the various types of personnel (single and double-qualified nurses, public health nurses, etc...). Basic personal and demographic information was also included on the questionnaires administered. Tables and figures describing the results are presented and discussed along with inferential findings for several hypotheses of interest.

c. Retrospective Survey of Contraceptive Acceptors in Lesotho (RSCAL), 1975  
Abstract

In April of 1975, a retrospective survey of contraceptive acceptors (RSCAL) was undertaken in Lesotho by the University of California Santa Cruz at the request of the Ministry of Health and the Lesotho Family Planning Association to evaluate existing medical record systems, examine contraceptive acceptance patterns during 1972 to 1974 and provide baseline data for program planning and evaluation. Summary tables and statistics on demographic characteristics are presented on all 4377 contraceptive acceptors during the study period.

To elicit more specific information about contraceptive experience, a random sample of 502 of the women was selected and an extensive questionnaire was administered to 293 of the women of this sample. Several reasons for the low response rate are discussed and descriptive results of the sample are presented and discussed.

d. Model Village Survey, Ha Pechela, 1976 (Tsakholo Demonstration Zone) - Abstract

This document reports on the motivation and objectives of the model village concept and demonstration project and the subsequent necessity of an evaluative component to the program. The three-part survey which provides this component was undertaken to fulfil several objectives including collection of baseline data on the village itself, pilot testing the questionnaire for future use in Lesotho, and to supplement clinical and other data gathered in the Ministry of Health's demonstration zone at Tsakholo.

Attention was focused on the heads of households, women in the fertile years (15-49), and older women (over 50) to obtain information on a broad spectrum of topics concerning the health and health-related practices of all the inhabitants of the designated village. The results of this three-part survey are presented and discussed and recommendations are made to improve future evaluative efforts of program impact.

e. KAP (Knowledge, Attitudes and Practices) of Doctors and Nurses in Lesotho, 1976  
Abstract

In July, 1976 a follow-up survey was accomplished on 226 health personnel as regards their knowledge, attitudes and practices concerning reproduction, contraception and abortion. This report includes comparative results from the 1973 survey and correlations with certain demographic characteristics of the respondents.

In addition to the above surveys, the Ministry of Health has assisted various other government and non-government departments with research related to the broad topic of maternal and child health.

The Scott Hospital Regional Project at Morija has duplicated the Model Village Survey in two of its catchment areas. Late in 1976, the government assisted a team from UCLA with a comprehensive nutrition survey from a country-wide sample. These reports are in progress and are not included in the bibliography, appendix A, which lists various surveys and reports pertaining to MCH available by the end of 1976.

SECTION V

CONSULTANT INPUT - UCSC

## V. CONSULTANT INPUT

### A. Routine Team Consultants

#### 1. Obstetrician-Gynecologist, Field Director

During the first phase, 1972-1974, the project received one-third time obstetrician-gynecologist field director input into the Lesotho program. During this period, Lesotho was part of a larger regional program in maternal and child health shared with the Gambia and Dahomey in West Africa. Viewing Lesotho from this perspective had both advantages and disadvantages. The advantages were the rich experiences which were shared and helped the Basotho and technicians perceive the demonstration activities from a more global perspective, learning from both productive and non-productive experiences from other parts of Africa. The principal disadvantages were the turn-around-time involved in communication and, as the program developed, the pressing need for more technical assistance from the medical director. As the project matured, medical assistance was achieved in part from several national as well as expatriate staff who lived and worked in Lesotho. The overall support and direction of the project faltered following the Phase II planning sessions in January, 1974, when it was no longer clear what the linkage would be between the previously existing structure and the new structure. The technicians had been delegated considerable responsibilities but a plan of action had not been signed for Phase II. This was perhaps less of a problem to the Basotho who continued to pursue the Phase II plan as if it existed, and it became the important role of the technicians to continue to work towards localization of as much responsibility as could be absorbed, according to the plan agreed upon by country nationals.

#### 2. Administrative Officer

During Phase I of the project, the Lesotho team agreed to delegate certain administrative responsibilities to a collectively described "supply dispersal officer" due to the very large input of supplies and equipment during the starting up period. The administrative officer for the project, located in Benin (Dahomey) worked one-third time in Lesotho with the technicians, the project secretary, administrative, financial, and medical stores personnel at Ministry of Health headquarters to set up a system for absorbing personnel salaries, vehicle maintenance, customs agreement, and other commitments specified in the terms of agreement between the Ministry of Health and UCSC. It was attempted to build the necessary control into the existing system insofar as possible. One difficulty, aside from turnaround of staff, was absorption of the "supply dispersal officer" salary at the level and post agreed upon in Phase I, which was to have been redescribed for more central, Maseru based, responsibility in Phase II. This left a deficit in both project and government support systems. The technicians and principal counterparts were faced with many administrative details that could have been handled by a locally qualified administrative person.

### B. Consultants and Special Programs

Over the five year period, the Ministry of Health and UCSC sponsored several special activities in support of a broad and meaningful public health program for Lesotho. The following are summaries of these activities:

### 1. Benin Conference

The Ministries of Health of Lesotho, The Gambia and Benin as well as other organizations of the host country, Benin (formerly Dahomey), participated in a regional conference on maternal and child health sponsored by UCSC. This occurred in November - December 1972. Representing Lesotho were the two UCSC technicians and four principal counterparts. This was excellent preparation for the future experiences the counterparts would have in international conferences and the learning situations provided an excellent perspective for everyone involved.

### 2. International Students

Two students from the UCSC campus in Community Studies fulfilled their field experience and made significant contributions to the development of the rural health project at Tsakholo. Ruth Wilson (Masentle) and Ross Nadel (Qhabo) arrived in January 1973 and 1974 respectively to assist in projects initiated by the Basotho in that area. They were counterparted and assisted by country nationals in the completion of a survey renovation of the clinic, work with women's groups, and establishment of a poultry scheme at the demonstration health center. It was hoped that this would stimulate internships for Basotho from the local University in rural development projects.

### 3. Training of Trainers (TOT)

The input of this certificate program directly into Lesotho has been mentioned previously in this document. Twenty personnel selected by the Ministry of Health participated in this intensive two week program geared to team building and problem solving with particular emphasis on the importance of the educational process. The program was highlighted by the awarding of certificates of completion, recognized by both UCSC and the National University of Lesotho, to the twenty completers. Assisting in this effort were Mr. Richard Keyes and Mr. James Williams, in addition to Benin based and Santa Cruz based UCSC personnel.

### 4. Research Assistant in Family Planning

In April 1975 through September 1975, Ms. Elizabeth Burns resided in Lesotho to assist the government and LFPA in development and implementation of the 1975 RSCAL Survey described earlier in the report. The high level of rapport established with individuals and organizations concerned with the issue in Lesotho is indicative of her successful approach in the assignment.

### 5. Biostatistician

In the final year of the UCSC Project, 1976, several surveys had been completed and raw data had been used from two of the surveys for program planning. However, none of the surveys had been completed to report form with the desired statistical and comparative inferences included. From February 1976, through May 1976, the Ministry of Health received consultation from a UCSC biostatistician, Mr. Harrison Stubbs, who's primary responsibility was to work with the MCH technician in completion of all survey findings to report form. This was accomplished and this document includes abstracts from these reports under "Research."

6. Family Planning/Nurse Practitioner Training

In July, 1976, four nurses received nurse practitioner/family planning certificates, after completing in-country training under the direction of Dr. Ben Major, a UCSC consultant.

SECTION VI

RECOMMENDATIONS

1. Outside consultative, material and logistical assistance should be identified as needed to continue:

- (a) localized family nurse practitioner training;
- (b) monitoring of the village health volunteer or Traditional Birth Attendant Program at Tsakholo;
- (c) development of a coordinated Family Health Council;
- (d) organization of a unit of Maternal and Child Health Services within the Ministry of Health;

2. Institutional support should be sought for medical input (OB-Gyn., pediatrics, etc.) for the localized nurse practitioner training program.

3. Local full time administrative capability should be designated to assist in the continued development of the infrastructure for Tsakholo as a national training facility in rural health.

4. Schools of nursing should be assisted as requested with tutorial staff as well as curriculum advisers while local nursing faculty are updated in family nurse practitioner skills.

5. Institutions should continue to receive government support to prepare them as field training facilities.

SECTION VII

APPENDICES

APPENDIX A

REFERENCES

1. Ministry of Health, Government of Lesotho, "Tsakholo MCH Demonstration Project Progress Report 1974."
2. Stubbs, H.A. and P.K. Goodale, "Retrospective Survey of Contraceptive acceptors in Lesotho 1972 - 1974," A report to the Ministry of Health, 1975, UCSC/AID Contract No AFR-799.
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10. Pekeche, B., "Survey of Four LFPA Service Centers, 1976, Lesotho Family Planning Association, Maseru, April 1976.
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14. Lesotho Family Planning Association, "Survey of Attitudes, to Family Planning in Lesotho", Pub. Lesotho Distance Center, Maseru, April 1976
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APPENDIX B

UCSC/MCH PROJECTPHASE I PLANNING TARGETS AND ACCOMPLISHMENTS AS OF DECEMBER, 1974

TARGETS ESTABLISHED AT UCSC PRIOR TO FIELD ASSIGNMENT, FEBRUARY 1972	TARGETS ESTABLISHED BY UCSC TECHNICIANS, COUNTERPARTS AND PROJECT STAFF, APRIL, 1973	ACCOMPLISHMENTS BY THE TEAM AT THE END OF THE YEAR 1974
<p>1. By the end of the first year the Tsakholo Health Center will be fully established as a model rural health center for training where all levels of health and related personnel can participate in rural basic health services which integrate health teaching and child spacing.</p>	<p>1. Same, plus.</p> <p>...by the end of Phase I, Tsakholo Center will become the foundation for a National Rural Health Training Center in MCH.</p>	<p>1. Accomplished. Government intention documented in January, 1974.</p>
<p>2. The staff at the Tsakholo Health Center will have been trained in health teaching methods and identification of high risk mothers. Staff includes two nurse-midwives, health assistant, health aide, driver, public health nurse.</p>	<p>2. Same, with the following revisions to numbers who will have been trained: two health education counterparts, two public health nurses, three health aides, one home economics assistant, two project secretaries, two nurse midwives, one health assistant and three drivers.</p>	<p>2. Accomplished in total by Mar., 1974.</p>
<p>3. Ten volunteers will have been recruited and trained and will be doing simple health teaching in their village.</p>	<p>3. Ten village leaders will have been identified and trained and will be doing simple health teaching in their village.</p>	<p>3. Accomplished in part. Absence out-of-country by the principal counterparts disrupted this progress.</p>
<p>4. Six thousand patients seeking service at the Tsakholo Health Center will have benefited from the improved service.</p>	<p>4. Eight thousand patients seeking service at the Tsakholo Health Center will have benefited from the improved services.</p>	<p>4. Accomplished in total in terms of number reached. "Benefited from" is difficult to evaluate. In general, patient visits were recorded for 1972, 1973, 1974. In addition, during that</p>

TARGETS ESTABLISHED AT UCSC PRIOR TO FIELD ASSIGNMENT, FEBRUARY 1972	TARGETS ESTABLISHED BY UCSC TECHNICIANS, COUNTERPARTS AND PROJECT STAFF APRIL, 1973	ACCOMPLISHMENTS BY THE TEAM AT THE END OF THE YEAR 1974
		<p>4. cont...  period 1785 first visit antenatals and 3031 first visit preschool cases were reached regularly with improved services</p>
<p>5. Two hundred and seventy-five prenatal patients will have benefited from improved services and from health teaching.</p>	<p>5. Six hundred prenatal patients will have benefited from improved services and from health teaching.</p>	<p>5. In 1974 alone, 836 first visit antenatals were registered. 1785 new cases had been reached in 1972, 1973, and 1974 collectively.</p>
<p>6. The Division of Health Education will have been established within the Ministry.</p>	<p>6. The Division of Health Education will have been established within the Ministry.</p>	<p>6. Accomplished and documented in February, 1973.</p>
<p>7. Health teaching methods will have been documented.</p>	<p>7. Health teaching materials and methods will have been developed, pre-tested, evaluated and documented.</p>	<p>7. This continues to be an on-going process.</p>
<p>8. The following will have attended training courses which include health teaching methods:</p> <ul style="list-style-type: none"> <li>60 nurses, government</li> <li>5 nurses, CRS</li> <li>40 teachers</li> <li>62 student nurses</li> <li>18 student midwives</li> <li>25 home economics assistants</li> </ul>	<p>8. Same with revisions as follow:</p> <ul style="list-style-type: none"> <li>200 nurses, gov't and non-gov't</li> <li>400 teachers</li> <li>80 student nurses</li> <li>18 student midwives</li> <li>40 home economics assistants</li> <li>10 student health assistants</li> <li>20 health assistants</li> <li>6 health inspectors</li> <li>40 agric college trainees</li> </ul>	<p>8. Health teaching methods and family planning education and information reached:</p> <ul style="list-style-type: none"> <li>214 single and double qualified nurses '72-'74, teachers '72 only</li> <li>24 student nurses '73, '74</li> <li>12 student midwives '73, '74</li> <li>48 home economics assistants</li> <li>5 student health assts (0 enrolled '73 '74)</li> <li>12 health assistants</li> <li>7 health inspectors</li> <li>0 agric college trainees</li> <li>150 others (youth groups, high schools, etc.</li> </ul>

ADDITIONAL TARGETS ESTABLISHED BY THE TEAM IN APRIL 1973	ACCOMPLISHMENTS TOWARDS THE TARGETS BY THE TEAM AT THE END OF THE YEAR 1974
9. A health record system will have been developed as a national model, including pediatric records, antenatal, delivery, postnatal and child spacing records.	9. This was accomplished collectively with government and non-government MCH related agencies. Records committee of the government has not met to discuss official approval.
10. A counterpart for the UCSC student will be designated from UBLs by the end of Phase I.	10. Not accomplished. There has not been any UCSC student input since December, 1973.
11. A village near Tsakholo Health Center will have been identified and a village health committee will be functioning as a first step in the development of a model demonstration village, showing improved health habits and environment.	11. Accomplished. Ha Phechela was "drawn from the hat" by the various chiefs of villages around Tsakholo. The health committee currently consists of all major branches of health related personnel in the area. After a cooperative baseline survey, the work in the village will be localized to a village health committee.
12. Thabana Morena and Malealea will have received Project supplies necessary for improving MCH services. Training will be extended to these areas, using Mafeteng Hospital as a base for this training extension.	12. Accomplished in part. The district matron was sent for out of country training to assist in this development.
13. Ten thousand people will have benefited from improved health teaching provided by the staff and counterparts.	13. Probably accomplished but "benefited" is difficult to measure.
14. As a result of the Project, 100 men and women will have benefited from child-spacing services in the pilot district.	14. Accomplished, although records are analysed for only 79 child-spacing clients.
15. Improved teaching techniques will be provided in the Q.E. II School of Nursing curriculum and as a regular sequence in the Public Health Orientation Course for nurses.	15. Accomplished in part. Curriculum has been documented in the Q.E. II School of Midwifery and Public Health Orientation course for nurses.
16. Health teaching techniques will be provided in the course work for 60 students at the Teachers' Training College	16. Not accomplished in total.

ADDITIONAL TARGETS ESTABLISHED BY THE TEAM IN APRIL 1973

ACCOMPLISHMENTS TOWARDS THE TARGETS BY THE TEAM AT THE END OF THE YEAR 1974

17. One nurse-midwife will be fully trained in IUCD insertion.

17. Accomplished. By the end of 1974, 8 nurse-midwives had received this training (see appendix A).

18. Three nurse leaders will have been trained in philosophy and approaches to providing child-spacing services as an integral part of MCH services, and will be given information on newer methods for improving MCH in general.

18. Accomplished. This was the focus in multiple in country training programs country-wide. In November, 1973, alone we reached 20 doctors, 6 health assistants, 185 nurses, 20 ward attendants, with this information.

19. An efficient system of supply dispersal and inventory will be functioning in Mafeteng District to support the needs at Tsakholo and Mafeteng District in general.

19. Accomplished but later dissolved when the project supported salary of the supply-dispersal officer was not carried in full by the government. The post was transferred to Maseru and no one is designated to continue what had been started in Mafeteng.

20. Three rondavels will be completed at Tsakholo and in use as shelter for pregnant and post-partum patients needing this facility. An intensive health education program will be provided by the staff to these patients, including instruction on maintaining a safe and hygienic environment.

20. Accomplished.

21. A classroom will be complete and in full use as a community education center, and for regular courses and meetings related to the Project.

21. Accomplished. Dedicated for use by Her Majesty Queen 'Manohato on November, 1973.

22. All Project staff and counterparts will have received basic information on health planning, and will document and carry out an individual or group project as part of this coursework.

22. Accomplished. In service education at Tsakholo emphasized this in regular planning meetings held at the Health Center. A more formalized training of trainers (TOT) course was held for two intensive weeks for 20 MOH employees including Tsakholo staff in August, 1974.

23. An MCH Section will be established within the Ministry.

23. Not accomplished. The MOH recognizes the need for coordination of MCH services for the country and has indicated intent to formalize this position within the existing administrative structure.

ADDITIONAL TARGETS ESTABLISHED BY THE TEAM IN APRIL, 1973	ACCOMPLISHMENTS TOWARDS THE TARGETS BY THE TEAM AT THE END OF THE YEAR 1974.
24. One nurse leader will begin training in administration and organization of MCH services, including child-spacing, for the country.	24. Accomplished. Sister Nts'ekhe left for this training in September, 1974.
25. A Communal garden project will be initiated at Tsakholo and will be in its early stages of development.	25. Accomplished.

APPENDIX C

FAMILY PLANNING IN LESOTHO

THE CLIENT, THE COMMUNITY, THE SERVICES  
... THE PROFESSIONAL, THE COST 1976

This report is a summary of research and official documents prepared and catalogued for the Ministry of Health on the subject by the UCSC/MCH Project over the past four and one-half years.

THE CLIENT -

The typical client seeking contraceptive service can be described from data collected as service statistics in Mafeteng District, and from a countrywide retrospective survey of modern contraceptive acceptors from 1972 to 1974.<sup>1,2</sup> There is reasonable consistency between references to suggest that the typical client is likely to be high risk in terms of another pregnancy based upon age, parity and outcome of her previous pregnancies.

1. Health Factors:

- 1.1 As a modern method acceptor 1972 - 1974 she was typically married, on the average between 25 and 29 years old, had already experienced between 3 and 4 pregnancies and had accumulated two or more living children.<sup>2</sup>
- 1.2 Fifty-eight percent of the rural acceptors in Mafeteng, were over 30 years old and had six or more living children 18 percent of the time.<sup>1</sup>
- 1.3 7.9 percent of the countrywide initial acceptors had previous experience with two or more miscarriages.<sup>2</sup>
- 1.4 In the government's rural MCH demonstration health center, 1972, the average interval from termination of one pregnancy to conception of the next pregnancy was 23 months. The average interval from termination of one pregnancy to termination of the next was 31 months. This birth interval is inclusive of pregnancies terminating in stillbirths, live births and abortion.
- 1.5 An average birth interval of 36.3 months was found amongst recent deliveries of all ever-pregnant multiparous women aged 25 - 44 years in the 1976 Model Village Survey of Ha Pechela (Tsakholo Demonstration Zone).<sup>5</sup>

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1,2 Refer to like numbered references in Appendix A

## 2. Education, Employment, Religious Preference, Marital Status

- 2.1 As part of the countrywide sample the initial acceptor had a reading knowledge of Sesotho, 98.0 percent, and was also able to read English 57.7 percent.<sup>2</sup>
- 2.2 In Mafeteng district, 1974, a rural area, 84.9 percent of the new clients that year had achieved an education of Standard 6 or less.<sup>1</sup> In a sample survey of clients at four LFPA clinics in April, 1976, 77.6 percent had attained a higher primary education or less, and 2.6 percent had achieved beyond matriculation or its equivalent.<sup>10</sup>
- 2.3 In the countrywide sample, the woman was employed in a professional capacity 16.7 percent of the time and her spouse was likewise employed 33.3 percent of the time. Her spouse was employed in the mines 29.6 percent of the time. 42.0 percent of the initial acceptors were themselves unemployed.<sup>2</sup>
- 2.4 95.2 percent of the countrywide initial acceptors were married, widowed, separated or divorced.<sup>2</sup>
- 2.5 37.9 percent of these initial acceptors were Roman Catholic, 31.7 percent were Lesotho Evangelical church, 16.4 percent were Anglican and 14.0 percent of another or no religious preference.<sup>2</sup> The 1966 Population Census reports 41.2, 25.0, 11.0 and 22.8 percents respectively for these categories.<sup>4</sup>

## 3. Other Factors:

- 3.1 40.0 percent of initial acceptors in Mafeteng expressed a desire to limit family size (have no more children) on their initial visit.<sup>1</sup> On subsequent visits after using contraception for six months or more, the client was likely to desire limitation of children 47.8 percent of the time.<sup>2</sup>
- 3.2 If she was using a method of contraception, she expressed her perceived ideal family size to be 2.87 children evenly divided between boys and girls, but she thought her husband's ideal would be 3.38 children with a preference towards male children (1.82 boys, 1.56 girls). She thought the parents of a young couple would want them to have far more than this, 4.01 boys and 3.25 girls or an ideal family size of 7.26 children.<sup>2</sup>
- 3.3 If the woman was 15 to 49 years old, from a rural village in Mafeteng district and not on any method of contraception, she perceived the ideal number of children to be 5.72 with 3.17 boys and 2.55 girls.<sup>5</sup>

3.4 Appendix B compares ideal family size to age, sex and educational level as reported from six surveys 1972 - 1976.

THE COMMUNITY -

Information gathered from the government's rural demonstration health center in Mafeteng lends insight into socio-cultural factors and constraints that could be typical for rural women in Lesotho.

4. Rural Community:

4.1 If she was from Tsakholo, Mafeteng district, she would likely be getting advice from her elders, usually grannies, or traditional practitioners in her village in addition to the health center staff. Concerning her reproductive capacity, she would be engaged in carrying out traditional practices during her pregnancy, delivery or postpartum period.<sup>6</sup>

4.2 She would have delivered her babies in her own or her husband's village or outside of an institutional setting 80 percent of the time. 47.1 percent of the leaders in her area (chiefs, headmen, etc.) would prefer to see her deliver babies every two years or less interval.<sup>6</sup>

4.3 If she were between 15 to 49 years old, not using contraception and living in a rural village near a demonstration MCH center in 1975, she would have knowledge of at least one method of contraception, 51.6 percent of the time, and 29.0 percent of these women would have heard of the oral contraceptive pill.

4.4 In a survey sample of rural and urban, men and women aged 20+ years in 1976 knowledge of "the pill" was possessed by:

rural men	-	6.0%
rural women	-	22.0%
urban men	-	20.0%
urban women	-	38.0%

The findings in 4.3 and 4.4 above are from two different surveys with questions asked in two different ways. In 4.3 the woman was asked to name two methods she know for preventing pregnancy. In 4.4 she was asked "Have you heard of the pill as a method of preventing pregnancy".<sup>14</sup>

5. Countrywide Community:

5.1 She would be more likely a contraceptive acceptor if she lived less than an hour's travel time from the facility as did 55.3 percent of

the clients accepting contraception in 1972 - 1974. 33.4 percent of the women walked to a facility which 44.7 percent of the time was more than an hour's travel from home.<sup>2</sup>

5.2 As a contraceptive acceptor 1972 - 1974, she would have access to public transport from her village 61.1 percent of the time.<sup>2</sup>

## THE SERVICE -

### 6. Availability of Services:

- 6.1 82.3 percent of the modern method users (IUCD, Pill, injectable) 1972 - 1974 had had no previous experience with contraception.
- 6.2 In 1972, in addition to a few private practitioners in Lesotho and RSA, the woman would have been served only in Tebellong Regional Hospital area, T.Y., Leribe, Scott Regional Hospital area, Mafeteng, or Maseru.<sup>2</sup> By 1974, she would have access to services at least in her district camp and in some outlying missions or government centers, a total of 20 such facilities in the country.<sup>2</sup> (See Appendix C for a list of active facilities in 1974.) Between 1974 and 1976, the facilities were not expanded so much as upgraded and staffed appropriately.
- 6.3 As a working woman in 1974, she would have two facilities where she could secure assistance outside of working hours. She would also have in 1974 - 1975, several comprehensive service centers under government auspices which would allow her to receive family planning as well as other kinds of services in maternal and child health.
- 6.4 If there were a chemist (as occurs only in Maseru) she would be able to acquire contraceptives without a prescription and likewise she would have access to contraceptives in RSA over-the-counter. Condoms and other non-prescriptive methods were available through government dispenseries and LFPA from 1972 onwards.
- 6.5 In 1972, she would have had access to IUCD insertion in Leribe and Maseru districts only, but by 1975, there was at least one person in each district capable of providing this service.

### 7. Acceptability of Services:

- 7.1 A contraceptive user would be sufficiently satisfied with services received in four sample LFPA clinics in 1976 to be willing to recommend the facility to a friend 61.9 percent of the time.<sup>10</sup>
- 7.2 The number of contraceptive acceptors of the three methods, oral pill, IUCD and injectable, doubled in Lesotho over the three years 1972 - 1974.

- 7.3 If continuation of a method can be used as a criteria of the acceptability of that method to the client, the percent of IUCD acceptors still using that method twelve months after initial insertion was highest, 60.6 percent. Continuation twelve months after starting the pill was 51.9 percent and depo-provera, 52.3 percent. 67.9 percent of initial acceptors used only that method initially accepted whereas 32.1 percent of initial acceptors had used the initial method plus at least one other method during the study period.<sup>2</sup>
- 7.4 Acceptability of services can also be viewed as to how well the current services meet the anticipated need for contraception in the country. The following comparisons of age specific fertility rates (ASFR's) 1971 - 1973 in Lesotho, and percent participation by that age group in contraceptive services 1972 - 1974 show that the older aged high risk woman is beginning to avail herself of the benefit of protection against pregnancy but there is negligible participation by the young high risk woman (15 - 19 year old).

AGE GROUP	ASFR*	PERCENTAGE OF ALL ACCEPTORS 1972-74 (n = 4377)
15 - 19	.2685	.8
20 - 24	1.1680	16.6
25 - 29	1.2685	31.6
30 - 34	1.0440	24.4
35 - 39	.8160	14.3
40 - 44	.4305	7.2
45 - 49	.1720	1.9

\* ASFR = Age Specific Fertility Rate  
TFR = Total Fertility Rate, 5.1675

- 7.5 This disequilibrium is compounded by the expected fact that the percent of women 15 - 19 years old, 10.0 percent of all women in the country, is far greater than any other age group of women in their reproductive years.

AGE GROUP	TOTAL WOMEN 1966	PERCENT OF ALL WOMEN* (n=484,106)	NUMBER USING CONTRACEPTION 1972 - 1974**	PERCENT ACCEPTORS THAT AGE
15 - 19	48,602	10.0	33	0.06
20 - 24	37,301	07.7	732	01.9
25 - 29	31,492	06.5	1391	09.4
30 - 34	31,299	06.4	1072	03.4
35 - 39	23,800	04.9	628	02.6
40 - 44	20,435	04.2	388***	01.9
45 - 49	23,499	04.8	153***	00.6

\* Bureau of Statistics, Government of Lesotho Population Census 1966  
n = 484,106 females all ages

\*\* Reference 2, Appendix A

\*\*\* Presumes that 140 age unknown acceptors were evenly divided between age group 40 - 44 and 45 - 49

7.6 Another way to interpret this data is to remind ourselves that pregnancies too young in life, especially under 18 years old, and too old in life, especially 35 years and older, carry added risks to the health and well being of both the mother and the progeny. We may need to consider the acceptability of our current services in providing protection to high risk groups who may wish to avoid pregnancy at those times which are known to increase morbidity and mortality.

7.7 By the end of 1976, one can estimate that about 10,000 of the 282,200 de jure women in their reproductive years will have been at some time a new acceptor of a modern method of contraception since 1972.2,4,10 The magnitude of impact in the previous five-year period can roughly be estimated at 04.5 percent initial acceptors of all women in their reproductive years.

THE PROFESSIONAL -

In 1973 and again in 1976, eighty percent of all government and 30 percent of mission, private voluntary nurses were surveyed concerning their knowledge, attitude and practice regarding family planning. These and other documents provide a picture of the contribution of professionals and non-professionals in this area.

8. Availability of Health Manpower:

- 8.1 The Basotho have access to a traditional medicine man/herbalist far more often, 1 : 1300 population,<sup>7</sup> than to a doctor 5 : 100,000, or nurse/midwife 33 : 100,000.<sup>8</sup> Access to a trained Maternal/Child Health nurse practitioner would 1 : 50,000 if they were evenly spread throughout the country, varying from 1 : 40,000 in Mafeteng district to 1 : 160,000 in Leribe to 0 : 60,000 in Mokhotlong.<sup>9</sup>
- 8.2 In 1973, 47.4 percent of the nurses surveyed indicated that they had no preparation at all in contraception or family planning and only 19.3 percent had received some training in their basic professional schooling. A cumulative correct performance level of 45.6 percent (out of 100 percent) was demonstrated.<sup>11</sup>
- 8.3 Since that time, basic information on contraception and family planning has been incorporated into the basic and continuing education of all government, and in some instances, mission nurses. It is included since 1975 in board qualifying exams for nurses and midwives in the country. Preliminary review of the findings from the 1976 survey (completed in July, 1976) demonstrate significant improvement in performance level of the nurses.<sup>12</sup>
- 8.4 By 1975, there were 20 MCH nurse practitioners trained and certified out of the country by various donors including two tutors and 4 staff nurses engaged in teaching posts. By 1976, four nurses completed local training and certification as Family Planning practitioners through the Ministry's UCSC/MCH Project. The client seeking assistance from trained practitioners can expect to receive: breast examination, bimanual pelvic examination, pap smear, diagnosis and treatment of common vaginal infection and venereal disease, in addition to prescription, education and supervision of a suitable method of contraception or infertility counseling if she is unable to conceive.
- 8.5 Private physicians and some government physicians also provide services. On the government side, the emphasis has been to use the physician for referral in that the turnover of doctors and constraints on his time require utilization to the fullest of others trained to perform these functions.

THE COST -

9. For couples seeking contraception, the cost factor is in keeping with the economy of the country and is heavily subsidized.
  - 9.1 Examination, insertion and supervision of IUCD costs 60¢ at LFPA or government facilities, the initial examination and prescription for three months of oral contraception costs 60¢. Refills are 60¢ for a three month supply. Injectables cost 60¢ every three months.
  - 9.2 Diaphragm fitting costs 60¢ for the examination and the device. Condoms cost 10¢ for a packet of three at government and LFPA facilities and from 50¢ to R1-00 on the commercial market.
  - 9.3 Cost through private physicians are not known.
  - 9.4 In a survey in 1976 conducted by LFPA at four service facilities, 67.1 percent of the clients felt this charge to be just right, 26.3 percent thought it too low and 5.3 percent thought it too high.<sup>10</sup>

FACILITIES PROVIDING CONTRACEPTION  
1974 TO PRESENT, 1976

- Lesotho Flying Doctor Service
  - Tebellong Hospital - Qacha's Nek
  - Queen Elizabeth II Hospital, Maseru
  - Thaba-Bosiu LFPA
  - St. James Hospital - Mantsonyane
  - Teyateyaneng LFPA
  - Peka LFPA
  - Leribe LFPA
  - Mohale's Hoek LFPA
  - Qacha's Nek LFPA
  - Mokhotlong LFPA
  - Tsakholo Health Center\*
  - Buthe-Buthe LFPA
  - Quthing \* \*\*
  - Scott Hospital at Morija
  - Morija LFPA
  - Mafeteng Hospital\*
  - Mafeteng LFPA
  - Maseru LFPA
- \* Refers to those facilities which offer family planning as part of a comprehensive maternal and child health program.
- \*\* Quthing includes three out-lying service facilities.

APPENDIX D

OUTPUTS - LESOTHO (BY DECEMBER, 1976)

- A. Project sponsored surveys, demographic and health survey data will be analyzed, reported and incorporated into localized teaching programs.
- B. Continue to expand family and community health services at Tsakholo .
- C. The MCH/FP portion of nurse practitioner training will be localized.
- D. The routine MCH records and data collection system in health statistics will reflect basic means of monitoring on-going MCH/FP activities in the country.
- E. 11 PHNs and 40 government nurses serving in rural areas will have received training in organization, implementation and supervision of MCH services including health education, nutrition and family planning.
- F. Project staff and counterparts will continue to provide long and short term MCH/FP training including health education and motivation as requested to the following:
  - 40 teachers
  - 10 pupil health assistants
  - 10 pupil dispensers
  - 10 pupil home economics extension workers
  - 10 student nurses
  - 10 student midwives
  - 100 others
- G. A post will be filled within the Ministry which outlines responsibilities for continued coordination, program planning, implementation and evaluation of MCH activities within the country including specific responsibilities in expansion of the rural demonstration teaching center at Tsakholo
- H. Integration of all administrative and logistical support will have been accomplished.
- I. Final project report completed.

**APPENDIX E**

USEFUL STATISTICS RELATING TO MCH IN LESOTHO FROM  
A.M. MONYAKE'S DEMOGRAPHIC ANALYSIS, MAY, 1973

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CRUDE DEATH RATE:

Male - 15.18  
Female - 13.87  
Both - 14.5

CRUDE BIRTH RATE:

Male - 37.18  
Female - 36.27  
Both - 36.7

Rate of natural increase: 2.29% per annum.

Gross Reproduction Rate (GRR):

Grad. data - 2.6235  
Fitted Model - 2.5129

Total Fertility Rate (TFR): 5.1675 (Adjusted - 5.6522)

ASFR (Age Specific Fertility Rates (Adjusted):

15 - 19	.2685	.2937
20 - 24	1.1680	1.2776
25 - 29	1.2685	1.3875
30 - 34	1.0440	1.1419
35 - 39	.8160	.8925
40 - 44	.4305	.4709
45 - 49	.1720	.1881

Infant Mortality Rate : 106/1000 live births

Early Childhood Mortality Rate: 75 deaths before age 4 for every 1000 entering age 1 year.

Neonatal Mortality Rate : Not known

Perinatal mortality rate : Not known

Maternal Mortality Rate : Not known

Life Expectancy: Male - 49.59  
Female - 53.56

<u>Dependency Ratio:</u>	<u>Male</u>	<u>Female</u>	<u>Both</u>
Percent 15 yr or under	42.4	38.3	40.3
Percent 65 yr or older	5.6	8.3	7.0

Live Births per annum - Lesotho: 42,440 (1974)

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REGIONAL MATERNAL AND CHILD HEALTH PROJECT/LESOTHO

(HEALTH EDUCATION COMPONENT)

SUBMITTED BY: THE UNIVERSITY OF CALIFORNIA EXTENSION/SANTA CRUZ  
DIVISION OF INTERNATIONAL PROGRAMS, CONTRACT NO. AFR-799  
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REGIONAL MATERNAL AND CHILD HEALTH PROJECT  
(HEALTH EDUCATION COMPONENT)

CONTENTS

	<u>Page</u>
1. Project Background	1
2. Background: LESOTHO	2
3. Development of Health Education in Accordance with the First Five Year Development Plan of Lesotho	2
4. Development of Health Education in Accordance with the Second Five Year Development Plan of Lesotho	3
5. Manpower Development of the Health Education Unit	4
6. Development of Health Education Activities Training Schools in the Ministry Teaching in Learning Institutions Outside the Ministry	7
7. Production of Administrative and Educational Materials	13
8. Logistics	13
9. UCSC Project Administration	14
10. MCH Activities	16
11. Summary of Achievements	17
12. Recommendations	18
APPENDIX	20 - 44

## 1. PROJECT BACKGROUND

1.1 The MEMORANDUM OF AGREEMENT between the Government of Lesotho and the University of California at Santa Cruz (UCSC), signed in November 1971, is the beginning of the Regional Maternal and Child Health Project (UCSC/MCH) in three African countries: Benin (Dahomey), Lesotho and The Gambia. The goal of this project is:

"To assist in the improvement of the quality of life of African mothers and children through the reduction of preventable maternal and child morbidity and mortality."

1.2 For Lesotho, this is to be achieved through working within existing government health services. The expected result of this project is the "establishment or improvement of basic maternal and child health (MCH) services which emphasize health education."

1.3 Lesotho Rationale of the Project Plan of Action in Phase I, clearly states the health education objectives which are:

- "To establish a central Division of Health Education.
- To offer immediate consultative services in health teaching methods and in the provision of materials to existing educational services (school teachers, Ministry of Agriculture, nutrition and community development programs, school of nursing, in-service training for nurses.)
- To meet the most pressing health education needs, center on the training of mothers in proper nutrition of children, hygiene in the home, prevention of the spread of venereal diseases, and the use of trained personnel for obstetric services."

1.4 Phase II is a continuation from Phase I with emphasis on:

- Manpower development of the health education staff;
- Plans to strengthen the administrative skills and professional capability of the Health Education Unit (HEU) in the Division of Preventive Health Services in the Ministry.
- The integration of health education programs into governmental and private endeavors in the development of Lesotho.
- The development and implementation of health curriculum in learning institutions.
- The continuing support of the MCH component of the UCSC/MCH Project including the T'sakholo Rural Health Training Center in the Mafeteng District.

1.5 The Project Health Educator (PHE) and the MCH Technician, a public health nurse, were assigned to Lesotho on February 29, 1972, after they have completed a three month orientation on the campus of the University of California at Santa Cruz. Prior to this assignment the PHE had made no visit to Lesotho to assess the present and future needs as proposed in the Project Plan of Action.

1.6 In addition to the above responsibilities, he has two other tasks in the project:

- Since the Central Administrative Office (CAO) of this project is located in Benin, West Africa, the basic day-to-day administrative duties rest with him; and
- During the absence of the MCH technician, he assumes the MCH promotive and consultative responsibility.

## 2. BACKGROUND: LESOTHO

2.1 Lesotho is a small independent country in Southern Africa, landlocked and bordered on all sides by the Republic of South Africa. The Basotho people are an ethnically homogeneous group consolidated under the leadership of Moshoeshe I in the early 19th century. Lesotho became a British protectorate in 1868 and gained independence in 1966.

2.2 Lesotho covers 11,716 square miles, roughly equivalent to the State of Maryland in America. The western quarter of the country consists of the lowlands where about half of the 1.1 million population live. From the lowlands of 5,000 feet it rises to a height of about 13,000 feet in the Drakensburg Range located along the eastern border. The other half live in the foothills or mountain region where people live in scattered and isolated villages, in thatched-roof stone huts with no public utilities or modern transportation.

2.3 The estimated mid-1974 population for Lesotho was 1,156,000 with an estimated annual growth rate of 2.2 percent. About 60 percent of the male labor force and 10 percent of the female labor force are working outside the country. Thus the population residing in the country has a significantly higher ratio of females. In addition, about 40 percent of the population is under the age of 15.

2.4 Like most of the countries of Africa, Lesotho has high infant and child mortality rate and a concentration of health services in the lowland and more urban areas.

2.5 The health problems of Lesotho are largely preventable diseases and are associated with low income, poor housing, inadequate water and sanitary facilities and insufficient health education.

## 3. DEVELOPMENT OF HEALTH EDUCATION IN ACCORDANCE WITH THE FIRST FIVE YEAR DEVELOPMENT PLAN OF LESOTHO

3.1 The first Five Year Development Plan (1970-1975) of Lesotho declared that:

"Improving the Health of the people of Lesotho is therefore not solely a matter of curative medicine; it involves improving standards of living over a wide range. It means raising family incomes, improving housing conditions, water supplies and sanitary facilities, and providing health education in the widest sense."

3.2 The UCSC Project comes at the time when the First Five Year Plan is being implemented. One of the objectives of this project is to assist the

the Ministry in assessing the health education needs, organizing education programs about health for the nation, selecting and training local staff to develop and implement the educational programs within the Ministry and reach out to the people.

3.3 A Health Education Unit was established by Health Internal Circular No. 67 of (September 12, 1972). The Circular announced that "It is hereby notified for general information by the Ministry of Health that a Health Education Section is established in the Department of Public Health and Social Services." (Appendix 1) This announcement has chartered a new beginning for health education in Lesotho.

#### 4. DEVELOPMENT OF HEALTH EDUCATION IN ACCORDANCE WITH THE SECOND FIVE YEAR DEVELOPMENT PLAN OF LESOTHO

4.1 Now the Ministry of Health and Social Welfare has embarked on the Second Five Year Development Plan. The proposed health objective of this Plan is that:

"A substantial improvement in the quality of health care and other social services, focusing on preventive medicine, nutrition, maternal and child welfare, and village services."

4.2 The Plan acknowledges that the provision of adequate health facilities, health education, and environmental sanitation are critical components of Lesotho's national development efforts. The Plan concludes that to improve the general health situation requires not only improved and expanded health facilities but also improvement of the environment, education, and higher incomes.

4.3 The specific targets under the Plan are summarized as follows:

- The improvement and expansion of health services in the rural area of the country.
  - The improvement of rural health services through the expansion of 25 health clinics.
  - Expansion of the maternal and child care program.
  - Immunization of all children against poliomyelitis, whooping cough, diphtheria, small pox, and tuberculosis.
- Provision of basic sanitary facilities at all primary schools.
- Expansion of activities to promote community health and nutrition.
  - Expansion of training for medical and paramedical personnel.
  - Reduction of the current rate of population increase, 2.2 percent to 2.0 percent annually.
  - Renovation and expansion of existing hospitals and the establishment of laboratories at all Government hospitals."

4.4 The health education program is being strengthened and expanded although limitations of staff put a serious constraint upon the capacity in the achievement of the above targets.

## 5. MANPOWER DEVELOPMENT OF THE HEALTH EDUCATION UNIT

5.1 According to the Project Agreement, the Ministry is to assign one matriculant as counterpart to the PHE. Having the opportunity to assess the local manpower situation more thoroughly, none could be available in the Ministry. The Ministry then agrees to nominate two health staff, one Health Assistant and one Home Economic Assistant, as counterparts in mid-1972. This forms the beginning of a health education nucleus in the Ministry and for the country. On-the-job training for them has commenced immediately.

5.2 The on-the-job training schedule has been purposefully planned as flexible as possible in order to adjust to the experience, educational background and ability of the counterparts. The modus operandi is for them to 'gain experience as they work.' Training experiences include:

- Accumulating information and utilizing these for the right reason, at the right time, and in the right place;
- Applying simple health education principles of consultation, coordination, and cooperation in village, in-service education and meetings;
- Appreciating effective administration through planning, evaluation, office management, program supervision, and human relations;
- Building self-confidence in a new health profession;
- Conducting community health survey;
- Developing communication skills and techniques;
- Discussing freely of ideas and proposing them;
- Encouraging them to extend their natural ability to its fullest potential;
- Examining own motive objectively;
- Finding out what health education means to themselves and to the nation;
- Gaining simple skills in the development and implementation of a non-complicated health education exercise;
- Having a sense of loyalty to their new health profession and above all to the people of Lesotho;
- Holding staff and community meetings;
- Improving written and verbal communication skills;
- Interpreting as accurately as possible the purpose of the UCSC and other health projects and their relationships to the HEU and national development;
- Joining in actively with colleagues to bring about positive attitudinal and behavioral changes;
- Knowing and accepting own limitation and not be frustrated or handicapped by it;
- Learning how to identify health education needs for themselves and for the public;
- Maximizing production and minimizing errors;
- Nurturing a health education idea until the right time to be used;
- Operating simple movie and slide projectors;
- Organizing one's own time and energy more productively;
- Producing simple health literature and training aids for public and staff education;

- Qualifying and quantifying all data and results;
- Recognizing own bias and prejudice and overcoming them;
- Respecting the judgement of others;
- Stimulating others to do more for themselves;
- Testing public reaction cautiously over controversial issues;
- Understanding each other better and formulating a behavior which supports each other's effort;
- Utilizing local resources as efficiently as possible;
- Viewing a situation without bias or subjectivity;
- Winning the confidence and sympathy of the public and co-workers;
- X-raying questionable information beyond reasonable doubt;
- Yielding to pressure constructively; and
- Zeroing in to the heart of a health problem with common sense and courage.

5.3.1 This training process continued until August 1973 when both counterparts left for advance training in America. (Appendix 2)

5.3.2 The training of the Home Economic Assistant in the United States concentrated in nutrition and family planning education. Having completed her USAID sponsored four month program in the Family planning institute at Meharry School of Medicine in Tennessee, she received an additional two months field work in the West Indies. She returned to her post and assumed her duty until August 1975 when she accepted a position with the National University of Lesotho, formerly the University of Botswana, Lesotho and Swaziland.

5.3.3 The focal point of training for the Health Education Assistant is to prepare him as academically and professionally competent as possible in order to lead the health education program for Lesotho. Under a project scholarship, he enrolled in Cabrillo Community College where, eighteen months later, he received his Associated in Science Degree with emphasis on Community Health Education. (Appendix 3a) On his way back, he attended a two month course on Family Planning Education and Motivation at the University of Ibadan, Nigeria. (Appendix 3b) He assumed his duty in April 1975. With a USAID scholarship he left in August 1976 for the California State University at Northridge to complete his B.S. Degree in Community Health Education. (Appendix 3c) He is expected to return and assume his new post as Chief Health Educator by mid-1978. The Cabinet Personnel has appointed him as Health Educator for Lesotho on December 1975. (Appendix 3d)

5.4.1 To replace the counterparts who have left for study abroad in 1973, the Ministry has nominated a third health education counterpart, also a former Health Assistant, who learns and carries out health education activities up to the present. His in-country training, 1974-1975, includes two three week courses in rural development, jointly conducted by the Mount Carmel International Training Center for Community Services of Israel and the Ministry of Rural Development of Lesotho. (Appendix 4a) Aside from the PHE, he is the only staff in the HEU who has completed a UCSC sponsored intensive two week training course for trainers in August 1974. (Appendix 4b) His other advantage, a significant one, over the rest of the health education staff is his being benefited from on-the-job training with the PHE since

5.4.2 Since the Health Educator will be away for another two years on study duty, the Ministry on September 1976 has promoted this person to immediately fill the vacated Health Educator's slot. This now makes two health educators, one on the job and the other away studying, for the HEU. Arrangements are being made for this person to receive advance training abroad.

5.5.1 To meet the increasing demands of health education literature and training materials from all quarters, the PHE has recommended the Ministry to add one more staff to the HEU. April 1975 the Ministry assigned a fourth counterpart. The specific responsibilities of this person are:

- To develop and produce graphic materials for teaching and training purposes;
- To design and reproduce simple health literatures for public education; and
- To be responsible for all audio-visual equipment and their needs.

5.5.2 May 1975 this person left for a three month training course on graphic and design under the sponsorship from the British Government. He returned from England and assumed his duty as the Graphic-Artist in the HEU as of August of the same year. (Appendix 5)

5.6 The Ministry was unable to replace the Home Economic Assistant, who has since been promoted to Home Economic Instructress, until six months later, in February of 1976. The new Home Economic Instructress brings from the Ministry of Agriculture her experiences in working with village groups and developing nutrition education and home-making skills. She completes the foursome of the Health Education Unit staff with the project Health Educator as advisor. She is in an intensive nutrition survey skill training course in preparation of the 1976 national nutrition survey. After this exercise is completed, she receives a certificate, issued by the Central Planning and Development Office, in recognition of her new skills.

5.7 All four health education positions are listed in the 1976/77 Establishment List of the Government of Lesotho. The new post of Chief Health Educator will appear in the 1978/79 Establishment List. Job descriptions for each post have already been approved by the Ministry.

6. DEVELOPMENT OF HEALTH EDUCATION ACTIVITIES

6.1 Training schools in the Ministry.

6.1.1 Health Education as an organized entity first materialized with the teaching of six (6) health assistant students in May 1972. (Table I) When the 1975 class began, a greatly expanded health education outline was built into the revised health assistant syllabus. (Appendix 6) This teaching is being continued.

6.1.2 June of the same year, the Public Health Nurse Tutor invited the PHE to give a series of lectures on basic health education skills to the students in the Public Health Orientation Course for Nurses. This continued until 1974 when the course was finished.

6.1.3 Two health education outlines were developed, one for the general student nurses and the other for the midwife students of Queen Elizabeth II Hospital School of Nursing, first introduced with the 1974 class. (Appendix 7)

6.1.4 Still another course outline was developed for the dispensary students in 1975. (Appendix 8)

6.1.5 Since 1972, 950 health education classroom hours have been taught to 242 students in the Ministry. Table 2 summarizes the increasing number of health education hours taught to these students.

Table 1. Number of Ministry of Health Students  
Receiving Health Education Lectures, Lesotho, 1972 - 76.

Category *	1972	1973	1974	1975	1976	Total
1. Q.E.II Student Nurses	0	0	41	40	27	108
2. Q.E.II Midwife Students	0	0	24	20	8	52
3. Health Assist. Students	6	6	0	6	6	24
4. Dispenser Students	0	0	0	11	0	11
5. Nurses in P.H. Orient. Course	9	22	16	0	0	47
Total:	15	28	81	77	41	242

\* 1. Students in years 1-3 combined, only years 2-3 in 1976.  
2. Students in groups 1-2 combined, only 1 group in 1976.  
3-4. A two-year course.  
5. Course discontinued after 1974.

Table 2. Number of Health Education Hours Received  
By Ministry of Health Students, Lesotho, 1972 - 76.

Category	1972	1973	1974	1975	1976	Total
Q.E.II Student Nurses	0	0	24	125	200	349
Q.E.II Midwife Students	0	0	20	100	100	220
Health Assist. Students *	10	20	0	78	225	333
Dispenser Students	0	0	0	18	0	18
Nurses in P.H. Orient. Course	10	10	10	0	0	30

\* Practicals: 2 weeks in Tsakholo and 4 weeks in HEU, 1976.

## 6.2 Teaching in learning institutions outside the Ministry.

6.2.1 The PHE and the Principal from the Thaba Khupa Ecumenical Farm Institute first discussed in 1972 the possibility of including health education into this newly organized intensive farming vocational school for young men and women. Fifteen lectures and demonstrations were developed and given to 26 students in the first class in 1973. Having evaluated the impact and staff time required to teach at Thaba Khupa in November 1974, both the Ministry and Thaba Khupa agreed to:

- Expand the health curriculum from a 15 weekly, two hours each, lecture to 30 weekly, two hours each, lectures in 1975; and
- Train Thaba Khupa's Home Economic Instructress for three months under the guidance of the PHE in 1975 so that she can begin to assume the health teaching responsibility.

This approach has been proven so successful that the Ministry now provides only occasional lecture and consultative assistance to Thaba Khupa.

6.2.2 The teaching of health in the Lesotho National Teachers Training College (N.T.T.C.), begun in April 1975 after the country consolidated the seven mission-operated colleges, is patented after the Thaba Khupa experience. When N.T.T.C. requested the Ministry to assist the college to develop and teach health to the students, the Ministry agreed and seconded the PHE and his counterpart to produce a health outline - the Ten Health Concepts - and teach it in 1975. (Appendix 9a, 9b, and 9c) In the second year N.T.T.C. increased the original classroom hours for health education from 10 to 30 per academic term. This April N.T.T.C. has added a local health teacher and a U.S. Peace Corps volunteer to take over most of the teaching and school administrative functions from the Ministry's staff.

6.2.3 A fifteen-hour health outline has been incorporated into the Lesotho Agricultural College, a two-year college, since 1975. In the first year, only six students attended this class. Twenty-four students have already completed the health class this year.

6.2.4 Twelve health lectures have been completed for five National University of Lesotho students who are in the Diploma Home Economic Course.

6.2.5 The twenty health education lecture hours were completed by 478 Lesotho Youth Services (L.Y.S.) cadets in 1973, 1974 and 1976. (Appendix 10) L.Y.S. is a two-year training program for young people, boys and girls from age 15 - 18, selected from villages in all districts. The purpose of this program is to train these fine young people to become more productive citizens of Lesotho and to be agents for community development and social change in the villages from which they come.

6.2.6 Table 3 summarizes the institutions outside the Ministry which have incorporated the teaching of health into their respective curricula.

Table 3. Number of Students Receiving Health Education Teaching by HEU Outside the Ministry, Lesotho, 1973 - 76.

Institutions	Number of Students in				Total
	1973	1974	1975	1976	
Thaba Khupa Ecumenical Farm Institute	26	36	36	38	136
Agric. College Min. of Agric.	0	0	6	24	30
Nat'l University of Lesotho	0	0	0	5	5
Nat'l Teachers Training College	0	0	76	134	210
Lesotho Youth Services	158	160	0	160	478
<b>Total:</b>	<b>184</b>	<b>196</b>	<b>118</b>	<b>361</b>	<b>859</b>

Note:

There was no health education teaching in these institutions in 1972. Education, promotion, coordination, and planning for a health education curriculum to be accepted by these institutions had occupied all of 1972. This effort is being continued to bring about an acceptance by those other institutions which currently are not yet teaching health.

### 6.3 In-service education course for health and allied field workers.

6.3.1 The PHE and the Principal Tutor of the Queen Elizabeth II Hospital School of Nursing collaborated and conducted the first one-week refresher course for nurses in September 1972. Altogether, 134 nurses from both government and the private sector attended this one of many refresher courses for health and allied field workers in Lesotho conducted by HEU and in cooperation with health associates. The significant courses conducted, in chronological order from 1972 to 1976, are:

- The refresher courses for nurses, nationwide, 1972-76;
- The health education and motivation courses for teachers, nationwide, 1972-76 (Appendix 11);
- Catholic Relief Service staff, Maseru, 1972-76;
- Lesotho Family Planning Association field workers, nationwide, 1972-76;
- Health staff at Tsakholo, 1972-76;
- Audio-visual skills for health field workers, Leribe and Mohale's Hoek, 1973 and 1976;
- MCH/FP skills for doctors and nurses, nationwide, 1973 and 1976;
- Nutrition field workers, Ministry of Agriculture, Leribe 1974 and 1976 at Mohale's Hoek (Appendix 12);
- Village health workers, Quthing, 1975-76 (Appendix 13);
- Lesotho Flying Doctor Services (L.F.D.S.) staff, Maseru and Tsakholo, 1975.

6.3.2 The number of health and allied staff attending refresher courses which cover a wide range of subjects is increasing. Table 4 summarizes the number of participants from 1972 to 1976.

Table 4. Number of Participants in Various Health Education Refresher Courses, Lesotho, 1972 - 1976.

Category	1972	1973	1974	1975	1976	Total
Ministry of Health						
Nurses	108	203	110	103	176	700
Doctors	5	21	1	2	10	39
Public Health*	26	34	28	66	55	209
L.F.D.S.	0	5	0	55	25	85
Village Health Workers	0	0	0	10	8	18
Ministry of Agric. Home Economic Assistant	8	10	56	17	18	109
Ministry of Educ. Teacher +	25	578	57	48	0	708
Mission Hospital and Clinic	18	38	16	56	108	236
Catholic Relief Services	70	80	75	60	54	339
L.F.P.A. and others	34	45	62	45	62	248
<b>Total:</b>	<b>294</b>	<b>1014</b>	<b>405</b>	<b>462</b>	<b>516</b>	<b>2691</b>

\* Including environmental health and public health nurses.

+ Courses for teachers in Qacha's Nek, Butha Buthe and Leribe Districts, November and December 1973.

#### 6.4 Community Health Education.

6.4.1 The first village health education effort took place in May 1972 when the PHE and the Senior Medical Officer of Health (S.M.O.H.) spent three days with the typhus control team at Mphaki of the Quthing District. This was the first real opportunity for the PHE to get exposed to the cultural, geographical, economical, and health problems, particularly health education issues, in Lesotho.

6.4.2 The next most significant village education event, organized by the HEU, was the anti-plague village education campaign in the Mohale's Hoek District during the months of June and July 1975, immediately after the plague outbreak had been put under control. The PHE and the counterpart made several planning trips to that district to meet and organize the key district government officials, chiefs, villagers, health and allied workers, merchants and church leaders. The first three days of the campaign were to identify and train 34 local personnel, selected from various backgrounds and experiences, to be "village health educators."

This short training had accomplished:

- The development of lay individuals into effective health education extension workers;
- The organization of four smaller teams from these individuals and the assignment of each team to a given number of villages to be covered by that team;
- The education of team members about plague and plague prevention;
- Understanding the importance of team work; and
- That each team member had learned how to relate the newly acquired information to the villagers.

The following ten days, including weekends and evening hours, the four teams moved into a pre-assigned area and began to explain to the villagers about plague - a fatal disease - and how to prevent plague from happening again in their own villages. At the end of this campaign, the results showed that:

- Over 8,000 villagers in an estimated 15,000 population area were reached;
- Given good planning and a flexible training program, lay people can be trained in a reasonably short time to teach a simple health message to their own people; and
- Lay people with motivation can be an effective community channel to reach a larger population.

6.4.3 Another approach which has experienced good results has been clearly described in a field report to the S.M.O.H. by the Health Educator. His report discussed how he had organized a regional health committee and explained to the committee how it should function in relation to that particular health clinic. (Appendix 14)

6.4.4 Meanwhile, community health education activities are being conducted on other fronts. Examples are pitsos (outdoor meetings) in villages, first aid courses for police and military officers, basic hygiene for prison supervisors, and food hygiene for hotel catering staff. (Appendix 15)

6.4.5 In cooperation with Radio Lesotho, a 15-minute weekly broadcast in Sesotho on various health subjects has been presented over the air since 1973. The purpose is to maximize the use of the radio medium so that health messages can reach the people, particularly those who live in the remote mountainous regions and other hard-to-get-to areas. In August 1976, a second 15-minute air time was added. Now Radio Health has two 15-minute weekly broadcasts, Thursday noons and Friday evenings.

To improve the Radio Health program, a Radio Health Committee was established as directed by the Permanent Secretary for Health in 1973. The PHE has served this Committee as an advisor ever since.

6.4.6 The PHE provides consultative services to numerous organizations outside the Ministry. The Lesotho Family Planning Association is one of the organizations which has frequently requested through the S.M.O.H. and received assistance on various technical and non-formal education matters. Of particular importance are:

- The development of family planning education literatures, training of field workers and radio broadcasts; and
- The production of a lesson on venereal diseases.

Consultative services to other organizations include the production of a recipe booklet for the Catholic Relief Services and a First Aid Handbook for the Lesotho Red Cross.

6.4.7 Technical assistance has been extended to international conferences conducted in Lesotho. They are:

- As Conference Officer of "The Regional Congress of the Commonwealth Medical Association on Orthopaedic Rehabilitation, Airport Hotel, Lesotho, 9th - 12th of October, 1975";
- As Physical Planning Officer of the "Conference on Individual and Social Responsibility in Developing Countries, King's Palace, Lesotho, 9th - 13th of March, 1976"; and
- As Conference Officer in the "Fourth Regional Health Conference of the East, Central and Southern Africa, Commonwealth Countries, Victoria Hotel, Lesotho, 2nd - 5th of November, 1976."

6.4.8 In addition to the technical training materials, a number of simple health literatures have been produced, both in English and Sesotho, for staff and public education purposes. Examples include:

- Ten Easy Ways to a Bulgur Meal;
- V.D., It Can Happen To You! Know the Facts;
- Anyesa Lesea La Hao Ho Tolha Tohahong Ea Lona (Breast Feed the Baby from Birth);
- Ntlafatsa Bophelo Ba Lelapa La Hao (Improve Your Health at Home);
- Use the Latrine, Not the Donga;
- Water Means Life;
- When to Teach Health;
- Rua Tsebo Ka Seso Le Mokaola (Questions and Answers About V.D.);
- Facts About Alcohol; and
- Kholisa Ea Ngonana (Child Growth).

## 7. PRODUCTION OF ADMINISTRATIVE AND EDUCATIONAL MATERIALS

7.1 From 1972 - 1973 the Health Education Unit, with only project supplies, produced educational and administrative materials mainly for the project. When the Ministry began to supply duplicating paper, stencils and ink in 1974, the HEU gradually extended this unique service to produce for the whole Ministry and WHO with their educational and administrative production and reproduction of training outlines, manuals, minutes of meetings, reports, project papers, hospital forms, MCH records, and documents. (Appendix 16) In 1975 there were 61,475 pages produced; and during the first three quarters of 1976, 153,404 pages have already been produced.

## 8. LOGISTICS

8.1 A general policy of the Ministry is that the Preventive (Public) Health Division has an operating budget from which all programs under this Division draw logistic support. Since mid-1974 the Health Education Unit draws its logistics from the same source. So far, the HEU has encountered no major difficulty

in getting basic office supplies, duplicating paper and ink, materials for training and public education programs, photographic materials, and items such as a transformer. This year HEU has received a photocopier machine and supplies for this machine and a public address system from the same source. Overhead of the HEU office, a large room to house the staff of nine people and a smaller production room, is provided through a general administrative budget in the Headquarters.

8.2 Vehicles are provided by the project. Maintenance, petrol, insurance, and two drivers are the responsibility of the Ministry since 1974. The general service for all vehicles is less than satisfactory, however. The Ministry has submitted a proposal to UNICEF and requested three landrover type vehicles plus various educational materials for the HEU over the next five years.

8.3 Since the beginning of this project, the Ministry has been able to maintain and service the few non-sophisticated office machines and audio-visual equipment that are supplied by the project. The one difficulty was the replacement of a piston in a portable generator that was damaged due to careless operation. The piston had to be imported from the United States. This generator has since been repaired at the hospital workshop and is now in Tsakholo supplying electrical power to the two-way radio.

8.4 While this logistic system, similar to other infra-structures in the government, has drawbacks, it is adequate for now until the Ministry has developed a more effective administrative apparatus to improve the logistic mechanism within the Ministry.

## 9. UCSC PROJECT ADMINISTRATION

9.1 The UCSC Project in Lesotho does not provide an in-country administrator or coordinator (leader of the party). They are in the Project Central Administrative Office (CAO), Benin, West Africa. Even when they come to Lesotho, they seldom stay longer than a month in Lesotho and only once or twice a year. Visits from the UCSC office are even less frequent. In the last two years the officers from CAO made only one visit to Lesotho, and this was in September 1975. Within the same period, the Project Director and Assistant Project Director from UCSC made one visit each to Lesotho. The long absence of direction and physical presence over the five years has made it difficult for the PHE, and therefore, imposed upon him to discharge certain administrative responsibilities which are not clearly defined. This arrangement is far from being perfect to deal with the daily administrative details required for a smooth project operation. What the PHE has to face, in addition to his health education responsibilities, is as follows:

- The importation details, custom clearance, inventory and distribution of project supplies and equipment, including family planning materials;
- The hiring, training, and supervision of local personnel;
- The supervision over project vehicles, travel, office supplies and equipment;
- The help needed by the Ministry's Accountant over the Project Deposit Account;

- The organization and management of a "project" functional office;
- The advance groundwork before each visit by officers from the CAO and/or UCSC and the follow-up needed after each visit;
- The badly needed supports during the implementation and construction phase in Tsakholo;
- The provision of back-up supports to the MCH Technician while she lived in Tsakholo and activities in Maseru; and
- The negotiations with government and private sectors over project policy which is usually delayed until a response is received from either the CAO or UCSC.

## 9.2 Project budget comment.

9.2.1 The project financial system is administered in accordance with AID/Washington and University of California regulations. The University keeps record of all transactions on project purchases and reimbursements. Local spending comes from a Project Deposit Account which is administered by the Ministry's Accountant and a Petty Cash Account which is managed by the PHE.

9.2.2 The Project Deposit Account pays for local personnel salaries and benefits, Technician's rent and public utilities (excluding telephone), locally made medical examination tables and office furnitures plus the furnishing of the T'sakholo classroom, in-country transportation, advance per diem for out of country participant training, certain building materials and clinic supplies for T'sakholo, and project office supplies and materials. This account keeps an advance deposit of R10,000.00.

9.2.3 The Petty Cash Account pays for numerous items of various reasons, especially in the support of the MCH Technician while she lived in T'sakholo during Phase I as well as materials needed for the implementation of the project in the demonstration zone within the same period. This policy was changed in 1974, when the Ministry began to assume a greater financial responsibility for the project. This change has reduced the spending from this account from a high of R1,315.73 in 1973 up to R248.25 for 1976 as of July 29, 1976 submission. The PHE keeps R250.00 in the Petty Cash Account.

9.2.4 Local Technician travel is also reimbursed through the Petty Cash Account.

9.3 Vacation days and sick leave are taken in accordance with the University policy. National holidays are observed with the national policy of the Government of Lesotho.

## 10. MCH ACTIVITIES

10.1 Since the project MCH Technician is submitting her assignment report to the Ministry, this report treats only those specifics which the PHE has made a contribution in the implementation of the MCH activities in Lesotho. Some of the major inputs have been in:

- Assisting the MCH Technician to promote and educate the decision-makers, staff and public on the purpose of the UCSC/MCH Project;
- Informing and motivating the public, especially the policy-makers, the importance of family planning services to the people of Lesotho;
- Collaborating in the development of MCH plans and strategy for action;

- Assisting in the coordination and implementation of MCH in-service education courses for staff and allied workers;
- Assisting in the four project sponsored health surveys;
- Training and supervising of clerical and office machine operators to produce and reproduce MCH training aids;
- Developing, producing, and managing clinical forms and all training aids for MCH service and educational purposes;
- Organizing the logistics for the demonstration zone and the MCH Technician while she lived in T'sakholo;
- Helping to make the T'sakholo Rural Health Training Center into a reality for the Ministry and the project;
- Designing the classroom furniture for the T'sakholo Rural Health Training Center and clinic;
- Supervising over the installation of the two-way radio at T'sakholo;
- Designing a locally made wooden medical examination table (9 for health and 8 for L.F.P.A.) for MCH clinics; and
- Proposing an annual budget to UCSC for local operation.

## 11. SUMMARY OF ACHIEVEMENTS

11.1 A Health Education Unit in the Division of Preventive Health Services of the Ministry of Health and Social Welfare has been established in September 1972. Its objectives are:

- To develop and implement health education programs in the community, in educational institutions, and to develop in-service education courses.
- To assist in the implementation of the preventive health services and health projects as set forward in the Second Five-Year Development Plan of Lesotho.

11.2 A nucleus of health education staff (two health educators, one graphic-artist, and one home economic instructress) are being trained, one to the B.Sc. level in Community Health Education.

11.3 An office and a small production room have been organized and equipped with supplies and equipment for non-sophisticated production work.

11.4 Staff have been trained to operate all equipment, and limited logistics have been developed to support the expanding health education activities.

- 11.5 All job descriptions for health education personnel have been approved by the Ministry.
- 11.6 A modest budget has been included in the annual Ministry budget for health education operation.
- 11.7 A five-year assistance project has been submitted through the Ministry to UNICEF for various health education equipment and supplies, including three landrover type vehicles.
- 11.8 A wide range of health education programs has been integrated into village development activities, in refresher courses for health allied workers, and in varied learning institutions.
- 11.9 The public, both government and private sectors, has been well educated and motivated to apply health education within their respective spheres of activities.
- 11.10 The impacts made so far have given the health authority an impetus for intensifying their supports for health education activities in Lesotho.
- 11.11 The PHE has accepted and performed the administrative responsibility for the project; and
- 11.12 The PHE has provided maximum assistance to the MCH Technician as she conducts her MCH activities.

## 12. RECOMMENDATIONS

- 12.1 The Ministry should request continued technical assistance from a donor agency for an additional two years until such time when the 'chief' health educator returns from his studies.
- 12.2 The Ministry should identify additional funds to train a second staff to the B.Sc. level in community health education.
- 12.3 The Ministry should develop a plan to train (locally) 'health education assistants' and deploy them to each district so that they can carry out the day-to-day health education activities at the district level.
- 12.4 To develop the potential of the graphic-artist more fully, he should receive an additional short term training under an experienced health illustrationist.
- 12.5 The Home Economic Instructuress can strengthen her skills from additional training in the development of nutrition education curriculum and teaching.
- 12.6 The modest operating budget must be increased in order to support the growing demands on health education.
- 12.7 The Ministry ought to follow-up with the request to UNICEF and other donors agencies for health education assistance.
- 12.8 Additional office space must be made available to relieve the already overcrowded situation in the present quarter.

12.9 A secretary-typist and two driver-operators must be permanently assigned to the Health Education Unit.

12.10 The Ministry should continue to evaluate and modify the health education programs in accordance with national development.

12.11 When the government policy permits, the Health Education Unit in coordination with other service sectors should implement a more liberal family planning education and service program.

12.12 To complete the commitment to the UCSC Project and to meet the needs of future health projects and local training programs, the Ministry must develop the T'sakholo Rural Health Training Center in a practical way that should include permanent staff, logistics, and housing for students.

12.13 To implement the MCH services more effectively, the Ministry should establish an organization in the Ministry to plan, coordinate, and evaluate MCH activities.

12.14 To insure the success of future health projects, the Ministry should stipulate that the project director or administrator for that project takes residence in Lesotho.

12.15 The Ministry should capitalize on the experience gained from the UCSC Project for the planning and implementation of future health projects.

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APPENDIX 1

HEALTH INTERNAL CIRCULAR NO.67 OF 1972.

Ministry of Health  
P.O. Box 514,  
Maseru. Lesotho.

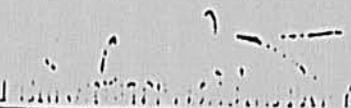
12th September, 1972.

TO: M.H.S.  
Medical Superintendent, G.B.H. Hospital  
D.F.S.S.  
M.O.M.H.  
The Supt. for Leper Settlement  
All Medical Officers in charge

-----

It is hereby notified for general information by the Ministry of Health that a Health Education Section is established in the Department of Public Health and Social Services.

The objectives and functions of this new Section are attached. Also attached is a job description for the Health Education trainees.

  
Minister of Health

Appendix 2

Out of Country Training For Health Education  
Counterparts, Lesotho, 1973 - 1976.

Title	Training/ When	Cert./ Degree	Sponsor- ship	Duration	Where
Home Economic Assistant	Nutrition/ Family Plan. Education, 1973-74	Cert.	USAID	6 mos.	USA
Health Educator	Community Health Ed., 1973-75	A.S. Degree	UCSC	18 mos.	USA
Health Educator	Family Plan. Education, 1975	Cert.	UCSC	2 mos.	Nigeria
Graphic-Artist	Graphic and Designs, 1975	Cert.	U.K.	3 mos.	U.K.
Health Educator	Community Health Ed., 1976-78	B.Sc.	USAID	2 yrs.	USA

Note:

The Health Educator is the same person. His present study is expected to be completed by mid-1978.

APPENDIX 3 b

UNIVERSITY OF IBADAN  
TRAINING PROGRAMME IN FAMILY PLANNING



This is to certify that

MR. MOKUBA PETLANE

diligently attended a

COURSE IN FAMILY PLANNING

from

10TH FEBRUARY, 1975

to

7TH APRIL, 1975

  
DIRECTOR

Upon recommendation of the Faculty of  
*Cabrillo College*  
Santa Cruz County, California

and under authorization granted by the State Board of Education  
the degree of  
*Associate in Science*

is hereby conferred upon

*Eliayer Molyba Pedone*

with all Rights, Benefits and Privileges appertaining thereto.

Given this twentieth day of December, 1974



*Robert E. Jensen*  
President  
*Ernest W. Nelson*  
Board of Trustees

APPENDIX 5 a

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APPENDIX 3 c  
August 16, 1976.

Mr. L. W. Molapo  
National Manpower Dev. Secretariat  
P.O. Box MS 517  
Maseru.

Dear Lebohang,

Mokuba Petlane  
B.S. Health Education

I have received a cable from AID/W which requests that Mr. Petlane arrive in AID/W by August 19th or as soon as possible thereafter.

The Ministry has been verbally informed.

Sincerely,

Harry R. Johnson  
USAID Representative

cc: P.S. Health  
P.S. CPDO

APPENDIX 3 d

G.P. 114



Ministry of Cabinet (Personnel),  
P.O. Box 527, MALAWI.

5th December, 1975.

Ref. CAB/P/A120 - 27

Sir/Madam,

PROMOTION

I have pleasure in informing you that you have been appointed on promotion to the office of Health Director

in the Range 33:39(5) scale, in the Ministry/Department of

Health with effect from the date you assume full duties and responsibilities of the post.

You will enter that scale at the R 2528 point, and your incremental date will be determined in accordance with For 424 (2) (a) as amended.

Your terms and conditions of service will in other respects remain the same.

I am Sir/Madam,

Your obedient servant,

Mr. J. Poulton  
Permanent Secretary for Health,  
Ministry of Health,  
P.O. Box 300, Lilongwe.

G.P. 111.74-10396

Copy: Person  
Audit

APPENDIX 4 a

CERTIFICATE OF ATTENDANCE

Department of Community and Rural  
Development, Lesotho

This is to Certify that

.....M. RADITAPOLU.....

has completed a course in

VILLAGE SURVEY AND PROGRAMME PLANNING

HELD AT THE Division of Extra Mural Services, University of Botswana,  
Lesotho and Swaziland (Roma Campus) with the assistance of Mount Carmel  
International Training Centre for Community Services, Haifa, Israel.

10th July, 1974 to the 30th July, 1974

*A. J. M. ...*  
.....  
Course Director

*Boadler ...*  
.....  
Visiting Expert

*C. ...*  
.....  
Director of Community and Rural  
Development

*Richard G. ...*  
.....  
Director of DEMS

UNIVERSITY OF CALIFORNIA, SANTA CRUZ  
UNIVERSITY EXTENSION

This is to certify that

*MORAPEDI RADITAPOLE*

has satisfactorily completed the requirements for the  
Program in Training of Trainers/Community Health

August 17, 1974

*Carl J. Swanson*  
1974

APPENDIX 4 b

-27- 90

BEST AVAILABLE COPY

BEST AVAILABLE COPY



This is to certify that

completed a course of instruction in

from to  
provided by the British Government  
as part of its Technical Assistance  
Programme.

Date 10th JULY 1975

MINISTER FOR OVERSEAS DEVELOPMENT

APPENDIX 6

HEALTH EDUCATION CONTENTS TO BE TAUGHT IN THE  
HEALTH ASSISTANT TRAINING COURSE, 1975.  
STATEMENT OF OBJECTIVES

The Ministry of Health trains Health Assistants to carry out those responsibilities as defined by the health inspectors. One of these responsibilities is to teach the public on personal and environmental hygiene. To achieve this educational objective, the tutors and health education staff jointly have discussed and developed the following contents:-

I. HEALTH EDUCATION PRINCIPLES

1. What is Education? What is Health Education?
2. Principles for planning, implementing and evaluating health education programs.
3. Health Education Methodology - This includes the whats, when, where, how, who and for whom.
4. Techniques involved in program planning and how does the planning process work.
5. Concepts in evaluation and evaluation process.
6. Skills in identifying family health problems and organizing problem solving resources.
7. Understanding of human behaviour, customs, culture, and beliefs.
8. Studies in community structures and skills in village organization.
9. Staff and community manpower development to achieve health education program objectives.
10. Field trips and practicals.

II. HUMAN BEHAVIOUR

1. An understanding in human behaviour.
2. An understanding of adult and child psychology.
3. Personal maturity, immaturity and adjustment.
4. Interpersonal relationship and how it works among staff themselves and community individuals.
5. Staff and public motivation and changing attitudes toward better family health practices.
6. Relationships between behaviour and social values such as customs, cultures, and beliefs.

### III. COMMUNICATIONS

1. Communications: Processes, skills, and instruments needed.
2. Audio-visual aids and mass media: How to operate simple audio-visual equipment and use them effectively.
3. Sharing information with each other: Why is information sharing with each other important? How to make it work?
4. Health exhibit: What is a health exhibit? Can you make one and how?
5. Problem solving process through consulting, counselling and utilizing resources.

### IV. PLANNING A HEALTH EDUCATION PROGRAM

1. To overcome health education problems in Lesotho.
2. To organize villages for better family health practices.
3. To coordinate and involve allied workers and community individuals in the planning and implementation of practical educational programs.
4. To develop educational manpower through training and orientation courses for trainers, allied health workers, policy makers and community individuals.
5. To improve the Health Assistant's own understanding of skills to help organize programs in patient education, school health, family spacing, utilization of health services and relationship between man and his surroundings.
6. To identify, develop and utilize resources for public meetings, teaching situations and staff conferences.

Other content areas such as school health, nutrition, maternal and child health, nursing, administration and the broad field of environmental health will be coordinated by the Health Inspector Tutor.

APPENDIX 7

HEALTH EDUCATION LECTURE FOR NURSING  
STUDENTS, QUEEN ELIZABETH II HOSPITAL, 1975

1. Defining the Objective of this Course.....
2. Ground Rules.....
3. Introduction to Basic Health Education Principles  
.....
4. Introduction to and Development of a Statement of  
Objective.....
5. Individual Student Develops and Presents a statement  
of Objective.....
6. Introduction to Basic Principles on  
Communication.....
7. Examining Some Factors - Effecting and Affecting  
that lead to the Success or Failure of Existing  
communication Methods.....
8. Personal attitudes, Behaviour and Social Values as  
Related to Effective Communication.....
9. Customs, Beliefs and Superstition - How do They  
Relate to Health?
10. Developing Approaches (including Trust Building)  
To Bring About a Desired Behaviour Change.....
11. Understanding the Importance for Adult Education -  
The What? The How? The Where? The When?.....
12. The Values of Teacher Education on Health and In-  
Service Education for Staff.....
13. Introduction to Human Relations - Staff and Public  
Relations.....
14. Experience, Identify Analyse and Generalize  
(E.I.A.G.).....
15. Planning and Integrating Health Education Activities  
Into Health and Health Related Programs.....
16. Developed Those Skills Needed To Identify  
Education Resources.....
17. Introduction to Basic Principles in Developing and  
Producing Health Education and Teaching Aids.....

18. Radio as A Mass Media To Teach Health To The People  
.....
19. Demonstrating on the Use of 19 mm Movie and Slide  
Projectors.....
20. Planning and Organizational Skills to Develop A  
Health Talk.....
21. Individual Student Develops a Health Talk to be  
Presented.....
22. Individual Student Presentation of a Developed  
Health Talk.....
23. Feedback.....
24. EIAG.....
25. Summary.....



APPENDIX 9  
SAVINGRAM

FROM: BOPHOLONG  
TO: HEALTH EDUCATION MCH/CS PROJ.

RECEIVED DATE STAMP

REF. NO. H/INFORM/11

SIGNED: *P.M.J. Rasekoai*  
(Full Signature)

NAME: P.M.J. RASEKOAI.  
(Typed)

FILE NO.: .....  
(Receiving Min./Dept.)

DATE: 19th June, 1975.

G.P.L. 408/68-400rad.

(Att. Mr. Fong)

HEALTH LECTURES

Thank you very much for the health lectures conducted by you and your counterparts.

The impact that you are making is most invaluable for the future of our health programmes in this country and I think that we should aim at the teachers and students more than anybody else if we want to bring about a new approach to health problems.

I should be very grateful if this programme can be extended to the Teacher Training Colleges in future.

*started in April 1975*  
*34*

c.c. S.M.O.H.  
Miss P. Goodlad

BEST AVAILABLE COPY

BEST AVAILABLE COPY

APPENDIX 9 b

M/1185V/1-1  
JLM/MM.

Ministry of Health,  
P.O. Box 514,  
Maseru, Lesotho.

4th June, 1975.

Dear Sir,

School Health - NPTC

This is to acknowledge receipt of your letter dated 21st May 1975 on the above subject.

The Ministry of Health is pleased and will participate in this forward-looking step to intergrate health education in the teaching of teachers.

I have assigned Messrs Mokuba Letlane and Sunny Fong of our Health Education Unit to co-ordinate activities between your college and the Ministry.

We look forward to a fruitful co-operation.

Yours faithfully,

(Mr. J.L. Molapo)  
PERMANENT SECRETARY FOR HEALTH

Mr. E.A. Matšela,  
Ag. Director,  
N.T.T.C.,  
P.O. Box 1393,  
Maseru.

c.c. F.S. Education.  
Messrs. Letlane and Fong.

APPENDIX 9 c

N.T.T.C HEALTH EDUCATION LECTURE OUTLINE 1976

<u>Subject</u>	<u>Class Period Required</u>
I. Man and His Environment	1
II. Health - An Education	1
III. Human Reproduction:	
1. Male and Female Reproductive Organs	1
2. Conception and Pregnancy	1
3. Childbirth	1
4. Sexual Responsibility	1
5. Contraception	1
IV. Infant and Child Health:	
1. Traditional/Current Attitudes	1
2. Vaccination and Immunization	1
3. Health Services and Nutritional Requirement	1
4. Growth and Development	
V. Environmental Health	
1. Safe Drinking Water and Spring Protection	1
2. Pit Latrine	1
3. Management of Man Made Waste	1
VI. Community Health and Health Education	
1. Health Education	1
2. Community Health Services	1
VII. Social Health:	
1. Alcohol and Alcoholism	1
2. Tobacco and Dangerous Drugs	1
VIII. Venereal Diseases:	
1. Gonorrhea	1
2. Syphilis	1
IX. School Health:	
1. Practical School Health Observations including hearing, seeing, etc.	1
2. Classroom Health Teaching	1
3. School Environment	1
4. Identifying the need and Development of a School Health Guideline	1
X. Health Organizations	1

APPENDIX 10

LESOTHO YOUTH SERVICE CADETS

HEALTH LECTURE 1976

1. Introduction of basic Hygiene
2. Common Communicable Diseases in Lesotho
3. Venereal Diseases
4. Sex Education
5. Water Sanitation
6. Disposal of Waste Material
7. Environmental Sanitation
8. Nutrition and Health
9. Communication Skills
10. Village Health Organization

APPENDIX 11

Phone No.: 3343 Maseru



Telegrams: — Education

LESOTHO

*Ministry of Education, Sports and Recreation*

P.O. Box 47

MASERU

13th December, 1974.

Dr. Mohale,  
Ministry of Health,  
P.O. Box 514,  
MASERU.

Dear Dr. Mohale,

The Science Division of the Ministry of Education wishes to request assistance in setting up the Human Reproduction and Human Ecology aspects of the new Junior Certificate Lesotho Integrated Science Improvement Programme (LISIP) by your MCH Project Team. We will be holding two courses for science teachers this January 1975. We would appreciate the participation of members of the MCH Project Team during these courses.

Yours sincerely,

C. CHABANE.

Senior Science Inspector.

APPENDIX 12



LESOTHO

BEST AVAILABLE COPY

Ministry of Agriculture,  
P.O.Box 24,  
MASERU.

27th June, 1975.

Mr Sonny Fong,  
Ministry of Health,  
P.O.Box 514,  
Maseru.

Dear Sonny,

Since the last staff refresher course which was held in Leribe and which was conducted by your educational team together with the Public Health Section, I have meant to write to you pointing out how successful I feel your efforts have been.

There has been an obvious change of attitude amongst the staff. They are co-operative, sympathetic towards each other - while they regard their seniors with the greatest esteem nevertheless they are free to discuss points of common interest and to voice their opinion frankly. Their general outlook is very objective and they tend to think of others before themselves.

They take initiative and look upon each other as a team.

All this is attributable to your discussions with them and I hope you will have time when we hold our annual refresher course in August to come and refresh them on this very important subject of communication skills.

Thank you and extend our thanks to the rest of the team.

Yours sincerely,

*A.M. Hlalele*

A.M. HLALELE.

Nutrition Officer.

**APPENDIX 13**

COPY



**LESOTHO**

Quthing MCH Team

Quthing Hospital

Box 3

QUTHING

3rd September, 1975

Dr. Mohale SMCH,  
MINISTRY OF HEALTH  
MASERU

Dear Dr. Mohale,

We would like to thank you for the excellent input of Mr. Petlane and Mr. Fong in the training of village health workers in the Quthing MCH project.

Their assistance in training our teaching team has been of great help, and it has made the basis for the success of the program! We would be most obliged, if their expert knowledge could be available for future training sessions in Quthing.

Yours sincerely,

(Sgd) Miss Chabana PHN, Dr. De Vries and Dr. Perk.

C.C. P.S. FOR HEALTH  
TSAKHOLO PROJECT

APPENDIX 14

REPORT ON MPHAKI MEETING TO ELECT A MPHAKI

REGIONAL HEALTH COMMITTEE 23-24 OCTOBER 1975.

BY

MOKUBA PETLANE \* - HEALTH EDUCATION UNIT

Almost three months ago Health Education Unit was invited through the SMOH to assist in the planning and conducting of the ten (10) Quthing Health and related personnel training so that these people were able to train (10) ten Village Voluntary Health workers. The VVHW would function Public Health Extension workers who would identify health needs and problems of individuals, families and the community as a whole and be able to suggest simple solutions to them using the available resources. Eight of these volunteers have done remarkably well especially T.B. case finding as indicated by DMO, PHN, and HI.

On October 23 and 24 1975 Sister Seipobi and I were instructed by SMOH to assist the Quthing District Medical Officer and his staff to motivate and organize the chiefs and people of Mphaki so that they might revive the idea of establishing a Regional Health Committee whose main purpose would be to act as a link between Health personnel, chiefs and public. They will work as motivators, coordinators, organizers and consultants with or on behalf of chiefs and Health staff in all health and related problem areas. But they are not administrators.

On October 23, four area chiefs, one chief's representative and one (1) police sergeant seven (7) Health and two (2) LFPA workers participated in the discussion which I chaired. The importance of electing a Health Committee to serve the whole of Seforong area was emphasised for the purpose of improving existing health services in remote areas with emphasis on all preventable diseases like V.D., deficiency diseases, T.B., Leprosy and others which Dr. Perk pointed out that they have high incidence in the area.

Need for establishing the Committee was strongly felt especially now that the physical structure is nearing completion. Members participated and discussed their view points freely, productively and constructively.

The meeting lasted three (3) hours as the chiefs had to leave early to go and notify their villagers to come the following day to elect the committee on democratic basis.....On October 24 an Interim Health Committee of nine (9) members was elected by 47 villagers from among the people present after a long discussion and exchange of ideas.

\* Absent people, even though they might qualify for this committee, would not be elected because they might lack motivation to do the work on voluntary basis.

\*Chiefs were not elected because of their significant role in Public Administration and other responsibilities which also include health activities.

\* The committee was described as the "Interim Health Committee" because a number of other area chiefs and their people in the Seforong Ward were not represented because of either (a) distance or (b) shortness of notice before elections.

Drs. Perk and De Vries and their staff have expressed urgent need for training of this committee on Group Process, Communication skills, Team building etc. so that they can be effective organizers of their community for health purposes. Arrangements will be made for the weekend workshop on November 28, 1975. Health Education staff will be invited to assist and conduct this workshop.

The first task of the committee will be to help the mothers at preschool child clinics to identify Voluntary Village Health Workers who will be trained on Basic Health Approaches some time in January 1976. It is envisioned that ten (10) volunteers will be an ideal number to start with.

Appended are the minutes as taken by one of the active participants in the meeting, Chief Setho Letsie, and also the names of the people elected.

APPENDIX 15

HEALTH LECTURE OUTLINE FOR THE PRISON OFFICERS TRAINING,  
MASERU, MARCH 5-9, 1973.

By: Mr. L Moshoeshe, Senior Health Inspector  
Mr. S. Fong, Health Education Advisor

- A. Personal Hygiene:
  - 1. Importance of Individual Cleanliness.
  - 2. Importance of group cleanliness.
  
- B. Food Hygiene:
  - 1. Food Preparations
  - 2. Food Storage
  - 3. Food Service
  - 4. Food born diseases
  
- C. Environmental Health:
  - 1. Cleanliness of the living and working areas.
  - 2. Management of Human Waste.
  - 3. Pest Control
    - A. Fleas
    - B. Lice
    - C. Bed Bugs
    - D. Other Insects
  
- D. Transmission of Diseases:
  - 1. Tuberculosis
  - 2. Venereal Diseases
  - 3. Other diseases
  
- E. Mental Health:
  - 1. The effects of separation from the family.
  - 2. The effects of isolation.
  - 3. The importance of understanding.
  - 4. The importance of recreation and activities.
  
- F. Health Assistance for the Officers and in-mates in the District
  - 1. Routine health services.
  - 2. Organized specific programs for the officers and in-mates.
  - 3. Others.
  
- G. Discussions.

APPENDIX 16

G. 28



LESOTHO

Central Public Health Laboratory,

P.O. Box 514,

Maseru.

19th. February, 1976.

Health Adviser,  
Health Education Unit,  
Ministry of Health,

MASERU.

Dear Sir,

I would like to express my appreciation and that of the above laboratory for the assistance given by your unit in compiling and reproducing the Haematology Manual. By virtue of this assistance it was possible to complete the course much sooner than otherwise as each student was able to have a personal Manual for study purposes.

Thanking you,

A handwritten signature in dark ink, appearing to read 'V.G. Alberto'.

V.G. Alberto.

PART I

KAP (KNOWLEDGE, ATTITUDES AND PRACTICES) SURVEY OF  
DOCTORS AND NURSES IN LESOTHO  
NOVEMBER 1973

A REPORT TO THE MINISTRY OF HEALTH OF THE GOVERNMENT OF LESOTHO

SUBMITTED BY: THE UNIVERSITY OF CALIFORNIA EXTENSION/SANTA CRUZ  
DIVISION OF INTERNATIONAL PROGRAMS, CONTRACT NO. AFR-799  
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

PREPARED BY: P. K. GOODALE, B.S., P.H.N., M.P.H.  
H. A. STUBBS, B.S., M.A.

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KAP (KNOWLEDGE, ATTITUDES AND PRACTICES) SURVEY OF  
DOCTORS AND NURSES IN LESOTHO  
NOVEMBER 1973

TABLE OF CONTENTS

	Pages
1. Introduction	1
2. Respondent Characteristics	2 to 4
3. Results of the Survey	4 to 10
4. Inferential Findings	11 and 12
5. Discussion	13 to 15
6. Conclusions and Recommendations	16

Appendix

Figure 1 - Response by Double Qualified Nurses to Question "With Whom Do You Work In Your Present Position?"	17
Figure 2 - Percent of Nurses Undecided About Terminating a Pregnancy By Abortion Under Various Conditions	18
Figure 3 - Rank Order of Agreement/Disagreement of Nurses Amongst Themselves	19
Figure 4 - Rank Order of Agreement Between Doctors and Nurses	19
Figure 5 - Education Completed and Percent Agreeing with Abortion for Various Attitudes for All Respondents	20
Tables 1 to 35	21 to 41

Questionnaire

KAP (KNOWLEDGE, ATTITUDES AND PRACTICES) SURVEY OF  
DOCTORS AND NURSES IN LESOTHO  
NOVEMBER 1973

INTRODUCTION

The Knowledge, Attitudes and Practices (KAP) Survey of medical professionals in Lesotho was conducted in December of 1973 prior to any major in-country training amongst professionals regarding family planning within Lesotho. The objectives of the survey were to:

1. Determine the general level of knowledge, attitudes and practices amongst professionals engaged in or likely to be engaged in family planning education and services particularly in rural Lesotho.
2. Stimulate thinking in related subject areas.
3. Determine the acceptability and need for family planning content in formal and informal educational programs in the country.
4. Learn from professionals their experiences in and patient demand for contraceptives, infertility and related education counselling and/or services.
5. Determine significant relationships between professional status and institutional background and their effects on subsequent responses.

The survey was done in conjunction with and prior to a countrywide training program carried out by the Ministry of Health and the University of California Extension/Santa Cruz, Maternal and Child Health Project team. The questionnaires were anonymous, and their administration and completion was supervised by the training team. Prior to the first day of training all doctors and nurses participating in the training program received, in their districts, personal instruction on completing the questionnaire.

In most instances questions were selected from surveys of a similar nature. (a) A pretest was accomplished on ten non-nurses and ten nurses in training at Queen Elizabeth II Hospital to determine understanding and questionnaire wording prior to administration of the survey. The findings presented herein should serve as baseline data for planning and program implementation in the country, including education.

---

(a) A Manual for Surveys of Fertility and Family Planning: Knowledge, Attitudes and Practices, The Population Council, New York, 1970.

## RESPONDENT CHARACTERISTICS

The questionnaire was administered to a total of fourteen doctors and 173 nurses employed in Lesotho in November, 1973. Table 1 shows the total of doctors and nurses registered and believed to be practicing in Lesotho at that time compared to the survey group.

As noted in Table 1, questionnaires were obtained from 128, 80.0 percent, of government employed nurses and 45, 25.4 percent, of mission or private sector nurses. These represent 51.3 percent of the 337 nurses reported to be employed in the country at that time.<sup>(b)</sup> Low response from the mission/private sector is probably due to the sponsorship and site of the training program which in all instances except one were government-based hospitals. Although missions and private associations were invited to participate, large mission hospitals could not as easily function without substantial staff during the three-day training program as could the nurses at government training sites where rotations were made so that all staff could participate. Provision was made for all government nurses serving in rural health centers to be present for the training program. Of interest in Table 1 is the 100 percent response from government doctors, 13, based outside of Maseru district but only one respondent from all other categories of doctors.

Table 2 presents the respondents by professional category and basic educational preparation. Noteworthy is participation of 126 double-qualified nurses, 81, or 64.3 percent, coming from a basic educational preparation of junior certificate. Of the total 173 nurses, 107 entered nursing having achieved J.C., and 34 or 19.8 percent came from a basic level of matriculation.

The presence of other health-related personnel such as health assistants and ward attendants at the training program provided opportunity for their inclusion in the survey. Those who were neither nurses nor doctors totaled 39. Although the data for this group was analysed, they are not included in the following report of the survey which was geared towards health professionals.

The interpretation of any results concerning knowledge, attitude and practice of doctors in Lesotho is modified by the fact that 11 of the 14 doctors, 78.6 percent, were contract expatriates, non-Mosotho.<sup>3</sup> However, since this is the typical pattern and number of government medical staff in rural Lesotho, the findings will be reported. Nationality of the nurse participants was 89.6 percent Basotho either by birth or naturalization.<sup>3</sup> Only 10.4 percent, 18, were non-Basotho, a category which includes Zulu, Xhosa and nurses from other nations.

---

(b) Ministry of Health working document, Health Planning Unit, 1973.

3 All numbered references refer to Tables in the Appendix.

As can be expected, 100 percent of the nurses were female. However, only nine of the doctors were male, the remaining five female.<sup>4</sup> The median age of the nurses was 36.6 years.<sup>5</sup> Although this data appears to represent an older group of nurses, it is not unusual for double-qualified Basotho nurses to have completed and registered at age 25 or older. Consistent with the abovementioned age distribution of the respondents is the fact that 69.1 percent of all the professionals were married, 20.9 percent were never married, and the remaining 10.0 percent were widowed, divorced or separated at the time of the survey.<sup>6</sup>

Table 7 reveals that 56, or 32.4 percent, of the nurses were Roman Catholic, 114, 65.8 percent, were Protestant and 16 were of another religious faith. The religious preference of nurses in Table 7 is consistent with the overall pattern of the country for women with higher than BPTC education. This educational factor is a departure from the religious preference of all Basotho women which is 41.1 percent Roman Catholic.<sup>8</sup>

The nurses and doctors were asked to list the number of sons/daughters born and living, as well as the presence of adopted sons/daughters. Table 9 displays the results of this question. It should be noted that the numbers of sons and daughters born is far in excess of the number living at the time of the survey. For example, of the 178 daughters ever born to nurses, only 134, or 75.3 percent were still alive. Even more alarming is that of the 220 sons born, only 148 or 67.3 percent were still living. The experience of 126 double-qualified nurses was analysed separately with even more startling results, namely a survival of only 70.8 percent of all daughters born alive and 64.6 percent of all sons. Although a completed fertility rate is a desirable adjunct to this information, the presence of only 14 nurses aged 50 and over is insufficient numerically on which to base such a computation. A review of the raw data concerning this question shows that from 20 questionnaires randomly selected, all were completed properly, that is, when the number of sons/daughters born alive was answered, the number of sons/daughters still alive was also stated. Infant and young child mortality rates in Lesotho would suggest that more of the children born alive should still be living, particularly to this group of nurses who should be considered to be part of the educated, advantaged population in the country.

The nurses and doctors were asked in which district they were currently working and the length of time they had been in that location. Table 10 compares the district base of the doctors and nurses at the time of the survey to the district manpower patterns at that time. As observed previously, the doctors represent the total government physicians posted outside of Maseru district, and it is only on this basis that findings are reported. The number of nurse respondents from districts outside Maseru are felt to represent close to 100 percent of all government nursing posts at that time; however, figures are not available for comparison.

The length of time that doctors/nurses were in that particular location in Lesotho is shown in Table 11. Surprisingly, 82, or 47.4 percent, of the nurses indicated that they had been thusly located for more than three years and 126, 72.8 percent, for more than two years. On the contrary, all except three doctors had been in their post and location for eighteen months or less and eight doctors for less than eight months.

The employer at the time of the survey was Government for 128, 80.0 percent, of the nurses. The remaining 45 were employed by missions or other private voluntary organizations. All except one of the doctors were government physicians.<sup>12</sup> As shown in Table 13, 125, 82.2 percent of the 152 nurse respondents, were posted as staff nurses at the time of the survey. Table 14 shows the location of the respondents' principal training institution(s); that is, whether they received the bulk of their professional training in Lesotho, Republic of South Africa, other African countries, or countries outside Africa. As noted, a bulk of the nurse respondents, all categories, received most of their professional training outside of Lesotho. Eighty-one nurses, 46.0 percent, received most of their professional training in Lesotho, and 92 or 53.2 percent were prepared in their profession in large part outside the country, a majority, 41.6 percent having trained in RSA.

A separate analysis was made of 126 double-qualified nurses which demonstrates the same pattern of training as amongst all categories of nurses. This dichotomy between nurses trained inside and outside Lesotho will provide an opportunity for more detailed analysis of the data.

The doctors and nurses were asked "With whom do you work daily in your present position?" Figure 1 shows the work pattern in terms of whether 123 double-qualified nurses were likely to be working alone, in conjunction with non-professionals only, or if they were amongst other nurses, in daily contact with a doctor, etc. As can be seen from the bar graph, Figure 1, 33.3 percent of the double-qualified nurses who responded to the question, or 41 out of 123, indicated that their current post and location require them to function without daily contact with a physician.

## RESULTS OF THE SURVEY

### A. Knowledge Questions

Some of the questions were aimed at determining the level of knowledge concerning concepts related to work in the general area of family planning and infertility. Table 15 presents a summary of the percent of nurses and doctors who responded correctly to twenty multiple choice knowledge questions. It should be noted that the categories by column apply to different percentage bases, that is single-qualified nurses totaled 22, double-qualified nurses totaled 126 and other nurse specialists including 10 public health nurses, totaled 25. The percentages of column 2 are based on a large number (126) of respondents, whereas those in columns 1 and 3 are based on only 22 and 25 respondents. With this in mind, one notes that the higher nurse specialists (public health nurses, tutors, etc.) did not always exceed the knowledge level of the single-qualified respondents. For example, Question 18 asks the number of days an ovum is available to be fertilized. As shown, 31.8 percent of the single-qualified, 24.8 percent of the double-qualified and 20.0 percent of the nurse specialists answered the question correctly. Also noteworthy is that only 50.0 percent of the doctors were aware of the correct response to this question. Usually however, the knowledge level increases as professional rank increases.

Eleven of the 20 knowledge questions were answered incorrectly by more than one-half of the nurses. Seven of these questions have to do with knowledge of male and female reproductive anatomy and physiology which is basic to understanding, teaching and advising couples on conception and contraception. Question 45 asks about the so-called "safe period" during a woman's menstrual cycle when she is most likely unable to conceive, 67.6 percent of the nurses answered this incorrectly, but even more surprising, 78.6 percent of the doctors gave incorrect responses to this question. On the contrary, 100 percent of the doctors and 52.6 percent of the nurses correctly identified the most likely fertile period in the female with a regular 28 day cycle.

Question 23 asks, "At the time of fertilization, the sex of the new fetus is determined by \_\_\_\_\_". 54.3 percent of the nurses and 50.0 percent of the doctors were unable to answer this question correctly. For all questions, the percent of correct responses from all nurses was 45.6 percent, and all doctors answered the twenty questions correctly 71.4 percent of the time.

Question 46, Table 16, asks the nurses to rank nine methods of contraception on a basis of their effectiveness in preventing pregnancy when used exactly as directed. Although this is still a subject area of controversy in the literature, there is general agreement that withdrawal, for example, is a very unreliable or poor method; and pills, when used exactly as directed, are excellent means of preventing pregnancy. (c) The nurses indicated they did not know how effective the methods were between 16.2 percent of the time for pills, to 51.4 percent for rhythm. Sixteen or 9.2 percent of the nurses judged withdrawal to be an excellent method of contraception and 35.8 percent gave this ranking to oral contraceptive pills.

Some of the questions required basic knowledge but also had an overlay of attitude and/or personal experience that might be reflected in the response. Questions 25, 33 and 35 are examples. Question 25 refers to advice the respondent would give a couple who ask about the effects of having intercourse during menses. Although there are individual preferences psychologically to this, there are physical reasons for restriction. As shown in Table 17, the nurses' and doctors' responses were grouped into two categories, those who perceived the need for restricting intercourse on a basis of physical or health reasons and those who indicated there was no reason for restriction other than the couple's personal preference. The same categorization was given for responses to Questions 33 and 35; however, Question 35 has particular significance in relation to the local traditional practice of abstinence by women who are breastfeeding. Surprisingly, only 19.7 percent of the nurses perceived a reason for restricting intercourse while breastfeeding while 25.4 percent and 29.5 percent indicated reasons for restricting intercourse during pregnancy and menses. One hundred and twenty-two nurses, or 70.5 percent saw no reason to restrict intercourse during breastfeeding, except for couple's preference or to advise that the woman could become pregnant and should use some means of contraception. These reasons were categorized as "no restriction", whereas reasons such as "harmful to the woman" or "not to have intercourse during lactation" fell into the restrictive category.

---

(c) Reports on Population/Family Planning, No. 15, January, 1974, The Population Council Inc., New York.

Another area of knowledge requested from the participants was the amount of training they had received in the area of infertility, Question 30, and child spacing and family planning, Question 52. Table 18 presents the findings concerning the level of education or training received by the nurses and doctors, whether as basic professional or postgraduate education, on-the-job training, or none at all. It should be noted that respondents were asked to check all responses that applied to them. Noteworthy is that 50.3 percent of the nurses indicated that they had no preparation whatsoever in infertility counselling and 47.4 percent no preparation in child spacing/family planning. Surprisingly, three of the doctors stated that they had no formal preparation in child spacing/family planning. Basic professional schooling prepared only 19.3 percent of the nurses for work in family planning. Performance on the knowledge questions was not separately analyzed for those respondents who had received special training in family planning; and therefore the results presented here for the entire group of professionals are not particularly surprising.

## B. Attitudes

A number of the questions were asked to determine if there were strong positive or negative attitudes concerning specific issues. The correlates of selected attitudinal questions, such as religion, education, etc., are discussed under inferential results of the survey whereas this section will outline some of the basic results.

In Question 39 participants were asked if they thought a couple should have the right to determine the number of children they should have, which is interesting compared to Question 50, asking if they thought Basotho have too many children. The findings are presented in Table 19. As shown, almost 100 percent of all respondents indicated that it should be up to the couple to determine their own family size but more than 90.2 percent felt Basotho couples have too many children. Six of the nurses were undecided about the couple's right to determine numbers of pregnancies and three felt that Basothos do not have too many children. The remaining 8.1 percent for Question 50 were undecided.

In a later question the nurses and doctors were asked how many is too many children and one can see from Table 20 that the median of "too many" is quite high amongst the 126 respondents, or 7.57 children. Less than 20 or 11.6 percent of the nurses stated that five or fewer children is "too many", which is interesting in view of an average total fertility of approximately 56 live births for every ten women in Lesotho.<sup>(d)</sup> Another way to report this is to say that although 90.2 percent of the nurses felt that Basotho have too many children, on the average the nurses perceive "too many" to be far in excess of what is reported to be the total fertility rate among Basotho women who have completed their reproductive cycle (older than 49 years).

The doctors and nurses were asked who in their opinion should use something to prevent pregnancy. The list included two extremes, that is, a very liberal position of anyone who wishes to, to a very restrictive attitude of nobody should use

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(d) Manyake, A.M., Paper reported at the National Population Symposium, Government of Lesotho, June 1974.

contraception, Question 42. Of the former group, 106 or 61.3 percent of the nurses stated that anyone who wishes to should be able to use contraception and 48, 27.7 percent responded negatively. Nineteen of the nurses, 11.0 percent did not respond. The pattern for affirmative and negative responses is displayed in Table 21 and the initial position of the nurses was not consistently apparent in subsequent categories. For example, 61.3 percent of the nurses stated anyone who wishes to use contraception should do so, but only 49.7 percent thought that single men should be allowed to. In contrast, 61.3 percent thought that single women should be allowed to use contraception. Over one half of the nurses were in agreement that each category listed should use contraception if they so wished except for the restrictive categories of men only, women only and nobody, to which only 18.5 percent, 20.2 percent and 9.8 percent of the nurses were in agreement. The doctors gave a more consistent affirmative response in that 78.6 percent of the doctors agreed that anyone, single men, single women, women extramaritally, and married women should all use contraception if they so wish. In looking more closely at the data it is apparent that the nurses share agreement that women should have greater access to contraception than men if given the choice. This bias is displayed in Table 22.

Question 54 is an attitudinal and practice question which is an interesting contrast to aforementioned results. The doctors and nurses were given a list of what they would do, on the whole, if a client requested child spacing/family planning information. In spite of the fact that 9.8 percent of the nurses indicated in Question 42 that they thought nobody should use contraception, neither any of the nurses nor doctors agreed that child spacing should not be discussed nor patients referred elsewhere for information. In fact, 122 nurses, 70.5 percent and 12 doctors responded that they would, on the whole, discuss several methods in order to allow the patient to select a method.<sup>23</sup>

When asked what method of family planning they thought best for Basotho couples the most popular selection by nurses, 49 or 28.3 percent, was the oral pill, while eight of the doctors, 57.1 percent chose the IUCD.<sup>24</sup> A high non-response rate, 26.6 percent of the nurses, suggested a basic unfamiliarity with the methods or perhaps indecision about their use in Lesotho.

Questions 53 and 57 have both attitudinal and practice elements inherent in their wording and they were asked in order to determine the areas of ambivalence or indecisiveness amongs the respondents. They were correlated with different variables, reported under inferential findings, to determine if there were religious, educational, age bias, etc. This section will deal with the basic findings.

Table 25 presents the percentage of nurses and doctors who agreed, disagreed or were undecided about their professional role in relation to child spacing, family planning, Question 53. It is shown that the highest level of agreement amongst nurses was item 1 where 158 or 91.3 percent of the nurses agreed that family planning should be discussed routinely with all antenatal cases. Only 5.8 percent disagreed and 2.9 percent were undecided. The doctors were in 100 percent agreement that family planning should be discussed with community groups.

Surprisingly the factors of age and marital status appeared to influence the nurses' decisions concerning women who had already given birth, postpartum clients.

A greater percent of the nurses, 83.2 percent, agreed that family planning should be discussed routinely with postpartum patients regardless of age but fewer, 77.4 percent, thought that this should be done with postpartums regardless of marital status. Undecidedness on this issue reached 8.7 percent and 11.6 percent respectively. In contrast, only 37.6 percent of the nurses agreed that family planning should be discussed with any client regardless of age and more were in agreement, 58.4 percent, of discussion with any client regardless of marital status. Ambivalence or undecidedness was high under this age issue with 14.5 percent of the nurses responding thusly. Disagreement was also high by 48.0 percent of the nurses whereas disregard of marital status was less disagreeable, 31.2 percent, and less undecided, 10.4 percent.

As one might expect, the highest levels of ambivalence or indecisiveness were those issues that pertain to personal preferences or conflicts. Thus items 10 and 11 achieved the highest response of undecidedness, 23.1 percent and 18.5 percent respectively. These items ask the respondents if they would discuss only those methods that do not conflict with the health professionals' own personal beliefs or when he/she thinks the methods do not conflict with the client's personal beliefs.

The highest level of consensus, 75 percent or more, of both doctors and nurses was achieved in agreement to routine discussion with the following groups:

- Question 53, Item 1. Routinely with antenatal cases
2. Routinely with postpartum cases regardless of age
  3. Routinely with postpartum cases regardless of marital status
  7. Routinely with mothers in preschool clinics
  8. With community groups
  9. With men as often as possible

They were likewise in strong disagreement, 75 percent plus, that health professionals should discuss family planning only when he/she (the health worker) was married (Item 12), or should never give family planning information to anyone (Item 16).

Of relevance in Lesotho at the time of the survey (November, 1973) was the position of the Government on family planning issues whereby child spacing for high risk women was the only authoritative platform under which Government services were operating. The nurses were in obvious opposition with this, indicating disagreement of 68.8 percent that family planning should be limited only to discussions with high risk women. 92.8 percent of the doctors responded likewise. In fact 66.5 percent of the nurses felt that family planning needs should be assessed with almost every client contact.

Abortion is not an unknown occurrence in Lesotho and as this subject becomes more easily discussed amongst health professionals one finds the problem of non-professional induced abortion existing in traditional practice as well as modern practice. Because of its significant association with infant and maternal morbidity and mortality it was important to query the nurses and doctors concerning

their attitude with regard to abortion. Table 26 presents the basic findings from Question 57. Statistical inference is presented in that section regarding selected variables and their correlates.

As one might expect, a much higher position of indecisiveness exists amongst doctors and nurses over this issue than over the issue of their professional role with regard to family planning. Figure 2 displays in bar graph the position of 173 nurses as to how undecided they were over certain significant variables. Table 27 presents their rank agreement and disagreement over these same abortion variables, which as depicted in Figure 3 are highly correlated amongst the nurses. For example, the nurses achieved the highest consensus of agreement over those variables to which they also achieved the lowest level of disagreement. Table 26 shows that this was not so often the case with doctors who tended to disagree more often amongst themselves. Of significance in this issue is the disparity between the consensus of nurses and doctors in areas of agreement as shown in the line drawing, Figure 4. One has to remember that we are talking about 173 nurses and only 14 doctors but since this represents close to 100 percent of government employed doctors and nurses outside Maseru, the findings bear significance to government health manpower in the rural areas.

Figure 4 displays a strong disparity between the nurses and doctors over the issue of abortion for a client who is found to be seriously mentally ill. Under such circumstances 79.2 percent of the nurses and only one doctor said they would consider agreeing to abortion. Only 9.8 percent of the nurses, but 78.6 of the doctors, responded that they would disagree to abortion under such circumstances.

Item 7 asks for agreement or disagreement to abortion for a couple who feel they have too many children. Forty-eight or 27.7 percent of the nurses could agree to these circumstances but only one doctor said he would agree. Although the percent of disagreement was moderately high for both nurses and doctors, 44.5 percent and 57.1 percent respectively, Item 7 is of most interest because it is second in rank order of undecidedness for both doctors and nurses, with 35.7 percent of doctors and 27.7 percent of the nurses indecisive under these circumstances.

The only other area where nurses and doctors could agree was their degree of ambivalence about abortion when pregnancy is a serious medical threat to the woman's life. Here the doctors and nurses shared negligible indecisiveness with a majority of both groups indicating the highest level of agreement on abortion under these circumstances; the doctors, 92.8 percent in agreement with 0.0 percent undecided, the nurses, 91.9 percent in agreement and 5.8 percent undecided.

In summary, if one were concerned about changing abortion attitudes in Lesotho, one finds a correlation amongst nurses of issues where they agree and disagree but the contrary is true of doctors amongst themselves or positions taken between doctors and nurses. In lieu of probable continued dependency on foreign medical assistance in Lesotho, this disparity is likely to continue to be felt in the periphery. The areas of indecisiveness amongst Basotho nurses where educational efforts would be most fruitful are shown previously in Figure 2.

### C. Practices

It is difficult to separate some of the survey question as to how much of the doctors' and nurses' experience and practice is based upon their receptivity or attitude and how much is based upon client demands for services in the area of contraception, infertility and abortion. The consideration is that clients do not make their personal needs known to someone whom they perceive as unable or unwilling to help them. The findings reported in Tables 28 and 29 are of interest to those concerned with demand for contraceptive, infertility, and abortion services as experienced by the doctors and nurses.

In general the nurses received more client requests for help with infertility services than family planning services, with 55.4 percent of the nurses stating frequent or occasional requests for infertility problems and 47.3 percent for family planning. More of the nurses, 24.8 percent as opposed to 17.9 percent also responded that they had never had any requests for assistance in family planning or infertility respectively. The doctors received such requests more often, 85.7 percent for infertility, 78.5 percent for family planning.<sup>28</sup>

On their experience with abortion, the nurses had frequently or occasionally been exposed to Basothos requesting information about abortion only 17.3 percent of the time whereas their experience with Basothos who were patients as a result of non-professional induced abortions rose to 27.2 percent responding frequently or occasionally. Only 10.4 percent of the nurses and 7.1 percent of the doctors responded that they had never had and never heard about Basotho patients who were suffering from this consequence.<sup>29</sup>

In their own personal lives, 60.7 percent of the 173 nurse and doctor respondents who were in their reproductive years (under 49 years old) were currently using no method of contraception and had used no method for the previous year.<sup>30</sup> Of the 173 respondents 20.8 percent had used the pill, IUCD or injectable at some time over the previous year and 19.6 percent were presently using this method.<sup>31</sup> 2.9 percent had selected sterilization for protection against pregnancy.

## INFERENTIAL FINDINGS

Often in research projects of this nature only those results which are statistically significant are reported. Since these relationships are observed in the sample they are then believed to actually exist in the target population itself since the sampling process and the statistical decision procedure allow one to preclude (with a  $1-\alpha$  level of confidence) the explanation that the findings are solely due to chance alone and to therefore conclude that the explanation for the observed relationship in the sample is that the relationship actually exists in the sampled population. However, the authors feel that it is also important to report non-significant results because if the power of the statistical tests is moderate then some additional knowledge about the target population is conveyed in these results.

Table 32 displays the information generated by cross-tabulations of KAP Question 53(14) with Question 42, parts 5 and 6. The null hypothesis in both these instances is that no relationship exists between an individual's personal opinion as regards contraception and his or her opinion as a professional health worker. This analysis was done for all respondents, excluding missing values and was done for only these circumstances. One can see that in either case no significant relationship exists between the respondent's personal attitude toward contraceptive use by men or women in extramarital affairs and the respondent's professional opinion as regards discussing child spacing with clients regardless of marital status ( $p = .296$  for extramarital men and  $p = .393$  for extramarital women). It should be emphasized here that a possible relationship (lack of independence) between the respondents' personal and professional opinions was examined only for the case of extramarital men and women.

The contention that education liberalizes individuals was examined graphically for those respondents who had attained the junior certificate level or beyond. The response variables chosen to be examined were attitudes toward abortion for various circumstances, and specifically, the percent of respondents agreeing that abortion is justifiable as a method of terminating a pregnancy. These percents of agreement for each of the three educational levels, i.e., junior certificate, matriculation, and higher education, are shown in Figure 5 for the 17 situations of KAP Question 57, and Table 33 provides the exact percents to accompany this figure. It can be seen graphically that although there may be significant differences in the percents of respondents in the three educational levels agreeing for some of the situations, there are no consistent differences over all the situations.

In an attempt to assess the effect of Catholic or Protestant religious preference on attitudes concerning abortion while controlling for possible differences in educational level attained, a series of 17 fourfold contingency tables was generated and examined for the group of double-qualified nurses. The results of these crosstabulations are contained in Table 34, and one can observe in the far right column of this table that the Catholic and Protestant double-qualified nurses

do not significantly differ in their attitudes toward abortion for any of the 17 circumstances. In fact, the two groups are remarkably similar; the smallest p-value for all the situations is .1551.

In a similar analytical fashion the relationship between location of training, Lesotho or South Africa, and performance on knowledge question by the double-qualified nurses has been examined and is presented in Table 35. By scanning the p-values of the far right column it will be observed that the two groups differed at the one percent level for only one of the twenty knowledge question (KAP Question 34). A comparison of the columns of percent responding correctly by location of training in conjunction with the significance levels will convince one that training location does not have an overall significant effect on performance on knowledge questions.

## DISCUSSION

The findings are baseline of 80 percent of all government nurses in 1973, who represent a cross-section of basic and professional education, age, marital status and religious preference amongst women engaged in government nursing posts at that time. One hundred percent of the 128 nurses employed by Government of Lesotho were Basotho by birth or naturalization, however 89.6 percent of the total 173 nurse respondents were country nationals.

The participation of 41 double qualified nurses working in the absence of other trained nurses and doctors suggests substantial representation in the survey of nurses from rural health clinics and rural health centres. The government respondents are representative of district and Maseru-based personnel at that time.

The educational preparation of 173 nurses surveyed was limited in the field of family planning with only 19.3 percent of all nurses, government and private sector, indicating any preparation in this field in basic professional schooling and 47.4 percent indicating no preparation whatsoever in family planning. There was no significant difference in performance between 113 double qualified nurses amongst whom almost half were trained in Lesotho and half received most professional education in the Republic of South Africa. Of 171 nurse respondents, only 25.1 percent indicated having had some preparation in family planning while employed ("on-the-job" training). Infertility training was included in basic professional schooling of 29.2 percent of the 171 nurse respondents.

As can be expected the overall achievement of the nurses in basic knowledge questions related to family planning and infertility was low with an accumulative correct response frequency of 45.6 percent amongst the 173 nurses. As the level of educational achievement rose, there was not always a correlational increase in correct knowledge when the data was analysed item by item between single qualified, double qualified and nurse specialty categories, including public health nurses, suggesting that the educational deficit existed in all preparational institutions and programs. (e)

Knowledge level required in teaching certain religious preferences in family planning, such as safe period, rhythm method, withdrawal method, life of sperm and life of ovum was cumulatively weak and incorrectly responded to by 69.6 percent, 47.4 percent, 71.1 percent, 74.6 percent, and 75.2 percent of the nurses respectively.

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(e) Family planning and infertility education began at Queen Elizabeth II School of Nursing in late 1973; Government of Lesotho sponsored nationwide inservice education in November, 1973; the Ministry's Demonstration Maternal and Child Health Center began education and services in this field in January, 1973. (LFPA was active in motivation and family planning services from 1972 onwards, but limited to Maseru.)

Consistent with the lack of educational preparation of the nurses in family planning is their lack of familiarity with popular means of contraception both with regard to their effectiveness when used exactly as directed and in their own personal and professional lives. It was found that amongst 159 nurses and 14 doctors in their reproductive years, 60.7 percent were currently using no contraceptive method to prevent pregnancy and had not used any method for the past year. Unfortunately, the question was not asked if they were desirous of a pregnancy which would give the true value of practice amongst the professionals for avoiding a pregnancy. It is highly unlikely however that 50 percent of these qualified professionals were desirous of pregnancy at that time and lack of an appreciable shift from past year's use to present use would suggest lack of a planned attempt at exercising this alternative, and/or lack of services available. (f)

Professional exposure to clients requesting child spacing or family planning information services was limited with only 14.4 percent of the nurses indicating frequent, once or more per week, client requests and 50.8 percent stating rarely or never having had such requests. At the same time the nurses express a generally favorable attitude towards what they thought a professional health worker's responsibility ought to be regarding such clients. 61.3 percent stated that anyone who wished to ought to be able to use contraception. However, there was some ambivalence with a sexual bias demonstrated, showing a preference towards protection for the female versus the male on issues such as unmarried couples. Amongst the 173 nurse respondents, 70.5 percent thought that the best action to take with clients requesting child spacing or family planning information would be to explain several methods and allow the patient to assist in the decision of choice. 68.2 percent of the nurses were in opposition to the restriction of child spacing or family planning education only to high risk women which was the government's official position at that time. In fact, 65.5 percent felt that contraceptive needs should be assessed on almost every patient contact.

Abortion is recognized as a failure of family planning and is reported as the most frequent method of birth control used in the world today. (g) Most health professionals would rather offer family planning services than abortion services and this is the position of the Basotho nurses. Whereas 27.2 percent of the nurses had been exposed to frequent, once or twice a week, or occasional, once or twice a month, Basotho patients who were suffering from the consequences of non-professional induced abortions, only 17.3 percent had ever been approached frequently or occasionally by Basotho clients asking about abortion.

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(f) In November 1973 minimal services were available for contraception outside of Maseru. Reference Stubbs, H.A. and Goodale, P.K., "Retrospective Survey of Contraceptive Acceptors, 1972-1974, Report to the Ministry of Health, Government of Lesotho" 1976.

(g) International Planned Parenthood Federation Survey of World Needs in Family Planning, London 1974.

Abortion was acceptable to 91.9 percent of the nurses when the pregnancy constituted a medical threat to the woman's life. 79.2 percent and 64.1 percent respectively indicated they would agree with a client requesting abortion under the circumstances of pregnancy in a woman who was seriously mentally ill and in a couple with a known genetic inheritable disease. A statistical test of significance concerning agreement over thirteen abortion variables showed no overall relationship between religious preference or basic educational preparation of 113 double qualified nurses and their position regarding abortion.

Although 96.5 percent of 173 nurse respondents answered affirmatively that they thought a couple should have the right to determine their number of children, this was an area of ambivalence if the couple were to request abortion as a means of achieving this right. This is shown by 71.1 percent of the nurses who disagreed with abortion when the couple requested it due to a family planning method failure, 57.8 percent who disagreed with a couple's decision for abortion when they felt they couldn't afford another child and 44.5 percent when the couple felt they had too many children. The latter two circumstances were large areas of indecisiveness constituting 20.2 percent and 27.7 percent of the respondents respectively.

Of interest, 3.5 percent, or six nurses, thought that abortion should be performed on demand by the woman as her method of choice of birth control.

Ordinarily the laws affecting the practice of medicine in the Republic of South Africa are viewed as the same in Lesotho, even though they may not in fact exist for this country. The reference document in use in Lesotho is footnoted below. <sup>(h)</sup>

The maternal mortality accruing to non-professional induced abortion is not known but is likely to be quite high given the frequency with which the circumstance is reported to exist. It is not known if traditional means are effective and therefore do not come to the attention of the professional health worker.

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(h) Common Law of Lesotho, Law Office, Maseru.

## CONCLUSIONS AND RECOMMENDATIONS

The Ministry of Health supports the position that simple but effective ways of reducing mortality and morbidity of mothers and children should be incorporated into the broad concept of Maternal and Child Health services in the country. One effective means of achieving this goal is by strengthening activities in primary prevention and making a broad range of services, including family planning, available to high risk women.

It is apparent from this survey that motivational and educational efforts to the community will need to be coupled with intensive efforts to upgrade professional health workers, particularly nurses, to a level where they can adequately manage the addition of these new services. At the present level, couples are not likely to get assistance even with non-medical means of preventing pregnancy should they so desire. With the addition of new skills will also come the need to assure a dependable source of needed equipment and supplies to carry out such measures. Where possible the infrastructure should be based upon a program which coordinates both government and private sector efforts to making use of existing resources. A Maternal and Child Health Program should include organizational means of accomplishing the professional and community education and services required.

With widespread availability of contraception and modern methods prescribed under the supervision of health professionals trained in their management, Lesotho will continue to face the issue of abortion, the new issue being the circumstance of couples who desire limitation but experience a method failure. The first aim however should be to strengthen the health professional's capability of carrying out the aforementioned alternative within the desires of the country's health rights for its people.

APPENDIX

FIGURE 1 RESPONSE BY DOUBLE QUALIFIED NURSES TO QUESTION  
"WITH WHOM DO YOU WORK DAILY IN YOUR PRESENT POSITION?"

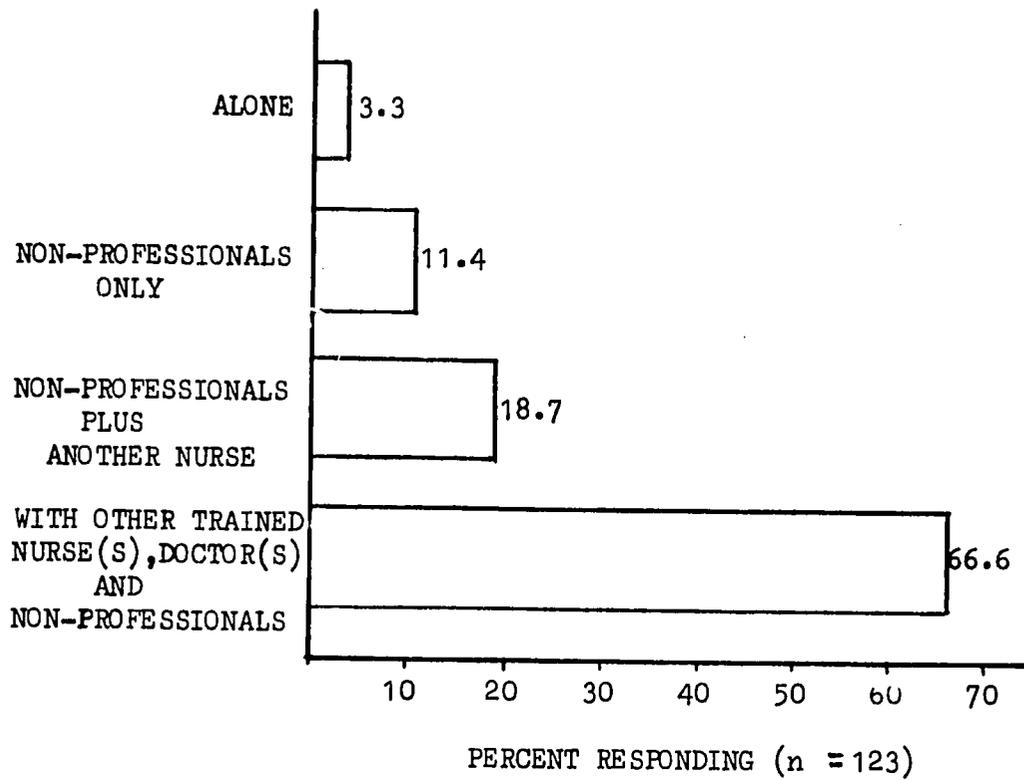
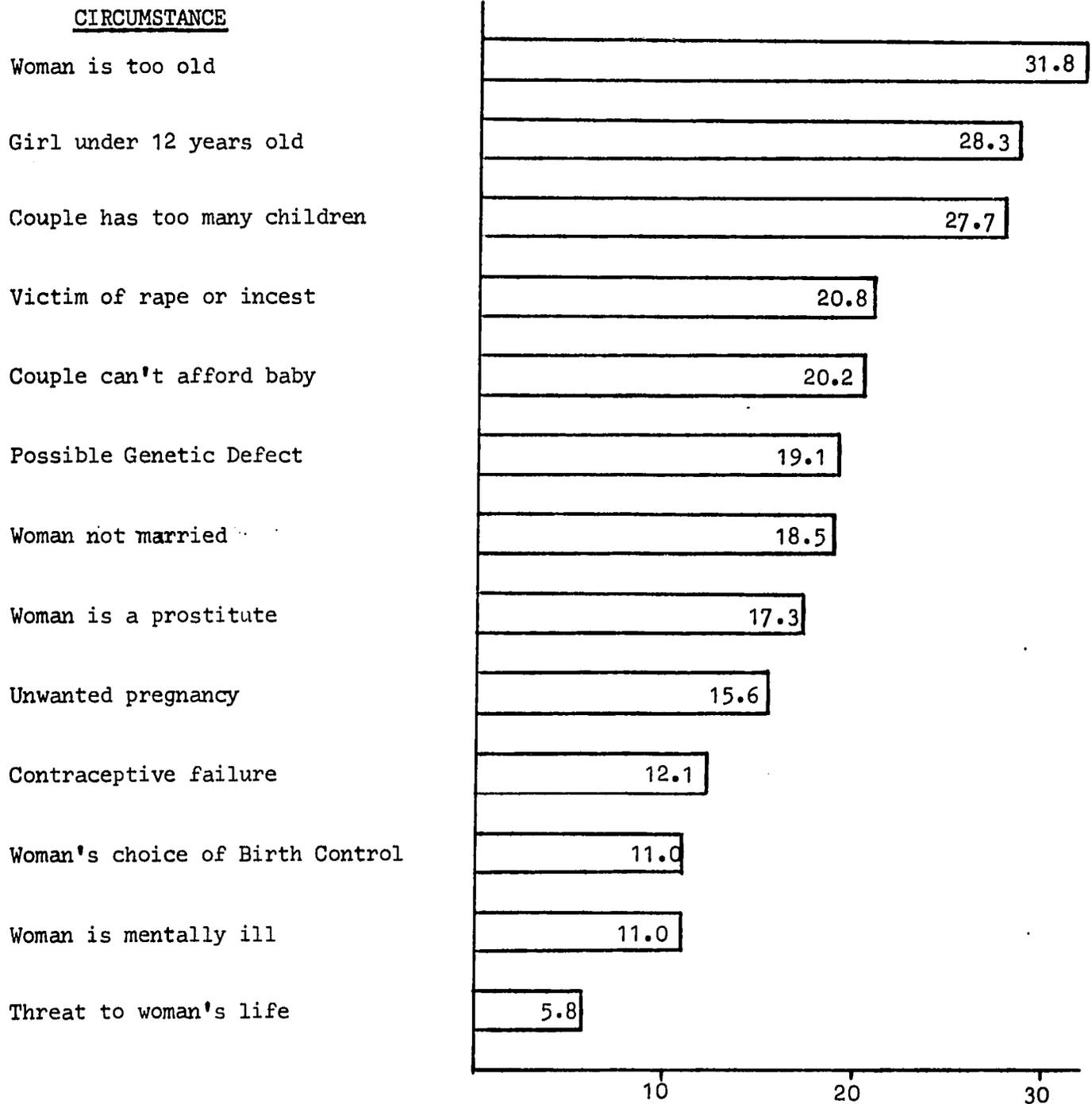


FIGURE 2 PERCENT OF NURSES UNDECIDED ABOUT TERMINATING A PREGNANCY BY ABORTION UNDER VARIOUS CONDITIONS



PERCENT OF NURSE RESPONDENTS  
UNDECIDED BY CIRCUMSTANCE (n=173)

ABORTION ISSUES: Parallel Lines Show Similarity of Position  
 Diagonal Lines Show Disparity

Figure 3: Rank Order of Agreement/Disagreement of Nurses Amongst Themselves

Percent Nurses Agreeing			Percent Nurses Disagreeing		
Medical threat	(13)*	91.9	2.3	(13)	Medical threat
Mental illness	(6)	79.2	9.8	(6)	Mental illness
Inherited dis.	(4)	64.1	16.8	(4)	Inherited dis.
Rape/Incest	(2)	49.1	30.0	(2)	Rape/Incest
Under 12 yr old	(3)	43.3	32.9	(3)	Under 12 yr old
Too many kids	(7)	27.7	43.3	(8)	Woman too old
Woman too old	(8)	24.8	44.5	(7)	Too many kids
Can't afford	(5)	22.0	57.8	(5)	Can't afford
Method failure	(16)	16.8	70.5	(9)	Unmarried woman
Unwanted preg	(10)	13.9	70.5	(10)	Unwanted preg
Prostitute preg	(15)	12.1	70.5	(15)	Prostitute preg
Unmarried woman	(9)	11.0	71.1	(16)	Method failure
Choice of B.C.	(17)	3.5	85.5	(17)	Choice of B.C.

Figure 4: Rank Order of Agreement Between Doctors and Nurses

Percent Nurses Agreeing			Percent Doctors Agreeing		
Medical threat	(13)*	91.9	92.8	(13)	Medical threat
Mental illness	(6)	79.2	85.7	(2)	Rape/Incest
Inherited dis.	(4)	64.1	85.7	(3)	Under 12 yr old
Rape/Incest	(2)	49.1	78.6	(4)	Inherited dis.
Under 12 yr old	(3)	43.3	57.1	(8)	Woman too old
Too many kids	(7)	27.7	50.0	(5)	Can't afford
Woman too old	(8)	24.8	50.0	(15)	Prostitute preg
Can't afford	(5)	22.0	42.8	(16)	Method failure
Method failure	(16)	16.8	35.7	(10)	Unwanted preg
Unwanted preg	(10)	13.9	28.6	(9)	Unmarried woman
Prostitute preg	(15)	12.1	7.1	(6)	Mental illness
Unmarried woman	(9)	11.0	7.1	(7)	Too many kids
Choice of B.C.	(17)	3.5	7.1	(17)	Choice of B.C.

\*Refers to item number under Question 57  
 Percentages from Table 26

FIGURE 5: EDUCATION COMPLETED AND PERCENT AGREEING WITH  
ABORTION FOR VARIOUS ATTITUDES FOR ALL  
RESPONDENTS

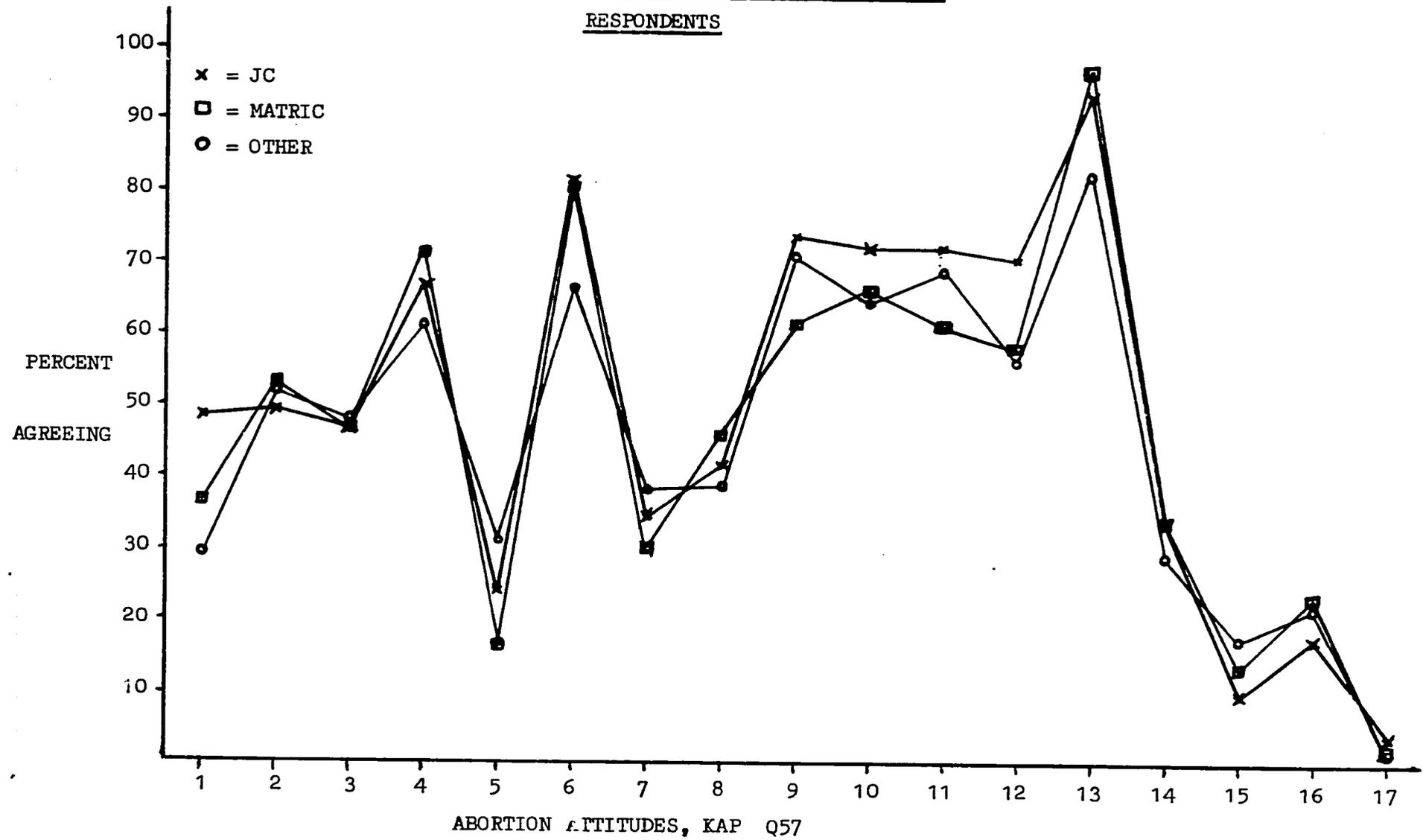


TABLE 1. REGISTRY OF EMPLOYED NURSES/DOCTORS IN LESOTHO IN 1973 COMPARED TO 173 NURSE AND 14 DOCTOR RESPONDENTS

	GOVERNMENT OF LESOTHO		MISSIONS AND PRIVATE SECTOR	
	MASERU	ALL OTHER DISTRICTS	MASERU	ALL OTHER DISTRICTS
Registry of Nurses, 1973	166		177	
Nurse respondents, Nov. 1973	128		45	
Percent responding	80.0		25.4	
Registry of Doctors, 1973	18	13	12	9
Doctor respondents, Nov. 1973	0	13	0	1

TABLE 2. DOCTOR AND NURSE RESPONDENTS BY PROFESSIONAL CATEGORY AND BASIC EDUCATIONAL PREPARATION

	STD 6	JC	MATRIC OR HIGHER	TOTAL
<b>NURSES</b>				
Single qual or enrolled	0	13	9	22
Double qualified	1	81	44	126
Public health nurses or other nurse specialist	0	13	12	25
<b>DOCTORS</b>				
General practitioners			9	9
Specialists			5	5

TABLE 3. NATIONALITY OF DOCTOR AND NURSE RESPONDENTS

	MOSOTHO BY BIRTH		MOSOTHO BY NATURALIZATION		NON-MOSOTHO	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
DOCTORS	2	14.3	1	7.1	11	78.6
NURSES	144	83.2	11	6.4	18	10.4

TABLE 4. SEX BY PROFESSIONAL CATEGORY

	NURSES Freq.	DOCTORS Freq.
MALE	0	9
FEMALE	173	5

TABLE 5. AGE BY PROFESSIONAL CATEGORY

	NURSES (n=173)			DOCTORS (n=14)	
	Freq.	Percent	Cumulative Percent	Freq.	Percent
20 - 24 yr	6	3.5	3.5	0	0.0
25 - 29	33	19.1	22.6	6	42.9
30 - 34	35	20.2	42.8	0	0.0
35 - 39	39	22.5	65.3	3	21.4
40 - 44	25	14.5	79.8	2	14.3
45 - 49	21	12.1	91.9	2	14.3
50 - 54	6	3.5	95.4	1	7.1
55 - 59	8	4.6	100.0	0	0.0
	173	100.0		14	100.0

TABLE 6. MARITAL STATUS BY PROFESSIONAL CATEGORY

	NURSES (n=173)		DOCTORS (n=14)	
	Freq.	Percent	Freq.	Percent
Never Married	38	22.0	1	7.1
Married Now	118	68.2	12	85.8
Widowed	9	5.2	1	7.1
Divorced	4	2.3	0	0.0
Other	<u>4</u>	<u>2.3</u>	<u>0</u>	<u>0.0</u>
	173	100.0	14	100.0

TABLE 7. RELIGIOUS PREFERENCE OF 173 NURSE RESPONDENTS

	NURSES	
	Freq.	Percent
Roman Catholic	56	32.4
Protestant (all denominations)	107	61.8
Other than above	10	5.8

TABLE 8. PERCENT DISTRIBUTION OF RELIGIOUS PREFERENCE OF 2,798 AFRICAN WOMEN WITH AN EDUCATION OF BPTC OR HIGHER AS REPORTED IN LESOTHO'S 1966 POPULATION CENSUS COMPARED TO 173 NURSE RESPONDENTS FROM THIS EDUCATIONAL CATEGORY

	ALL FEMALES 1966 CENSUS n = 48,296	WOMEN BPTC + 1966 CENSUS n = 2,798	NURSES 1973 KAP SURVEY n = 173
Catholic	41.1	34.6	32.4
Non-Catholic	58.9	65.4	67.6

TABLE 9. NUMBER OF SONS, DAUGHTERS BORN COMPARED TO NOW LIVING PROGENY OF RESPONDENTS (173 NURSES, 14 DOCTORS)

	0	1	2	3	4	5	6	TOTAL
NURSES								
Daughters born	76	46	30	14	6	0	1	178
Daughters now living	102	29	27	11	3	0	1	139
Sons born	66	39	38	18	9	3	0	220
Sons now living	97	31	27	11	5	2	0	148
DOCTORS								
Daughters born	10	3	1	0	0	0	0	5
Daughters now living	12	1	1	0	0	0	0	3
Sons born	8	3	1	2	0	0	0	11
Sons now living	9	2	1	2	0	0	0	10
DOUBLE QUALIFIED NURSES ONLY								
Daughters born	52	37	21	13	3	0	0	130
Daughters now living	74	23	19	9	1	0	0	92
Sons born	41	31	29	14	8	3	0	178
Sons now living	67	24	22	7	4	2	0	115

TABLE 10. DISTRICT BASE AT TIME OF SURVEY

	BEREA	BUTHA-BUTHE	LERIBE	MAFETENG	MASERU	MOHALE'S HOEK	MOKHOTLONG	QACHA'S NEK	QUTHING
REGISTRY PHYSICIANS									
G.O.L.	1	1	2	3	13	2	1	1	2
PRIVATE OR MISSION	3	0	4	1	12	0	0	1	0
PHYSICIAN RESPONDENTS									
G.O.L.	1	1	2	3	1	2	1	1	2
PRIVATE OR MISSION	0	0	0	0	0	0	0	1	0
REGISTRY NURSES	---NOT KNOWN---								
NURSE RESPONDENTS	16	14	16	14	69	6	10	15	13

TABLE 11. TIME IN PRESENT LOCATION OF EMPLOYMENT

Months	NURSES (n=166)			DOCTORS (N=14)		
	Freq.	%	Cum. %*	Freq.	%	Cum. %*
0 - 4	13	7.5	7.8	4	28.6	28.6
5 - 8	13	7.5	15.6	4	28.6	57.2
9 - 12	14	8.1	24.2	2	14.3	71.5
13 - 18	9	5.2	29.4	1	7.1	78.6
19 - 24	18	10.4	40.2	0	0.0	78.6
25 - 36	17	9.9	50.4	0	0.0	78.6
37 or more	82	47.4	100.0	3	21.4	100.0
No response	7	4.0	---	0	0.0	---
TOTAL	173	100.0		14	100.0	

\*Excludes no response

Freq. = Frequency; % = Percent; Cum. % = Cumulative percent

TABLE 12. EMPLOYER AT TIME OF SURVEY

	G.O.L.	MISSION	RED CROSS	C.R.S.	OTHER VOLUNTARY ORG.
DOCTORS	13	1	0	0	0
NURSES	128	23	7	7	8

TABLE 13. JOB STATUS OF 152 NURSE RESPONDENTS

	Freq.	%
Staff Nurse	125	82.2
Nursing Sister	20	13.2
Sister Tutor	4	2.6
Matron	<u>3</u>	<u>2.0</u>
TOTAL	152	100.0

TABLE 14. SOURCE OF MOST PROFESSIONAL TRAINING

	NURSES (n = 173)		D.Q. NURSES* (n = 126)		DOCTORS (n = 14)	
	Freq.	%	Freq.	%	Freq.	%
In Lesotho	81	46.8	60	47.6	0	0.0
In R.S.A.	72	41.6	53	42.1	1	7.1
Other African Country	3	1.7	3	2.4	1	7.1
Country on Other Continent	<u>17</u>	<u>9.8</u>	<u>10</u>	<u>7.9</u>	<u>12</u>	<u>85.8</u>
TOTAL	173	100.0	126	100.0	14	100.0

\* D.Q. NURSES = Double Qualified Nurses

TABLE 15. PERCENT OF NURSES AND DOCTORS WHO ANSWERED TWENTY KNOWLEDGE QUESTIONS CORRECTLY

KAP Q. #	SUBJECT AREA	PERCENT CORRECT				
		1 SINGLE QUALIFIED NURSES (n=22)	2 DOUBLE QUALIFIED NURSES (n=126)	3 NURSE SPECIALTY (n=25)	4 ALL NURSES (n=173)	5 ALL DOCTORS (n=14)
17	Hormone for ovulation (1)	36.4	31.1	28.8	30.6	71.4
18	Ovum available how long (3)	31.8	24.8	20.0	24.8	50.0
19	Male pubertal hormone (3)	59.1	65.9	68.0	65.3	85.7
20	Sperm produced where (3)	36.4	42.7	48.0	42.7	92.9
21	Sperm life in female (1)	36.4	24.0	24.0	25.4	64.3
22	Fertilization where (2)	72.7	66.7	88.0	70.5	100.0
23	Sex determined by (2)	59.1	41.3	56.0	45.7	50.0
24	Fertile period female (3)	40.9	55.3	56.0	52.6	100.0
26	Probable common cause infertility (4)	40.9	50.0	60.0	50.2	71.4
27	First step infertility evaluation (2)	81.8	81.0	80.0	80.9	85.7
28	Every woman needs (4)	13.6	23.0	12.0	20.2	78.6
31	Pap smear to diagnose (2)	50.0	61.1	44.0	57.2	92.9
32	Safest age for childbirth (3)	72.7	73.0	72.0	72.8	85.7
34	Childspacing after weaning (2)	22.7	25.4	28.0	25.4	42.9
36	Greatest risk to health/ life (2)	45.5	47.6	48.0	47.4	71.4
37	World most frequent birth control method (2)	9.1	8.7	8.0	8.7	7.1
45	So-called safe period (2)	22.7	31.7	44.0	31.4	21.4
47	Proper prac. withdrawal (4)	18.2	31.7	24.0	28.9	64.3
48	Proper prac. condom (3)	68.2	56.8	66.7	58.9	100.0
49	Forgotten pill (3)	72.7	71.4	68.9	71.1	92.9
	ALL QUESTIONS				45.6	86.4

( ) = number of correct response on KAP questionnaire.

**TABLE 16. THEORETICAL EFFECTIVENESS OF NINE METHODS OF CONTRACEPTION AS PERCEIVED BY 173 NURSES**

Method	Excellent	Good	Fair	Poor	Don't Know
Withdrawal	9.2	8.1	26.6	34.1	22.0
Rhythm	2.9	5.8	20.2	19.7	51.4
Douching	1.1	5.8	23.1	32.9	37.1
Spermicidal foams	1.7	17.4	28.9	9.2	42.2
Creams, jellies with diaphragm	11.6	28.9	16.7	3.5	39.3
Condom	17.9	29.6	15.6	1.1	35.8
IUCD	20.8	41.1	6.9	.6	30.6
Pills	35.8	32.9	13.9	1.1	16.3
Injectables	50.9	12.1	7.5	0.0	29.5

**TABLE 17. ADVICE TO COUPLES ASKING ABOUT INTERCOURSE DURING MENSES (Q. 25), PREGNANCY (Q. 33), AND WHILE LACTATING (Q. 35); 173 NURSE, 14 DOCTOR RESPONDENTS**

Circumstance	MENSES				PREGNANCY				LACTATION			
	Nurses Fr.*	%	Doctors Fr.	%	Nurses Fr.	%	Doctors Fr.	%	Nurses Fr.	%	Doctors Fr.	%
NO RESTRICTION, except couple preference or protection against pregnancy	79	45.7	9	64.3	97	56.1	12	85.7	122	70.5	14	100.0
RESTRICTION for any reason: physical, psychological, traditional	51	79.5	5	35.7	44	25.4	2	14.3	34	19.7	0	0.0
DON'T KNOW	43	24.8	0	0.0	32	18.5	0	0.0	17	9.8	0	0.0

\*Fr. = Frequency

**TABLE 18. PREVIOUS EDUCATION OR TRAINING RECEIVED IN INFERTILITY AND FAMILY AND FAMILY PLANNING**

	Percent with this level of training	
	DOCTORS (n=14)	NURSES (n=171)
<b>INFERTILITY TRAINING RECEIVED:</b>		
In basic professional schooling	71.4	29.2
In post graduate training	35.7	12.3
On the job	35.7	16.4
None at all	14.3	50.3
<b>CHILD-SPACING/FAMILY PLANNING:</b>		
In basic professional schooling	50.0	19.3
In post graduate training	21.4	11.7
On the job	28.6	25.1
None at all	21.4	47.4

**TABLE 19. PERCENTAGE INDICATING THAT COUPLE SHOULD HAVE THE RIGHT TO DETERMINE THEIR NUMBER OF CHILDREN: BASOTHO HAVE TOO MANY CHILDREN**

	RIGHT TO DETERMINE NUMBER		BASOTHO HAVE TOO MANY	
	Freq.	%	Freq.	%
DOCTORS (n=14)	14	100.0	14	100.0
NURSES (n-173)	167	96.5	156	90.2

**TABLE 20. HOW MANY IS TOO MANY CHILDREN AS PERCEIVED BY ALL NURSES\***  
(n=126 RESPONDENTS)

No. of Children	Frequency	%	Cum %
3	1	0.8	0.8
4	2	1.6	2.4
5	17	13.5	15.9
6	24	19.0	34.9
Median 7.57-----7	10	7.9	42.8
8	16	12.7	55.5
9	6	4.8	60.3
10	36	28.6	88.9
11	2	1.6	90.5
12+	12	9.5	100.0

\* 47 non-response (27.1%)

**TABLE 21. WHO SHOULD USE CONTRACEPTION? (Q. 42)**

	NURSES (n=173)			DOCTORS (n=14)		
	Yes PERCENT	No PERCENT	No Resp. PERCENT	Yes FREQUENCY	No FREQUENCY	No Resp. FREQUENCY
Anyone who wishes	61.3	27.7	11.0	11	3	0
Single men	49.7	30.0	20.2	11	2	1
Single women	61.3	24.3	14.4	11	2	1
Prostitutes	56.1	20.8	23.1	12	1	1
Men, extramarital	54.9	30.6	14.4	10	2	2
Women, extramarital	57.2	27.2	15.6	11	2	1
Men, marital	63.0	22.0	15.0	9	2	3
Women, marital	64.7	21.4	13.9	11	0	3
Men only	18.5	61.8	19.6	1	11	2
Women only	20.2	61.3	18.5	3	9	2
Nobody	9.8	54.9	35.3	0	11	3

TABLE 22. PERCENT OF NURSES (n=173) RECOMMENDING CONTRACEPTIVE USE FOR VARIOUS SITUATIONS SHOWING SEXUAL BIAS

SEX SITUATION	MEN	WOMEN
Single	49.7	61.3
Extramarital	54.9	57.2
Marital	63.0	64.7

TABLE 23. WHAT TO DO IF CLIENT REQUESTS CHILD SPACING INFORMATION (Q. 54)

ACTION	NURSES PERCENT n=173	DOCTORS FREQUENCY n=14
1. Discuss only best method	6.3	1
2. Discuss several methods; patient choice	70.5	12
3. Give pamphlet; not comfortable	1.7	1
4. Give pamphlet; not knowledgeable	5.2	0
5. Not discuss, but refer	7.5	0
6. Refer to doctor	8.1	0
7. Not discuss; not refer	0.0	0
8. None of above	0.0	0

TABLE 24. BEST METHOD FOR BASOTHO

METHOD	NURSES (n=173)		DOCTORS (n=14)	
	Freq.	Percent	Freq.	Percent
Nothing	2	1.2	1	7.1
Abstinence	2	1.2	0	0.0
Withdrawal, Rhythm, Douching	8	4.6	0	0.0
Foams, Condom, Diaphragm	13	7.5	0	0.0
IUCD	23	13.3	8	57.2
Oral Pill	49	28.3	3	21.4
Depo Provera	20	11.6	2	14.3
Sterilization	2	1.2	0	0.0
Other	8	4.6	0	0.0
No Response	46	26.6	0	0.0

TABLE 25. Q. 53, WITH REGARD TO CHILD SPACING/FAMILY PLANNING I THINK  
A PROFESSIONAL HEALTH WORKER SHOULD:

ACTION	% AGREE		% DISAGREE		% UNDECIDED	
	Nurses n=173	Doc n=14	Nurses n=173	Doc n=14	Nurses n=173	Doc n=14
1. Discuss routinely all ANC's	91.3	85.8	5.8	14.3	2.9	0.0
2. Discuss routinely all PP regardless of age	83.2	85.8	8.1	7.1	8.7	7.1
3. Discuss routinely all PP regardless of marital status	77.4	78.6	11.0	14.3	11.6	7.1
4. Assess FP needs almost every client	66.5	21.4	15.6	64.3	17.9	14.3
5. Give FP only when requested	27.2	14.3	66.5	79.6	6.4	7.1
6. Give FP only when already using	12.7	14.3	74.6	79.6	12.7	7.1
7. Discuss FP all mothers PS Clinic	80.4	92.9	9.8	0.0	9.8	7.1
8. Discuss with all community groups	82.6	100.0	8.7	0.0	8.7	0.0
9. Discuss with all men often	85.6	92.9	7.5	0.0	6.9	7.1
10. Discuss only methods of my choice	26.0	42.9	50.9	57.1	23.1	0.0
11. Discuss only if I don't perceive conflict	31.2	14.3	50.3	78.6	18.5	7.1
12. Discuss only if I'm married	16.2	0.0	78.0	100.0	5.8	0.0
13. Discuss any client regardless of age	37.5	42.9	48.0	50.0	14.5	7.1
14. Discuss any client regardless of marital status	58.4	7.4	31.2	21.4	10.4	7.1
15. Discuss only with high risk women	19.1	7.1	68.2	92.9	12.7	0.0
16. Never give FP information	4.6	0.0	82.7	100.0	12.7	0.0
17. Discuss only with women who have borne a child	24.3	7.1	67.0	92.9	8.7	0.0

TABLE 26. Q. 57, IN YOUR OPINION, IF A CLIENT REQUESTS IT, A PREGNANCY COULD BE STOPPED BY PERFORMING AN ABORTION UNDER WHICH OF THE FOLLOWING CIRCUMSTANCES:

CONDITION	% AGREE		% DISAGREE		% UNDECIDED	
	Nurses n=173	Doc n=14	Nurses n=173	Doc n=14	Nurses n=173	Doc n=14
1. Never	42.8	7.1	36.4	78.6	20.8	14.3
2. Rape or incest	49.1	85.7	30.0	0.0	20.8	14.3
3. Girl under 12 years old	43.3	85.7	32.9	0.0	28.3	14.3
4. Couple with genetic disease	64.1	78.6	16.8	14.3	19.1	7.1
5. Couple cannot afford	22.0	50.0	57.8	35.7	20.2	14.3
6. Woman mentally ill	79.2	7.1	9.8	78.6	11.0	14.3
7. Couple feel too many children	27.7	7.1	44.5	57.1	27.7	35.7
8. Woman too old	24.8	57.1	43.3	21.4	31.8	21.4
9. Unmarried woman	11.0	28.6	70.5	64.3	18.5	7.1
10. Woman doesn't want pregnancy	13.9	35.7	70.5	50.0	15.6	14.3
11. Woman's husband doesn't want	13.9	0.0	72.2	64.3	13.9	35.7
12. Extramarital pregnancy	15.0	42.8	67.0	35.7	19.9	21.4
13. Medical threat to woman's life	91.9	92.8	2.3	7.1	5.8	0.0
14. Woman believes baby malformed	32.9	50.0	45.7	42.8	21.4	7.1
15. Prostitute pregnant	12.1	50.0	70.5	21.4	17.3	28.6
16. Couple with method failure	16.8	42.8	71.1	21.4	12.1	35.7
17. Woman's choice of birth control	3.5	7.1	85.5	78.6	11.0	14.3

TABLE 27. Q. 57, PAIRED PERCENTAGE AGREEMENT/DISAGREEMENT ON SELECTED ABORTION VARIABLES (173 NURSES, 14 DOCTORS)

SITUATION	PERCENTAGE AGREE		PERCENTAGE DISAGREE	
	Nurses	Doctors	Nurses	Doctors
Medical threat to woman's life (13)*	91.9	92.8	2.3	7.1
Woman seriously mentally ill (6)	79.2	7.1	9.8	78.6
Couple with genetic defect (4)	64.1	78.6	16.8	14.3
Rape or incest (2)	49.1	85.7	30.0	0.0
Girl under 12 years old (3)	43.3	85.7	32.9	0.0
Couple feel too many children (7)	27.7	7.1	44.5	57.1
Woman too old (8)	24.8	57.1	43.3	21.4
Couple feel cannot afford (5)	22.0	50.0	57.8	35.7
Couple with method failure (16)	16.8	42.8	71.1	21.4
Woman doesn't want pregnancy (10)	13.9	35.7	70.5	50.0
Prostitute is pregnant (15)	12.1	50.0	70.5	21.4
Unmarried woman is pregnant (9)	11.0	28.6	70.5	64.3
Woman's choice of birth control (17)	3.5	7.1	85.5	76.6

\* ( ) = Item number of that variable under Q. 57.

TABLE 28. PERCENT OF NURSES AND DOCTORS EXPERIENCING CASES REQUESTING INFERTILITY AND FAMILY PLANNING INFORMATION, COUNSELING, OR SERVICES

	Frequently*	Occasionally	Rarely	Never	No Response
Infertility client request					
NURSES (n=173)	22.5	32.9	24.3	17.9	2.3
DOCTORS (n=14)	50.0	35.7	7.1	7.1	0.0
Family planning client request					
NURSES (n=173)	14.4	32.9	26.0	24.8	1.2
DOCTORS (n=14)	35.7	42.8	7.1	7.1	7.1

\*Frequently = once or more per week; Occasionally = once or twice a month; Rarely = once or twice a year.

TABLE 29. PERCENT OF NURSES AND DOCTORS EXPERIENCING CASES OF BASOTHO CLIENTS ASKING ABOUT ABORTION OR BASOTHO PATIENTS WHO HAD NON-PROFESSIONAL INDUCED ABORTION

	Freq*	Occas.	Rarely	Never had But heard	Never had Never heard	No Response
Basotho asking about abortions						
NURSES (n=173)	8.1	9.2	32.9	--	48.0	0.5
DOCTORS (n=14)	7.1	35.7	35.7	--	21.4	0.0
Basotho patients with non-professional induced abortions						
NURSES (n=173)	8.7	18.5	22.5	38.1	10.4	1.7
DOCTORS (n=14)	0.0	42.8	35.7	14.3	7.1	0.0

\*Freq. = once or more per week; Occas. = once or twice a month; Rarely = once or twice a year.

TABLE 30. CONTRACEPTIVE USE IN PAST YEAR, 159 NURSES IN REPRODUCTIVE YEARS,  
14 DOCTORS

METHOD	DOCTORS AND NURSES (n=173)	
	Frequency	Percent
None	105	60.7
Withdrawal, rhythm, douching alone or in combination	16	9.2
Diaphragm, condom, spermicides alone or in combination	17	9.8
IUCD, pill, Depo-Provera alone or in combination	36	20.8
Sterilization	5	2.9

TABLE 31. PRESENT USE OF CONTRACEPTION, 159 NURSES IN REPRODUCTIVE YEARS,  
14 DOCTORS

METHOD	DOCTORS AND NURSES (n=173)	
	Frequency	Percent
None	105	60.7
Abstinence alone or in combination	4	2.3
Withdrawal, rhythm, douching alone or in combination	10	5.8
Diaphragm, condom, spermicides alone or in combination	34	19.6
IUCD, pill, Depo-Provera alone or in combination	34	19.6
Sterilization alone or in combination	5	2.9

TABLE 32: CROSS TABULATION OF Q. 42 (5) (6) and Q. 53 (14)  
SHOWING NO SIGNIFICANT RELATIONSHIP

PERSONAL OPINION

Q. 42 In your opinion who  
should use contraception?

PROFESSIONAL ATTITUDE

Q. 53 A professional health worker should  
discuss family planning with any  
client regardless of marital status  
(yes, no, undecided)

(5) Men, extramarital

$$\chi^2_2 = 2.43, p = .296$$

	Yes	No	Undecided	
Yes	79	33	10	122
No	39	27	6	72
	118	60	16	194

(6) Women, extramarital

$$\chi^2_2 = 1.867, p = .393$$

	Yes	No	Undecided	
Yes	82	35	11	128
No	36	24	5	65
	118	59	16	193

**TABLE 33.** PERCENT OF RESPONDENTS AGREEING WITH THE USE OF ABORTION  
AS A METHOD OF TERMINATING A PREGNANCY FOR VARIOUS SITUATIONS\*

EDUCATIONAL LEVEL	ATTITUDE																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Junior certificate (n=120)	47.5	59.2	46.7	66.7	24.2	81.7	34.7	41.7	74.2	72.5	72.5	70.8	94.2	34.2	10.0	17.5	4.2
Matriculation (n=41)	36.6	53.7	46.3	70.7	17.1	80.5	30.0	46.3	61.0	65.9	61.0	58.5	97.6	34.1	14.6	24.4	2.4
Higher education (n=57)	29.8	52.6	47.4	61.4	31.6	66.7	37.7	38.6	71.9	64.9	68.4	56.1	82.5	29.8	17.5	22.8	1.8

\*See KAP Q. 57, parts 1-17.

TABLE 34. PERCENT OF DOUBLE QUALIFIED NURSES APPROVING OF ABORTION IN VARIOUS CIRCUMSTANCES BY RELIGION (n=113)<sup>1</sup>

KAP Q. 57 PART	SITUATION	PERCENT APPROVING		SIGNIFICANCE LEVEL <sup>2</sup>
		CATHOLIC	PROTESTANT	
1.	Never	52.0	51.9	.8252
2.	Rape/incest	46.7	50.6	.8671
3.	Woman under 12	43.3	45.1	.9633
4.	Inheritable disease	51.6	68.4	.1551
5.	Couple cannot afford	20.0	21.7	.9467
6.	Mental illness	75.0	82.1	.5473
7.	Too many children	27.6	27.8	.8294
8.	Woman too old	17.9	27.3	.4737
9.	Woman not married	20.0	8.5	.1789
10.	Unwanted pregnancy	10.0	17.1	.5310
11.	Husband doesn't want	9.7	13.1	.8603
12.	Extramarital father	12.9	10.7	.9977
13.	Threat to health	93.8	95.2	.8739
14.	Possibly malformed	22.6	35.7	.2657
15.	Prostitute	10.0	12.0	.9741
16.	Method failure	19.4	15.5	.8305
17.	Birth control choice	00.0	3.6	.6840

1 Excludes those trained outside Lesotho or South Africa

2 p-value

TABLE 35. PERCENT OF DOUBLE QUALIFIED NURSES RESPONDING CORRECTLY TO THE KNOWLEDGE QUESTIONS BY LOCATION OF TRAINING (n=113)<sup>1</sup>

KAP Q. NO.	SUBJECT AREA	TRAINING		SIGNIFICANCE LEVEL <sup>2</sup>
		LESOTHO	REP. OF S. AFRICA	
17.	Hormone for ovulation (1)*	28.8	34.6	.6514
18.	Ovum available how long (3)	30.0	17.0	.1620
19.	Male pubertal hormone (3)	76.3	54.7	.0274
20.	Sperm produced where (3)	45.0	37.7	.5548
21.	Sperm life in female (1)	20.0	26.4	.5588
22.	Fertilization where (2)	69.5	62.3	.5440
23.	Sex determined by (2)	48.3	32.1	.1177
24.	Fertile period female (3)	56.7	54.7	.9853
26.	Probable infertility cause (4)	55.0	46.2	.4566
27.	Infertility evaluation (2)	75.0	84.9	.2842
28.	Every woman needs (4)	21.7	23.5	.9951
31.	Pap smear to diagnose (2)	62.8	59.4	.8611
32.	Safest age for childbirth (3)	76.7	69.8	.5418
34.	Childspacing after weaning (2)	13.3	36.5	.0082
36.	Greatest risk to health (2)	54.2	39.6	.1747
37.	World most frequent birth control method (2)	8.0	9.5	.8529
45.	Safe period (2)	30.0	35.8	.6453
47.	Proper practice withdrawal (4)	34.7	26.4	.6852
48.	Proper practice condom (3)	54.2	58.5	.7931
49.	Forgotten pill (3)	73.3	68.6	.7374

\* ( ) = Number of correct response on KAP questionnaire.

1 Excludes all double-qualified nurses trained outside Lesotho or South Africa

2 p-value

## QUESTIONNAIRE

KAP SURVEY  
LESOTHO, NOVEMBER 1973

PLEASE DO NOT PUT YOUR NAME ON THE PAPER. WE WILL USE THE INFORMATION OBTAINED FOR HEALTH PLANNING AND TRAINING PURPOSES. AFTER THE INFORMATION HAS BEEN CORRELATED, THE PAPERS WILL BE DESTROYED. NO ONE EXCEPT THE UNIVERSITY OF CALIFORNIA PROJECT STAFF WILL SEE OR HANDLE THE QUESTIONNAIRES. THE GENERAL INFORMATION WILL BE SUMMARIZED AND USED FOR MCH PROGRAM PLANNING WITHIN THE MINISTRY OF HEALTH.

THANK YOU FOR YOUR COOPERATION.

- 
1. QUESTIONNAIRE NUMBER \_\_\_\_\_
  2. EDUCATION (Underline the highest level achieved)
    1. Standard 6
    2. J.C.
    3. Matriculation
    4. Other (explain) \_\_\_\_\_
  3. PROFESSIONAL TRAINING LEVEL: (Underline the highest level achieved)
    1. Single qualified nurse
    2. Double qualified nurse
    3. Public health nurse
    4. Sister tutor
    5. Other nursing specialty (explain) \_\_\_\_\_
    6. Doctor in general practice
    7. Doctor with specialty training
    8. Other (explain) \_\_\_\_\_
  4. NATIONALITY: (Underline one)
    1. Mosotho by birth
    2. Mosotho by naturalization
    3. Non-Mosotho
  5. SEX: (Underline which)
    1. Male
    2. Female

6. AGE: (Write in number of years)

1. \_\_\_\_\_ years

7. MARITAL STATUS: (Underline one)

1. Single

3. Widowed

5. Separated

2. Married

4. Divorced

8. RELIGION: (Underline one)

1. Catholic

2. Protestant

3. Other

9. NUMBER OF CHILDREN: (State number in space provided)

1. \_\_\_\_\_ sons born

2. \_\_\_\_\_ natural sons living

3. \_\_\_\_\_ sons adopted

4. \_\_\_\_\_ adopted sons living

5. \_\_\_\_\_ daughters born

6. \_\_\_\_\_ natural daughters living

7. \_\_\_\_\_ daughters adopted

8. \_\_\_\_\_ adopted daughters living

10. I CURRENTLY WORK IN: (In each column underline the response that describes where you spend the majority of your time.)

<u>DISTRICT (10)</u>	<u>PLACE OF PRIMARY EMPLOYMENT (11)</u>	<u>JOB STATUS (12)</u>	<u>SPONSOR (13)</u>
1. Berea	1. Hospital	1. Staff nurse	1. Government
2. Butha Buthe	2. Health Center	2. Nursing sister	2. Mission
3. Leribe	3. Public Health	3. Sister tutor	3. Red Cross
4. Mafeteng	4. Other _____	4. Matron	4. C.R.S.
5. Maseru	(explain)	5. Doctor	5. L.F.D.S.
6. Mohale's Hoek			6. Community Organized Clinic
7. Mokhotlong			7. Other _____
8. Qacha's Nek			(explain)
9. Quthing			

14. HOW LONG HAVE YOU WORKED IN YOUR PRESENT LOCATION IN LESOTHO?

\_\_\_\_\_ years \_\_\_\_\_ months

15. WITH WHOM DO YOU WORK DAILY IN YOUR PRESENT POSITION?  
(Underline as many as apply.)

1. With non-professionals
2. With trained nurses
3. With one doctor physically present
4. With more than one doctor physically present
5. Alone

16. WHERE DID YOU RECEIVE MOST OF YOUR PROFESSIONAL TRAINING?  
(Underline one only)

1. In Lesotho
2. In the Republic of South Africa
3. In some other country in Africa
4. Other

\* \* \* \* \*

17. THE HORMONE MOST DIRECTLY RESPONSIBLE FOR OVULATION IS:  
(Underline one response)

1. Follicle stimulating hormone (FSH)
2. Testosterone
3. Estrogen
4. Progesterone
5. I don't know

18. DURING EACH CYCLE, THE OVUM IS AVAILABLE TO BE FERTILIZED FOR APPROXIMATELY:  
(Underline one response)

1. 10 days
2. 1 day
3. 4 days
4. 8 hours
5. I don't know

19. THE MALE HORMONE RESPONSIBLE FOR CHANGES IN THE YOUNG BOY AT PUBERTY IS:  
(Underline one response)

1. Progesterone
2. Estrogen
3. Testosterone
4. Aldosterone
5. I don't know

20. SPERM ARE PRODUCED IN THE: (Underline one response)
1. Ovary
  2. Prostate
  3. Testicle
  4. Seminal vesicles
  5. I don't know
21. SPERM CAN LIVE IN THE FEMALE GENITAL TRACT AFTER INTERCOURSE FOR APPROXIMATELY: (Underline one response)
1. Two to three days
  2. One week
  3. 24 hours
  4. Two hours
  5. I don't know
22. FERTILIZATION USUALLY TAKES PLACE: (Underline one response)
1. In the cervix
  2. In the Fallopian tube
  3. In the uterine cavity
  4. In the ovary
  5. I don't know
23. AT THE TIME OF FERTILIZATION, THE SEX OF THE NEW FETUS IS DETERMINED BY: (Underline one response)
1. The sex chromosome from the mother
  2. The sex chromosome from the father
  3. Purely by chance
  4. I don't know
24. A WOMAN WITH A REGULAR MENSTRUAL CYCLE OF APPROXIMATELY 28 DAYS IS MOST LIKELY TO BE FERTILE: (Underline one response)
1. During her menstrual flow
  2. The first two to three days after menstrual flow ceases
  3. Approximately midway between the start of one flow and the start of the next
  4. During the week just before her menstrual flow
  5. I don't know

25. IF A COUPLE ASKED YOU ABOUT THE EFFECTS OF HAVING INTERCOURSE DURING THE WOMAN'S MENSTRUAL PERIOD, WHAT WOULD YOU TELL THEM?

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26. THE PROBABLE MOST FREQUENT CAUSE OF INFERTILITY IS: (Underline one response)
1. Psychological
  2. Failure of ovulation
  3. Failure of spermatogenesis
  4. Infection of the Fallopian tubes or vas deferens
  5. I don't know
27. IN EVALUATION OF THE INFERTILE COUPLE, THE FIRST STEP IS TO OBTAIN: (underline one response)
1. A sperm count
  2. A couple's medical history
  3. An endometrial biopsy
  4. A hysterosalpingogram
  5. I don't know
28. EVERY WOMAN WHO SEEKS COUNSELING FOR EITHER INFERTILITY OR ASSISTANCE WITH CHILD SPACING SHOULD HAVE: (Underline one)
1. An electrocardiogram
  2. A chest X-ray
  3. A blood clotting time
  4. A breast examination
  5. I don't know
29. DURING THE PAST YEAR, HAVE YOU HAD BASOTHO CLIENTS WHO HAVE REQUESTED HELP WITH PROBLEMS OF INFERTILITY: (Underline one)
1. Frequently (once a week or more often)
  2. Occasionally (once a month)
  3. Rarely (once or twice a year or less)
  4. Never
30. HAVE YOU EVER RECEIVED ANY TRAINING IN THE EVALUATION OF THE INFERTILE COUPLE: (Underline as many as apply)
1. Yes, in my basic professional schooling
  2. Yes, in post-graduate training
  3. Yes, on the job
  4. No, none at all

31. THE PAPANICOLAOU SMEAR (PAP SMEAR) IS MOST USEFUL AS AN AIDE IN THE DIAGNOSIS OF: (underline one)

1. Cancer of the endometrium
2. Cancer of the cervix
3. Venereal disease
4. Cancer of the ovary
5. I don't know

32. FROM A PHYSIOLOGICAL POINT OF VIEW, THE SAFEST AGE FOR WOMEN TO BEAR CHILDREN IS: (Underline one response)

1. Between the ages of 15 and 45 years
2. Between the ages of 30 and 40 years
3. Between the ages of 20 and 30 years
4. Between the ages of 15 and 25 years
5. I don't know

33. IF A COUPLE ASKED YOU ABOUT THE EFFECTS OF HAVING INTERCOURSE DURING THE FIRST EIGHT MONTHS OF A WOMAN'S PREGNANCY, WHAT WOULD YOU TELL THEM?

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34. HOW LONG SHOULD A WOMAN WAIT AFTER WEANING HER INFANT BEFORE BECOMING PREGNANT AGAIN? (Underline one response)

1. Five years
2. At least one year
3. At least 18 months
4. Between 2 and 3 years
5. I don't know

35. IF A COUPLE ASKED YOU ABOUT THE EFFECTS OF HAVING INTERCOURSE WHILE THE WOMAN IS STILL BREASTFEEDING AN INFANT, WHAT WOULD YOU TELL THEM?

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36. WHICH OF THE FOLLOWING IS THE GREATEST RISK TO A WOMAN'S HEALTH OR LIFE?  
(Underline one response)
1. The intrauterine contraceptive device (IUCD)
  2. Pregnancy
  3. The contraceptive pill
  4. Injectable contraceptives
  5. I don't know
37. IN THE WORLD TODAY, THE MOST FREQUENTLY USED METHOD FOR AVOIDING UNWANTED CHILDREN IS: (Underline one response)
1. The contraceptive pill
  2. Abortion
  3. The intrauterine contraceptive device (IUCD)
  4. Abstinence
  5. I don't know
38. DURING THE PAST YEAR, HAVE YOU HAD BASOTHO CLIENTS WHO HAVE REQUESTED CHILD SPACING INFORMATION OR SERVICES? (Underline one response)
1. Frequently (once a week, or more often)
  2. Occasionally (once or twice a month)
  3. Rarely (once or twice a year or less)
  4. Never
39. DO YOU THINK A COUPLE SHOULD HAVE THE RIGHT TO DETERMINE HOW MANY CHILDREN THEY WISH TO HAVE? (Underline one response)
1. Yes
  2. No
  3. Undecided
40. IF A YOUNG BASOTHO COUPLE YOU KNEW WERE GETTING MARRIED, HOW MANY CHILDREN DO YOU THINK THE COUPLE'S PARENTS WOULD WANT THEM TO HAVE? (State how many)
1. \_\_\_\_\_ boys
  2. \_\_\_\_\_ girls
41. IF A YOUNG BASOTHO COUPLE YOU KNEW WERE GETTING MARRIED, HOW MANY CHILDREN DO YOU THINK THEY WOULD LIKE TO HAVE? (State how many)
1. \_\_\_\_\_ boys
  2. \_\_\_\_\_ girls

42. IN YOUR OPINION, WHO SHOULD USE SOMETHING TO PREVENT PREGNANCY?  
(Underline either "yes" or "no" in front of each response)

- Yes No 1. Anyone who wishes to
- Yes No 2. Single men
- Yes No 3. Single women
- Yes No 4. Prostitutes
- Yes No 5. Married men with women other than their wives
- Yes No 6. Married women with men other than their husbands
- Yes No 7. Married men with their wives
- Yes No 8. Married women with their husbands
- Yes No 9. Men only
- Yes No 10. Women only
- Yes No 11. Nobody

43. WHAT CHILD SPACING METHOD(S) (INCLUDING COMBINATION OF METHODS) HAVE YOU USED PERSONALLY WITHIN THE PAST YEAR? (Record up to three answers. If none, write "none" in the first space.)

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_

44. WHAT CHILD SPACING METHODS, INCLUDING COMBINATION OF METHODS, ARE YOU USING RIGHT NOW?

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_

45. THE SO-CALLED "SAFE PERIOD" IN A WOMAN WITH A REGULAR 28 DAY MENSTRUAL CYCLE FALLS: (Underline one response)

- 1. The second and third weeks of a 4-week cycle
- 2. The last 10 days of one cycle and the first 7 days of the next
- 3. The week of menstruation
- 4. Roughly the week just before and the week just after her menstrual flow
- 5. I don't know

46. BELOW ARE LISTED SEVERAL CONTRACEPTIVE METHODS. ON THE BASIS OF WHAT YOU KNOW ABOUT THEIR EFFECTIVENESS IN PREVENTING PREGNANCY WHEN USED EXACTLY AS DIRECTED, RATE EACH ONE AS FOLLOWS:

Excellent: Practically foolproof

Good: Useful, but may result in pregnancy

Fair: Better than nothing, but still results in very many unwanted pregnancies

Poor: Practically worthless

UNDERLINE THE APPROPRIATE RESPONSE

1. Withdrawal	Excellent	Good	Fair	Poor	No knowledge
2. Rhythm	Excellent	Good	Fair	Poor	No knowledge
3. Douching	Excellent	Good	Fair	Poor	No knowledge
4. Foams, creams	Excellent	Good	Fair	Poor	No knowledge
5. Diaphragm	Excellent	Good	Fair	Poor	No knowledge
6. Condom	Excellent	Good	Fair	Poor	No knowledge
7. IUCD	Excellent	Good	Fair	Poor	No knowledge
8. Pills	Excellent	Good	Fair	Poor	No knowledge
9. Injectables (Depo-provera)	Excellent	Good	Fair	Poor	No knowledge

47. THE PRACTICE OF COITUS INTERRUPTUS (WITHDRAWAL) INVOLVES: (Underline one response)

1. Avoiding intercourse at a time during which impregnation can occur
2. Preventing ejaculation
3. Avoiding deposition of sperm in the vagina only
4. Avoiding deposition of sperm in the vagina and the external genitalia
5. I don't know

48. FOR BEST CONTRACEPTIVE EFFECTIVENESS, THE CONDOM MUST BE PUT ON: (Underline one response)

1. Just before ejaculation
2. Prior to the final insertion, if there are multiple insertions, of the erect penis
3. Prior to the first insertion of the erect penis
4. I don't know

49. IF A WOMAN FORGETS TO TAKE A CONTRACEPTIVE PILL AT THE SCHEDULED TIME, ON THAT DAY SHE SHOULD: (Underline one response)

1. Skip that pill, since missing just one pill does not matter
2. Take the forgotten pill at the end of the cycle
3. Take the forgotten pill as soon as she remembers
4. I don't know

50. Underline "yes" or "no" to the following statement:

SOME BASOTHO HAVE TOO MANY CHILDREN.      Yes      No

51. WHAT CHILD SPACING METHODS DO YOU THINK WOULD BE BEST FOR BASOTHO COUPLES? (Name up to four methods in the order of your preference, or underline "5")

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. I don't know

52. HAVE YOU EVERY RECEIVED ANY TRAINING IN PROVIDING CHILD SPACING INFORMATION OR SERVICES: (Underline as many as apply)

1. Yes, in my basic professional schooling
2. Yes, in post-graduate training
3. Yes, on the job
4. No, none at all

53. Indicate if you agree or disagree by underlining "yes", "no", or "undecided" in front of each of the following completions to this statement:

I THINK THAT A PROFESSIONAL HEALTH WORKER (NURSE, NURSE-MIDWIFE, OR DOCTOR) SHOULD:

- |     |    |           |  |
|-----|----|-----------|--|
| Yes | No | Undecided | 1. Discuss child spacing routinely with all prenatal patients                                |
| Yes | No | Undecided | 2. Discuss child spacing routinely with all postpartum patients, regardless of age           |
| Yes | No | Undecided | 3. Discuss child spacing routinely with all postpartum patients regardless of marital status |
| Yes | No | Undecided | 4. Assess and inquire about child spacing status and needs in almost every client contact    |
| Yes | No | Undecided | 5. Give child spacing information only when requested by the patient                         |
| Yes | No | Undecided | 6. Give child spacing counseling only when the patient is already using a method             |

53. Cont.

- |     |    |           |   |
|-----|----|-----------|---|
| Yes | No | Undecided | 7. Discuss child spacing with all mothers in the Preschool or Under-Fives Clinic                                      |
| Yes | No | Undecided | 8. Discuss child spacing with community groups  |
| Yes | No | Undecided | 9. Discuss child spacing with men as often as possible  |
| Yes | No | Undecided | 10. Discuss only those child spacing methods that do not conflict with his (the health worker's) own personal beliefs |
| Yes | No | Undecided | 11. Discuss child spacing only when he thinks that child spacing does not conflict with the client's personal beliefs |
| Yes | No | Undecided | 12. Discuss child spacing with a client only if the health worker is married  |
| Yes | No | Undecided | 13. Discuss child spacing with <u>any client</u> , regardless of age  |
| Yes | No | Undecided | 14. Discuss child spacing with <u>any client</u> , regardless of marital status                                       |
| Yes | No | Undecided | 15. Discuss child spacing only with high risk women   |
| Yes | No | Undecided | 16. Never give child spacing information  |
| Yes | No | Undecided | 17. Discuss child spacing only with women who have already borne a child  |

54. Complete this statement by underlining only one response.

ON THE WHOLE, IF CLIENTS REQUESTED CHILD SPACING INFORMATION I WOULD:

1. Discuss only the method I thought best for the patient
2. Discuss several methods, in order to allow the patient to select the method of his own choice
3. Give a pamphlet only (if I had one) because I do not feel sufficiently comfortable to discuss child spacing
4. Give a pamphlet only (if I had one) because I do not feel knowledgeable enough to discuss child spacing
5. Not discuss it, but would refer the patient elsewhere for information
6. Refer the patient to the doctor, and not discuss child spacing at all
7. Not discuss child spacing, and would not refer the patient anywhere else for information
8. None of the above

55. DURING THE PAST YEAR, HAVE YOU HAD BASOTHO CLIENTS WHO HAVE ASKED ABOUT ABORTION FOR AN UNWANTED PREGNANCY? (Underline one response)

- 1. Frequently (once a week or more often)
- 2. Occasionally (once or twice a month)
- 3. Rarely (once or twice a year or less)
- 4. Never

56. DURING THE PAST YEAR HAVE YOU HAD BASOTHO PATIENTS WHO HAVE HAD NON-PROFESSIONAL, INDUCED ABORTIONS? (Underline one response)

- 1. Frequently (once a week or more)
- 2. Occasionally (once or twice a month)
- 3. Rarely (once or twice a year or less)
- 4. Never had them as patients, but have heard of them
- 5. Never had them as patients, and never heard of them

57. IN YOUR OPINION, IF A CLIENT REQUESTED IT, A PREGNANCY COULD BE STOPPED BY PERFORMING AN ABORTION UNDER WHICH OF THE FOLLOWING CIRCUMSTANCES?

(Underline if you "agree" or "disagree" or are undecided about each of the following responses.)

Agree	Disagree	Undecided	1. Abortion should never be performed
Agree	Disagree	Undecided	2. If a woman is pregnant because of rape or incest
Agree	Disagree	Undecided	3. If a girl is younger than 12 years old
Agree	Disagree	Undecided	4. If a couple has an inheritable disease which might cause an abnormal child
Agree	Disagree	Undecided	5. If a couple cannot afford another child
Agree	Disagree	Undecided	6. If a woman has a serious mental illness which might be made worse by continuing the pregnancy
Agree	Disagree	Undecided	7. If a couple feel they have too many children. How many is "too many" children? (State number): _____
Agree	Disagree	Undecided	8. If a woman is too old. What age is "too old"? (State age): _____
Agree	Disagree	Undecided	9. If a woman is unmarried
Agree	Disagree	Undecided	10. If a woman does not want the pregnancy
Agree	Disagree	Undecided	11. If a woman's husband does not want the pregnancy
Agree	Disagree	Undecided	12. If the pregnancy is caused by someone other than the woman's husband

## 57. Cont.

- |       |          |           |     |  |
|-------|----------|-----------|-----|--|
| Agree | Disagree | Undecided | 13. | If the woman has a severe medical illness which might cause her to die if she continues the pregnancy                        |
| Agree | Disagree | Undecided | 14. | If a woman believes that her baby will be deformed because of measles or other illness she may have had during her pregnancy |
| Agree | Disagree | Undecided | 15. | If a prostitute finds herself pregnant   |
| Agree | Disagree | Undecided | 16. | If a couple has been conscientiously using a method of contraception, but the wife becomes pregnant anyway (method failure)  |
| Agree | Disagree | Undecided | 17. | In the woman who chooses abortion as a method of preference for birth control  |

THE END: THANK YOU AGAIN FOR YOUR ASSISTANCE AND COOPERATION!

PART II

KAP (KNOWLEDGE, ATTITUDES AND PRACTICES) SURVEY OF  
DOCTORS AND NURSES IN LESOTHO

July 1976  
with Comparative Findings

A REPORT TO THE MINISTRY OF HEALTH OF THE GOVERNMENT OF LESOTHO

Submitted by: THE UNIVERSITY OF CALIFORNIA EXTENSION/SANTA CRUZ  
DIVISION OF INTERNATIONAL PROGRAMS, CONTRACT NO. AFR-799  
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

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PART II

KAP (KNOWLEDGE, ATTITUDES AND PRACTICES) SURVEY OF  
DOCTORS AND NURSES IN LESOTHO

TABLE OF CONTENTS

	<u>PAGE</u>
I. INTRODUCTION	1
II. RESPONDENT CHARACTERISTICS	2
III. COMPARATIVE RESULTS: 1973, 1976	3
A. Knowledge Questions	3
B. Attitudes	4
C. Practices	6
D. Family Planning and Nutrition	6
IV. COMPARATIVE RESULTS BY DISTRICT	7
V. DISCUSSION	7
VI. SUMMARY AND CONCLUSIONS	8
VII. RECOMMENDATIONS	9

APPENDIX

FIGURE 1 : Response by Nurses to the Question "With Whom  
Do You Work In Your Present Position?"

FIGURE 2 : Percent Polygons Comparing Distribution of  
Scores Achieved on Sixteen Knowledge Questions.

FIGURE 3 : Cumulative Percent Distributions of Ideal  
Family Size Perceived by Respondents.

TABLES 1 - 28  
DISCUSSION

QUESTIONNAIRE

KAP (KNOWLEDGE, ATTITUDES AND PRACTICES) SURVEY OF  
DOCTORS AND NURSES IN LESOTHO

JULY, 1976

I. INTRODUCTION

This second Knowledge, Attitudes and Practices (KAP) Survey of medical professionals in Lesotho was conducted in July of 1976 following three years of in-and out-country training amongst Basotho regarding family planning and maternal and child health. The objectives of the survey were to:

1. Compare the general level of knowledge, attitudes and practices amongst professionals engaged in or likely to be engaged in family planning education and service: particularly in rural Lesotho.
2. Stimulate thinking in related subject areas.
3. Monitor the impact of family planning content in formal and informal educational programs in and outside the country since 1973.
4. Learn from professionals their experiences in and patient demand for contraceptives, infertility and related education counselling and/or services.
5. Determine significant relationships between district responses.

The survey was done in conjunction with and prior to a countrywide training program carried out by the Ministry of Health and the University of California Extension/Santa Cruz, Maternal and Child Health Project team. The questionnaires were anonymous, and their administration and completion was supervised by the training team. Prior to the first day of training all doctors and nurses participating in the training program received, in their districts, personal instruction on completing the questionnaire.

The findings presented in Lesotho's 1973 KAP Survey of Doctors and Nurses serves as baseline data to this survey.<sup>a</sup> From lists of participants it is known that 95 percent of the government nurses and 50 percent of the non-government nurses had been administered the questionnaire previously in a controlled situation in 1973. Since that time the questionnaire has been a classified document of the UCSC/MCH Project except at the time of administration again in 1976.<sup>b</sup>

- a) Goodale and Stubbs; KAP Survey of Doctors & Nurses in Lesotho, Nov. 1973  
A report to the Ministry of Health of the Government of Lesotho
- b) Acknowledgement is made to Dr. George Walter who was the principal advisor in the development of the 1973 questionnaire and survey.

## II. RESPONDENT CHARACTERISTICS

The questionnaire was administered to a total of eleven doctors and 170 nurses employed in Lesotho in July 1976 and to 48 student nurses. This report will contain the findings from the nursing categories only. The doctors represent a small sample comprised largely of expatriate physicians not present in 1973 and their survey results will not be reported.

In this report, "nurses" will refer to all categories of nurses, whether single qualified or double qualified nurse midwives, unless otherwise specified. "Nursing students" will refer to all levels of candidates from Lesotho's schools of nursing and midwifery. As noted in Table 1, questionnaires were obtained from 170, 66.0 percent, of government employed nurses and 60, 34.0 percent, of mission or private sector nurses. These represent 50 percent of the 337 nurses reported to be employed in the country in 1973.<sup>c</sup> Low response from the mission/private sector is probably due to the sponsorship and site of the training program which in all instances except one were government-based hospitals. Although missions and private associations were invited to participate, large mission hospitals could not as easily function without substantial staff during the three-day training program as could the nurses at governmental training sites where rotations were made so that all staff could participate. Provision was made for all government nurses serving in the rural health centers to be present for the training program.

Table 2 presents the respondents by professional category and basic educational preparation. As can be expected, the percentage of student nurses coming from a basic preparation of matriculation is higher, 60 percent, than those who had already qualified, 29 percent. This is consistent with the trend towards recruitment of matriculation candidates into nursing.

The nationality of the nurse participants was 91.1 percent Basotho either by birth or naturalization.<sup>3</sup> Only 8.8 percent, 15, were non-Basotho, a category which includes Zulu, Xhosa and nurses from other nations. As can be expected, 100 percent of the nurses and nursing students were female. The median age of the nurses was 37.6 years and of student nurses 24.8 years. Consistent with the abovementioned age distribution of the respondents is the fact that 64.7 percent of the nurses were married, 25.3 percent were never married, and the remaining 10.1 percent were widowed, divorced or separated at the time of the survey.<sup>6</sup> A majority of the student nurses, 83.3 percent, were never married.

Table 7 reveals that 53, or 31.2 percent, of the nurses were Roman Catholic, 95, 55.8 percent, were Protestant and 22 were of another religious faith. The religious preference of nurses in Table 7 is consistent with the overall pattern of the country for women with higher than BPTC education. The student nurses were evenly divided between the Roman Catholic and Protestant religions with 45.8 percent in each group. Four were of another religious preference.

c) Ministry of Health working document, Health Planning Unit, 1973

3 All numbered references refer to like numbered Tables in the Appendix.

Forty-four of the graduate nurse respondents, 25.9 percent, were nulliparous and the majority had experienced two or more pregnancies as shown in Table 8. The average number of sons and daughters born to the nurses was 2.441 and the average number of biological offspring living at the time of the survey was 2.035.

The nurses were asked in which district they were currently working and the length of time they had worked in that location. Table 10 compares the district base of the nurses at the time of the 1976 survey to the nurse respondents by district in 1973. In both surveys more than 30 percent of the nursing staff were Maseru based, 39 percent in 1973, 33 percent in 1976. The number of nurse respondents from districts outside Maseru are felt to represent close to 100 percent of all government nursing posts at those times; however, figures are not available for comparison. The length of time that the nurses were in that particular location in Lesotho is shown in Table 11. The comparison of findings with 1973 shows that a majority of the nursing staff, 60.0 percent in 1973, 57.0 percent in 1976, had been working in that location for two or more years. The employer at the time of the survey was the Government for 110, 65.0 percent, of the nurses. The remaining 60 were employed by missions or other private voluntary organizations. Fifty-six percent of the student nurses were government sponsored.<sup>12</sup> As shown in Table 13, 112, 65.9 percent of the 170 nurse respondents, were posted as staff nurses at the time of the survey. Table 14 shows the location of the respondents' principal training institution(s); that is, whether they received the bulk of their professional training in Lesotho, Republic of South Africa, other African countries, or countries outside Africa. In contrast to the 1973 respondents, the bulk of the nurses in 1976, 55.5 percent, indicated that they had received most of their professional training in Lesotho. Only 37.1 percent, compared to 41.6 percent in 1973, were trained principally in the Republic of South Africa. The 1973 findings showed no significant difference in their performance on the questionnaire that year and a test of significance was not repeated in 1976.

The doctors and nurses were asked "With whom do you work daily in your present position?" Figure 1 shows the work pattern in terms of whether the nurses were likely to be working alone, in conjunction with non-professionals only, or if they were amongst other nurses, in daily contact with a doctor, etc. As can be seen from the bar graph, Figure 1, 26.9 percent of the nurses or about one out of every four nurses, indicated that their current post and location require them to function without daily contact with a physician.

### III. COMPARATIVE RESULTS

#### A. Knowledge Questions

Some of the questions were aimed at determining the level of knowledge concerning concepts related to work in the general area of family planning and infertility. Table 15 presents a summary of the percent of nurses in various categories in 1973 and 1976 who responded correctly to sixteen multiple choice knowledge questions. It should be noted that the categories by column apply to different percentage bases as indicated at the top of each column.

Table 15 shows that the overall performance of nurses in 1973 was 45.6 percent correct, and this value was 50.5 percent in 1976. It was possible with the 1976 results to compare several categories of nurses. The double qualified nurses who had received on-the-job training to determine if this kind of informal training had had an impact on their performance. The results show no appreciable difference between the two groups. Double qualified nurses with on-the-job training achieved an overall average performance level of 50.1 percent correct. Those without this training collectively achieved slightly less, 47.7 percent correct responses. <sup>15</sup>

For comparative purposes the most significant findings are achievement by the twenty four nurses who had received MCH/FP nurse practitioner certificates by 1976. All of these candidates had received from eight to twelve weeks of intensive training to prepare them as family planning practitioners. As would be expected, their overall performance level exceeded that of all other categories of nurses by 14.3 percent compared to all nurses in 1973 and by 10.4 percent compared to all categories of nurses in 1976 who had not received MCH/FP certificates. Clearly their contribution led to an overall average correct performance of all nurses from 45.6 percent in 1973 to 50.5 percent in 1976.

Figure 2 displays percent polygons based upon distribution of the total number of correct responses to sixteen knowledge questions by two groups in 1976: Double qualified nurses with on-the-job training, and those who had achieved MCH/FP nurse practitioner certificates. The peak of the distribution curve shifts farther to the right, into the higher achievement areas with each input.

Table 16 presents the overall average performance level of student nurses and student midwives whose training was sponsored either by the government or mission schools of nursing in Lesotho. There was no appreciable difference between the two groups of students. Due to the small numbers of students in their fourth year of nursing it was not feasible to compare students at the same level of completion. Another area of knowledge requested from the participants was the amount of training they had received in the area of infertility, question 29, and family planning, question 43. Table 17 presents the findings concerning the level of education or training received by the nurses, whether as basic professional or post graduate education, on-the-job training, or none at all, and compares this to 1973 responses to the same question. It should be noted that respondents were asked to check all responses that applied to them. The trend indicates that more than twice the percent had received on-the-job training in infertility in 1976, with only 16.4 percent with this training in 1973 and 38.8 percent in 1976. Likewise, those receiving on-the-job training in family planning had risen from 25.1 percent in 1973 to 49.4 percent in 1976. Those with no training at all in infertility or family planning dropped from 50.3 and 47.4 percent respectively in 1973 to 30.0 and 22.4 percent in 1976. However in 1976, more than 70 percent of the student nurses indicated that they had not received either infertility or family planning training thus far in their nursing preparation.

#### B. Attitudes

A number of the questions were asked to determine if there were strong positive or negative attitudes concerning specific issues. The correlates of selected attitudinal questions, such as religion, education, etc., were discussed under inferential results in the 1973 survey and these variables were

found to make no significant difference on the results. This exercise was therefore omitted in this report. As in 1973 the respondents were asked, "How many is too many children?" One can see from Table 18 that the median of "too many" remains quite high amongst the respondents, or 7.54 children in 1973 and 7.30 children in 1976. Only 20.1 percent of the nurses stated that five or fewer children is "too many", which is interesting in view of an average total fertility of approximately 56 live births for every ten women in Lesotho.<sup>d</sup> Another way to report this is to say that on the average the nurses perceive "too many" to be far in excess of what is reported to be the total fertility rate amongst Basotho women who have completed their reproductive cycle (older than 49 years).

To ascertain the views of the respondents with respect to ideal family size, the question "How many boys (girls) do you think the husband, wife, and parents of a young Basotho couple would want them to have?" was asked. (KAP Questions 33-4) The nine cumulative percent distributions resulting from these questions are present tabularly in Table 19 and graphically in the couple wanting substantially different numbers of children for them than the husband of the couple. However, for all numbers of children the respondents overall perception was that the wife of the couple would prefer fewer children than either the parents or the husband of the newly married couple. The medians of Table 19 reflect this fact.

When asked what method of family planning they thought best for Basotho couples the most popular selection by nurses in 1976, 38.8 percent, was the oral pill, and 27.1 percent chose the IUCD.<sup>20</sup> The pill and the IUCD were methods of preference for Basotho in 1973 as well. However the popularity of depo provera (injectable) has slid from third choice for 1973 to fifth choice in 1976.<sup>20</sup> A high non-response rate, 56.3 percent by the student nurses, suggested a basic unfamiliarity with the methods or perhaps indecision about their use in Lesotho.

Table 21 compares the 1973 results with the 1976 results concerning the nurses attitudes to their role in family planning as health professionals. The only apparent shift (greater than a 5 percent difference) between 1973 and 1976 is the greater agreement amongst nurses of routine discussion of the subject with all post partum women regardless of marital status. However, in contrast, fewer nurses would agree to routine discussions with prenatal clients regardless of age or marital status. Findings were basically very similar to the 1973 results and an in-depth discussion is available in the 1973 report.

The highest level of consensus, 80 percent or more, was achieved in agreement to routine discussion of family planning with the following groups in this order:

1. With men as often as possible
2. Routinely with postpartum cases regardless of age
3. Routinely with postpartum cases regardless of marital status
4. Routinely with mothers in preschool clinics

d) Monyake, A.M., Paper reported at the National Population Symposium, Government of Lesotho, June 1974.

5. Routinely with prenatals regardless of age or marital status
6. With community groups as often as possible.

In 1973, 42.8 percent of the nurse respondents indicated that they would never agree to a client's request for abortion under any circumstances. In 1976 only 30 percent indicated that they would never agree to such a request. Aside from this departure, the responses by the nurses to thirteen abortion variables remained essentially unchanged during the three year period. As in 1973, the nurse respondents in 1976 agreed more than 80 percent of the time to abortion in the situation where there is a medical threat to the woman's life, 85.3 percent, and when the woman is seriously mentally ill, 83.5 percent. The percentage in rank order of agreement and disagreement in 1976 is summarized in Table 22. Statistical inference by education, religion, etc., is reported extensively in the 1973 report and is not duplicated for 1976 due to lack of statistically significant findings in the 1973 analysis of the data.

### C. Practices

The findings reported in Tables 23 and 24 are of interest to those concerned with demand for contraceptive and abortion services as experienced by the nurses in 1973 and again in 1976. The nurses received more client requests for family planning information and services in 1976. Those who were asked frequently (once or more per week) for this help more than doubled, 14.4 percent in 1973 to 32.4 percent in 1976.<sup>23</sup> In 1976 62.4 percent of the nurses said that they were frequently or occasionally asked for assistance with family planning.

Basotho asking about abortions decreased, from frequent (once or more per week) requests in 1973 of 8.1 percent to 4.1 percent in 1976. Likewise the nurses had experienced fewer Basotho parents with non-professional induced abortions from 8.7 percent frequently observing this in 1973, to 3.5 percent in 1976.<sup>24</sup>

In their own personal lives 21.8 percent of the nurses had used the oral contraceptive pill in the previous year, and 7.7 percent were using it currently. The most popular of the three methods, pill, IUCD and injectable, amongst the nurses currently using a modern method, was the IUCD, by 9.8 of the respondents.<sup>25</sup> Seventy-one percent of the nurses were currently on no method of contraception, but only 54.9 percent had used no method at all in the previous year.

### D. Family Planning and Nutrition

There can be no doubt that malnutrition and family planning are closely related in the traditional society of the Basotho. Certain beliefs about intercourse which result in abrupt (overnight) weaning are well known amongst formally educated and uneducated Basotho, both men and women. In the demonstration zone at Tsakholo, records were kept on the frank kwashiorkor and marasmus cases seen there in 1975. The linkage to tenacious traditional beliefs about weaning was apparent even in women who were regularly attending the preschool clinics where health education concerning nutrition and family planning is given regularly. In other words, the occasional child appeared in a mild or moderate state of malnutrition with a mother who "should have known better." There is a paucity of information on the etiology of malnutrition in Lesotho, and one of the least explored areas has to do with the influence of customs and beliefs. The beliefs concerning abstinence in the woman have a positive effect in spacing children. However, the breaking of the abstinence taboo, either real or imagined on the part of the husband, probably has dire consequences if it leads to abrupt (overnight) weaning.

Two questions were asked in this survey to determine if the health professionals in other parts of the country were having experiences with frank kwashiorkor or marasmus similar to the experience at Tsakholo. The results are not a survey of incidence of the condition nor an epidemiology of the cause, but an attempt to obtain what health professionals in other parts of the country think might be contributing to the occurrence of the severe status of malnutrition in their areas. They were asked, "Were any of the above (frank kwashiorkor or marasmus cases) weaned abruptly (overnight) because of traditional, non medical beliefs (i.e. lebese le hloebile, lebese le senyehile)."

Table 27 summarizes the nurses and doctors recall as to whether they had seen none, less than twenty, or twenty or more cases of frank kwashiorkor or marasmus over the previous year. On the average 72.5 percent had seen less than twenty cases in the past year and 7.4 percent indicated that they had seen none at all. The highest response rate to 20 plus cases per year was from the respondents in Butha Buthe, 44.4 percent, and Berea 42.3 percent. In Butha Buthe 100.0 percent of the respondents indicated that some or all of the cases they saw were connected with the carrying out of traditions. In Berea, 91.3 percent indicated the same findings.

Overall, 78.5 percent of the respondents who had seen cases, indicated that some or all of the cases were connected with abrupt weaning of the nature described. This varied from district to district as shown in Table 28.

#### IV. COMPARATIVE RESULTS BY DISTRICT

Tables 28, 29 and 30 show comparative results by district of two sections of this report. Tables 28 and 29, presented previously, demonstrate the differences as perceived by respondents to the magnitude of malnutrition seen in their districts the previous year. Forty percent or more of the respondents in Berea, Butha Buthe, Leribe and Mhales Hoek indicated that they had seen 20 or more cases over the past year. It should be emphasized that in all instances the respondents could have been talking about the same cases. This question was not intended as an incidence survey.

The districts reporting that "all cases" were due to to the circumstances described in Question 46 are not the districts reporting the highest occurrence. In Qaches Nek, Mafeteng, Maseru and Quthing, between 6.7 percent to 27.3 percent of the respondents said that all cases were linked to this traditional practice. One hundred percent of the respondents in Buthe Buthe and Makhotlong indicated that at least some of the cases were thus related. The overall average for all districts was 78.5 percent believing the condition(s) to be likewise related.

District data was compiled concerning the knowledge level attained in each district. Table 30 demonstrates that although the highest performance scores come from the Mafeteng district, this performance level is jeopardized when one eliminates input from the seven MCH/FP nurse practitioners in that district.

#### V. DISCUSSION

The results of the 1976 KAP survey are compared with the baseline data collected from essentially the same population reported in the 1973 results. The data was analyzed by district as well as categorical group. As in the 1973 survey, the response by physicians was limited and is therefore not reported. Forty-eight student nurses participated in the 1976 survey in

addition to 170 graduate nurses whose comparative results comprise the bulk of this report.

Performance level on sixteen knowledge questions by the nurses as a group showed a five percentile improvement in 1976 over 1973. This is demonstrated to be primarily due to the improved performance of twenty-four nurses who had received certificates as MCH/FP nurse practitioners during the interim. Marginal improvement was demonstrated comparing double-qualified nurses with on-the-job training to those likewise qualified without on-the-job training. The performance level by district shows a ten percentile improvement in the Mafeteng district as compared to all other districts, and this is related to the presence of seven MCH/FP certificate nurses in that district. When the districts were compared without the input of any MCH/FP certificate nurses, the achievement of the nurses was highest in Berea and Lerine districts. Although performance level by on-the-job trained nurses does not demonstrate appreciable improvement at this time, it is early to evaluate impact.

Student nurses from government compared to non-government institutions performed at about the same level on the knowledge questions, which was overall about seven percentiles below the graduate nurses.

Overall attitudes concerning family planning and abortion had not changed significantly since 1973, however the data presented several independent variables that had come into wider acceptance in 1976 as compared to 1973.

A majority of the nurses who were on a modern method of contraception were using the IUCD at the time of the survey, in contrast to 1973 when the pill was the more popular method. This is perhaps a reflexion of the greater availability of those trained to insert IUCD's.

As perceived by the respondents, patient demand for contraceptive services has increased markedly since 1973 and requests for abortion or patients suffering from the effects of non-professional induced abortions has diminished.

Questions were asked with regard to specific kinds of malnutrition and their association with certain traditional practices. A relationship appears to exist in at least some of the cases in all of the districts and this should receive further investigation.

## VI. SUMMARY AND CONCLUSIONS

This survey represents an assessment of nurses' knowledge over time concerning selected questions pertaining to reproduction, contraception and infertility. As expected, the nurses who had received MCH/FP nurse practitioner certificates in the interim of 1973-1976 achieved the highest performance level and non-certificate "on-the-job" training is only beginning to have an effect. The participation in the survey of 48 student nurses or student midwives from all events demonstrated an overall lack of preparation in the subject.

Attitudes and experiences of the respondents demonstrated some differences during the report period. Certain hypothesis were tested by correlations of district with specific variables and those results suggest a need for further investigation.

Specific statistical inferences are available in the 1973 report and were not duplicated in this document.

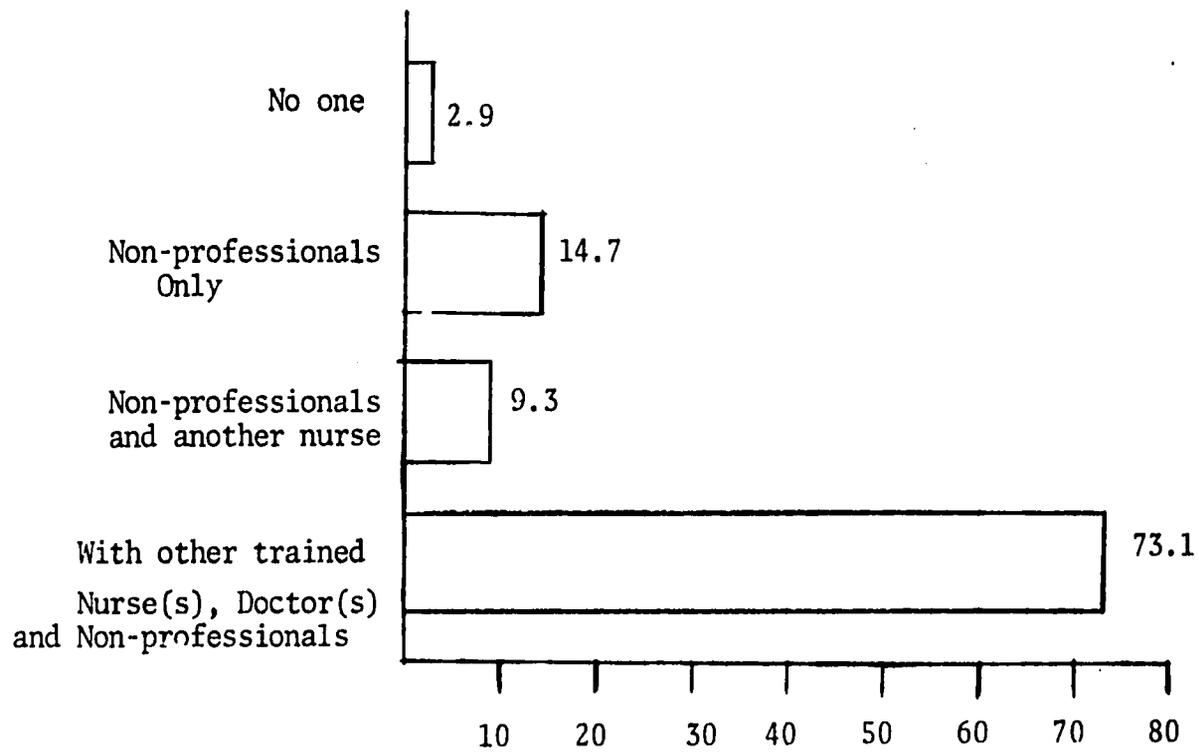
## VII. RECOMMENDATIONS

1. The KAP Questionnaire used in its unrevised form, 1973, and its revised form, 1976, are no longer classified documents since completion of the 1976 survey. Therefore a new set of indices should be used for testing performance levels in the future.
2. The districts should be motivated to provide regular opportunities for on the job training. There is at least one nurse per district qualified to a level of MCH/FP nurse practitioner around whom such a training effort can be focused.
3. Schools of nursing should re-evaluate and/or update their curriculum in these subject areas.
4. Further investigation should be made of the relationship of frank kwashiorkor and marasmus to customs known to be practiced countrywide and educational efforts should be modified accordingly.

A P P E N D I X

FIGURE 1

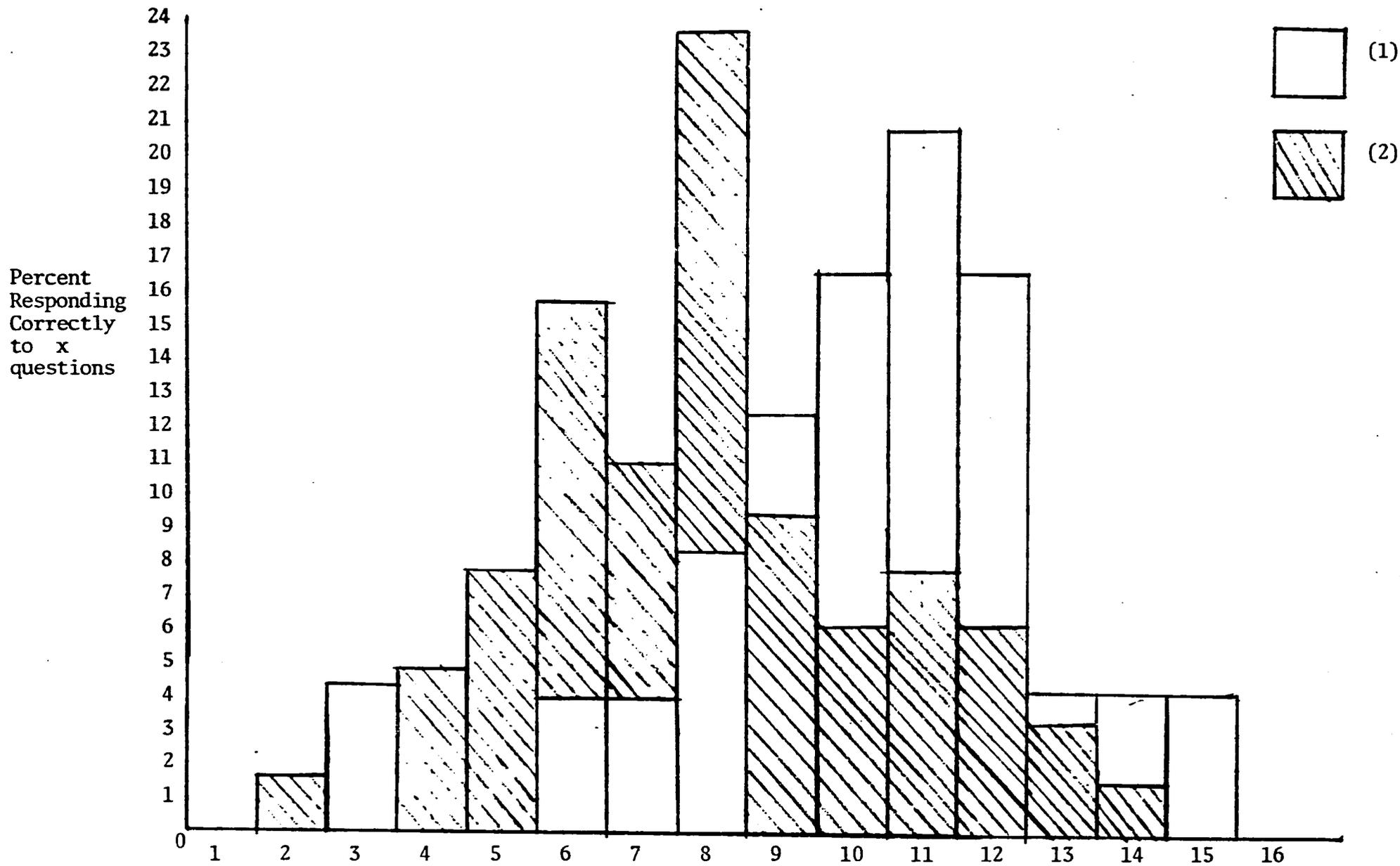
RESPONSE BY NURSES TO:  
"WITH WHOM DO YOU WORK DAILY IN YOUR PRESENT POSITION?"



Percent Responding (n = 168)

FIGURE 2

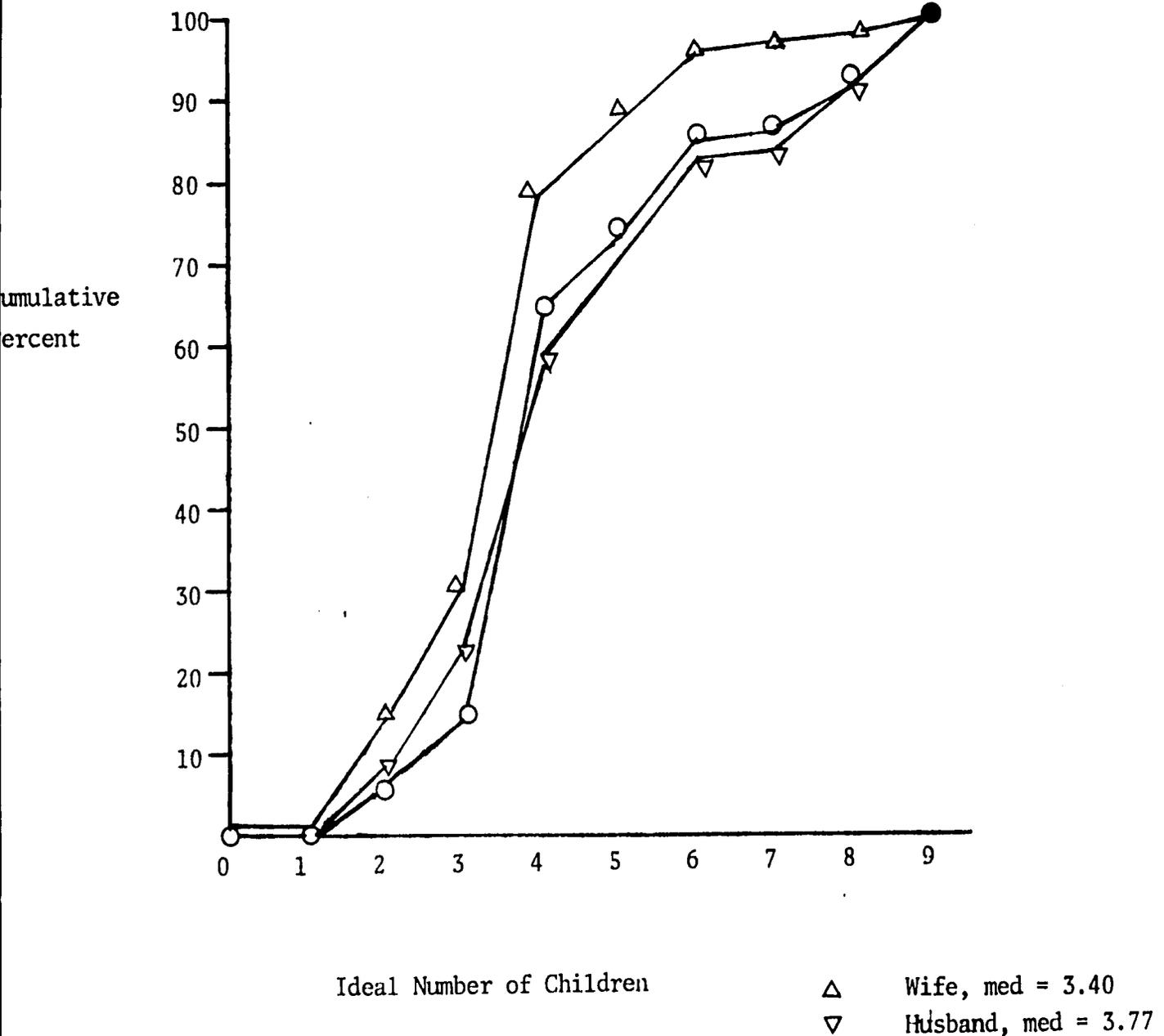
Percent Polygons comparing the distributions of scores on knowledge questions for MCH/FP trained practitioners (1) and Double Qualified Nurses/with on-the-job training. (2)



Percent Polygons comparing distributions of scores for knowledge questions for

FIGURE 3

Cumulative percent Distributions for the Ideal Number of Children for a young Basotho Couple to have as Desired by the Parents, Husband and Wife of the couple (as perceived by all respondents, n = 229). See Table 19.



**TABLE 1. REGISTRY OF EMPLOYED NURSES IN LESOTHO IN 1973 COMPARED TO NURSE RESPONDENTS 1973 AND 1976**

	GOVERNMENT OF LESOTHO %		MISSIONS AND PRIVATE SECTOR %	
	Registry of Nurses, 1973	166	100	177
Nurse respondents, Nov. 1973	128	80	45	25.4
Nurse respondents, July 1976	110	66	60	34

**TABLE 2. NURSE GRADUATES AND STUDENT NURSES BY EDUCATIONAL PREPARATION**

	STD 6	JC	MATRIC OR HIGHER	TOTAL
Nurses (all categories)	1	119	50	170
Student Nurses (all levels)	0	19	29	48

**TABLE 3. NATIONALITY OF NURSE RESPONDENTS**

	MOSOTHO BY BIRTH		MOSOTHO BY NATURALIZATION		NON-MOSOTHO	
	Freq.	%	Freq.	%	Freq.	%
NURSES	142	83.5	13	7.6	15	8.8
STUDENT NURSES	39	81.3	4	8.3	5	10.4

**TABLE 4. SEX BY PROFESSIONAL CATEGORY**  
(Table not reproduced - all Nurse respondents female.)

TABLE 5. AGE OF NURSES, STUDENT NURSES

	NURSES (All categories) (n=169)			STUDENT NURSES (n=48)		
	Freq.	%	Cumulative %	Freq.	%	Cumulative %
20 - 24 years	10	5.9	5.9	25	52	52.1
25 - 29	31	18.3	24.2	14	29.2	81.3
30 - 34	26	15.4	39.6	6	12.5	93.8
35 - 39	34	20.1	59.7	3	6.3	100
40 - 44	29	17.2	76.9			
45 - 49	12	7.1	84			
50 +	<u>27</u>	<u>16</u>	100	<u>        </u>	<u>        </u>	
	169	100		48	100	
	*median age = 37.6			*median age = 24.8		

TABLE 6. MARITAL STATUS

	NURSES (n=170)		STUDENT NURSES (n=48)	
	Freq.	%	Freq.	%
Never Married	43	25.3	40	83.3
Married Now	110	64.6	6	12.5
Widowed	10	5.9	1	2.1
Divorced	3	1.8	1	2.1
Other	<u>4</u>	<u>2.4</u>	<u>0</u>	<u>0</u>
	170	100	48	100

TABLE 7. RELIGIOUS PREFERENCE

	NURSES (n=170)		STUDENT NURSES (n=48)	
	Freq.	%	Freq.	%
Roman Catholic	53	31.2	22	45.8
Protestant (all denominations)	95	55.8	22	45.8
Other than above	22	13	4	8.4

TABLE 9. NUMBER OF SONS, DAUGHTERS BORN COMPARED TO NOW LIVING PROGENY OF 170 NURSES, MEDIAN AGE 37.6 YEARS

	NUMBER OF CHILDREN*	AVERAGE NUMBER
Sons born	206	1.212
Sons now living	158	.929
Daughters born	209	1.229
Daughters now living	188	1.106
Total children born	415	2.441
Total children now living	346	2.035

\*44 nurse graduate respondents were nulliparous

TABLE 10 DISTRICT BASE AT TIME OF SURVEY, 1973, 1976

	BEREA	BUTHA-BUTHE	LERIBE	MAFETENG	MASERU	MOHALE'S HOEK	MOKHOTLONG	QACHA'S NEK	QUTHING
Nurse Respondents 1976	20	8	21	18	55	9	11	11	16
Nurse Respondents 1973	16	14	16	14	69	6	10	15	13

TABLE 11. NURSES TIME IN PRESENT LOCATION OF EMPLOYMENT, 1973, 1976

Years	NURSES, 1973 (n=166)			NURSES, 1976 (n=168)		
	Freq.	%	Cumulative %	Freq.	%	Cumulative %
less than 1	40	24	24	45	27	27
1 - 2	27	16	40	27	16	43
more than 2	99	60	100	96	57	100
Total	166	100		168	100	

TABLE 12. EMPLOYER OR SPONSOR AT TIME OF SURVEY

	GOVERNMENT OF LESOTHO	MISSION	RED CROSS OR CATHOLIC RELIEF SERVICE	LESOTHO FAMILY PLANNING ASSOC.	OTHER
Nurses	110	32	13	12	3
Student Nurses	27	21			

TABLE 13. JOB STATUS OF NURSE RESPONDENTS

	Freq.	%
Staff Nurse	112	65.9
Nursing Sister or Charge Nurse	27	15.9
Sister Tutor	5	2.9
Public Health Nurse	11	6.5
Matron	5	2.9
Other	10	5.9
Total	170	100.00

**TABLE 14. SOURCE OF MOST PROFESSIONAL TRAINING OF NURSES 1973, 1976**

	NURSES - 1973 (n = 173)		NURSES - 1976 (n = 170)	
	Freq.	%	Freq.	%
In Lesotho	81	46.8	96	55.5
In R.S.A.	72	41.6	63	37.1
Other African Country	3	1.7	2	1.2
Country on Other Continent	<u>17</u>	<u>9.8</u>	<u>9</u>	<u>5.3</u>
TOTAL	173	100.0	170	100.0

TABLE 15. PERCENT OF NURSES BY CATEGORY AND YEAR WHO ANSWERED SIXTEEN KNOWLEDGE QUESTIONS CORRECTLY

KAP Q. #	SUBJECT AREA	1973 DQN* (n = 126)	1973 ALL NURSES (n = 173)	1976 DQN* NO ON JOB TRAINING (n = 58)	1976 DQN* WITH ON JOB TRAINING (n = 63)	1976 MCH/FP CERT (n = 24)	1976 ALL NURSES (n = 170)
23.	Hormone for Ovulation (1)	31.1	30.6	48.4	31.7	45.8	37.6
24.	Ovum Available How Long (3)	24.8	24.8	32.8	22.2	37.5	29.4
25.	Male Pubertal Hormone (3)	65.9	65.3	67.2	61.9	75.0	63.5
26.	Sperm Life in Female (1)	24.0	25.4	32.8	33.3	54.2	34.1
27.	Fertilization Where (2)	66.7	70.5	74.1	71.4	87.5	75.3
28.	Sex Determined by (2)	41.3	45.7	62.1	71.4	79.2	65.9
29.	Probable Common Cause of Infertility (4)	50.0	50.2	48.3	46.0	66.7	49.4
30.	First Step Infertility Evaluation (2)	81.0	80.9	84.5	85.7	91.7	86.5
31.	Every Woman Needs (4)	23.0	20.2	24.1	44.4	62.5	37.1
37.	Safest Age for Childbirth (3)	73.0	72.8	70.7	71.4	75.0	70.6
38.	World Most Frequent Birth Control Method (2)	8.7	8.7	5.2	1.6	8.3	3.5
51.	So-Called Safe Period (2)	31.7	31.4	32.8	27.0	54.2	32.9
52.	Proper Prac. Withdrawal (4)	31.7	28.9	24.1	38.1	45.8	35.9
53.	Insert Diaphragm When (1)	-	-	58.6	66.7	87.5	65.9
54.	Remove Diaphragm When (2)	-	-	36.2	47.6	54.2	42.9
55.	Forgotten Pill (3)	71.4	71.1	65.5	81.0	91.7	78.2
	ALL QUESTIONS (TOTAL AVE)	<u>44.6</u>	<u>45.6</u>	<u>47.4</u>	<u>50.1</u>	<u>59.9</u>	<u>50.55</u>

( ) = number of correct response on questionnaire.

\* = DQN = Double Qualified Nurse. The 1976 columns exclude the 24 nurses with MCH/FP certificates.

TABLE 16: PERCENT PERFORMANCE LEVEL OF GOVERNMENT SPONSORED VERSUS NON-GOVERNMENT SPONSORED STUDENT NURSES TO SIXTEEN KNOWLEDGE QUESTIONS.

KAP#	SUBJECT AREA	STUDENT NURSES GOVERNMENT OF LESOTHO (n=26)	STUDENT NURSES NON-GOVERNMENT (n=19)
23	Hormone for Ovulation (1)	3.8	57.9
24	Ovum Available How Long (3)	26.9	26.3
25	Male Pubertal Hormone (3)	73.1	57.9
26	Sperm Life in Female (1)	30.8	42.1
27	Fertilization Where (2)	88.5	84.2
28	Sex Determined by (2)	42.3	47.4
29	Probable Common Cause of Infertility (4)	34.6	31.6
30	First Step Infertility Evaluation (2)	76.9	94.7
31	Every Woman Needs (4)	19.2	21.1
37	Safest Age for Childbirth (3)	76.9	63.2
38	World Most Frequent Birth Control Method (2)	3.8	5.3
51	So-called Safe Period (2)	23.1	31.6
52	Proper Prac. Withdrawl (4)	30.8	15.8
53	Insert Diaphragm When (1)	34.6	26.3
54	Remove Diaphragm When (2)	23.1	10.5
55	Forgotten Pill (3)	46.2	52.6
Average Total		39.7	47.8

TABLE 17: PREVIOUS EDUCATION OR TRAINING RECEIVED BY NURSES AND STUDENT NURSES IN INFERTILITY AND FAMILY PLANNING, 1973, 1976

	Percent with this level of training		
	NURSES 1973 (n=173)	NURSES 1976 (n=170)	STUDENT NURSES (n=19)
<b>INFERTILITY TRAINING RECEIVED:</b>			
In basic professional schooling	29.2	22.9	25.0
In post graduate training	12.3	17.6	4.2
On the job	16.4	38.8	4.2
None at all	50.3	30.6	72.9
<b>CHILD SPACING/FAMILY PLANNING:</b>			
In basic professional schooling	19.3	21.8	20.8
In post graduate training	11.7	13.5	0.0
On the job	25.1	49.4	8.3
None at all	47.4	22.4	70.8

**TABLE 18. HOW MANY IS TOO MANY CHILDREN AS PERCEIVED BY ALL RESPONDENTS\***

No. of Children	Frequency	%	Cum %
2	1	0.5	0.5
3	3	1.5	2.0
4	13	6.5	8.5
5	28	14.0	22.5
6	33	16.5	39.0
Median 7 7.30-----	15	7.5	46.5
8	23	11.5	58.0
9	5	2.5	60.5
10	52	26.0	86.5
11	4	2.0	88.5
12+	<u>23</u>	11.5	100.0
	200		

\* 47 non-response (27.1%)

**TABLE 19. CUMULATIVE PERCENT DISTRIBUTIONS OF THE IDEAL NUMBER OF CHILDREN FOR A YOUNG BASOTHO COUPLE DESIRED BY THE PARENTS, HUSBAND AND WIFE OF THE COUPLE AS PERCEIVED BY ALL RESPONDENTS (n = 229).**

IDEAL NUMBER	COUPLE'S PARENTS			HUSBAND			WIFE		
	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL
0	0.0	0.0	0.0	0.4	4.4	0.4	1.3	0.9	0.4
1	8.7	11.4	0.0	7.9	37.1	0.4	32.3	21.8	0.4
2	66.4	73.8	5.2	47.2	76.4	8.3	88.2	74.7	14.8
3	83.0	85.2	14.0	75.5	86.5	23.6	95.6	91.3	31.9
4	92.6	94.3	64.2	88.6	93.9	58.1	97.4	96.5	77.7
5	96.5	96.9	73.4	94.8	96.9	71.2	98.7	98.3	87.3
6	97.8	98.3	84.7	98.3	97.8	83.4	99.1	99.6	95.6
7	98.3	98.3	86.0	98.7	98.3	88.2	99.6	99.6	96.1
8	98.7	98.7	92.1	98.7	98.7	90.8	99.6	99.6	97.4
9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MEDIAN	1.73	1.62	3.72	2.10	1.33	3.77	1.32	1.53	3.40

**TABLE 20: BEST CONTRACEPTIVE METHOD FOR BASOTHO**

METHOD	Percent Listing Method as First Choice		
	Nurses-1973 (n = 173)	Nurses-1976 (n = 170)	Student Nurses (n = 48)
Oral Pill	28.2	38.8	14.6
IUCD	13.3	27.1	12.5
Injectable	11.6	4.1	2.1
Condom/Diaphragm	7.5	7.6	4.2
Sterilization	1.2	.6	2.1
Other	10.4	6.5	8.3
No response	26.6	14.7	56.2
Nothing	1.2	.6	0.0

**TABLE 21: QUESTION 47, WITH REGARD TO FAMILY PLANNING, I THINK A PROFESSIONAL HEALTH WORKER (NURSE, NURSE MIDWIFE, OR DOCTOR) SHOULD:**

ACTION	PERCENT NURSES AGREE 1973 (n = 173)	PERCENT NURSES AGREE 1976 (n = 170)
1. Discuss routinely with prenatals (regardless of age or marital status)	91.3	82.9
2. Discuss routinely with post partums (regardless of age)	83.2	86.5
3. Discuss routinely with all post partums (regardless of marital status)	77.4	84.7
4. Assess Family Planning needs with almost every client.	66.5	63.5
5. Discuss routinely with pre-school mothers	80.4	84.7
6. Discuss with community groups	82.6	80.6
7. Discuss often with men	85.6	87.1
8. Discuss only if not in conflict with my own beliefs	26.0	27.6
9. Discuss only if I don't perceive a conflict with the client's beliefs.	31.2	25.9
10. Discuss regardless of age	37.5	38.8
11. Discuss regardless of marital status	58.4	62.9
12. Never give Family Planning information or services	4.6	6.5

**TABLE 22: PERCENTAGE AGREEMENT/DISAGREEMENT ON THIRTEEN SELECTED ABORTION VARIABLES BY 170 NURSES 1976.**

SITUATION	PERCENTAGE AGREE NURSES	PERCENTAGE DISAGREE NURSES
Medical threat to woman's life	85.3	7.6
Woman seriously mentally ill	83.5	8.2
Couple with genetic defect	65.3	16.5
Rape or incest	47.1	32.4
Girl under 12 years old	47.6	32.4
Couple feel too many children	30.0	47.6
Woman too old	27.1	44.7
Couple with method failure	24.1	60.6
Couple feel cannot afford	22.9	56.6
Woman doesn't want pregnancy	19.4	61.7
Prostitute is pregnant	12.4	71.8
Unmarried woman is pregnant	9.4	76.5
Woman's choice of birth control	5.3	84.1
Never agree to abortion	30.0	50.0
Total average percent excluding "never agree"		
1973	35.34	46.58
1976	36.88	46.16

**TABLE 23. PERCENT OF NURSES EXPERIENCING CASES REQUESTING FAMILY PLANNING INFORMATION, COUNSELING, OR SERVICES 1973, 1976**

	Frequently*	Occasionally	Rarely	Never	No Response
<b>Family Planning Client Requests</b>					
NURSES, 1973 (n = 173)	14.4	32.9	26.0	24.8	1.2
NURSES, 1976 (n = 170)	32.4	30.0	17.6	18.2	1.5

\*Frequently = once or more per week; Occasionally = Once or twice a month; Rarely = once or twice a year.

**TABLE 24. PERCENT OF NURSES 1973, 1976 EXPERIENCING CASES OF BASOTHO CLIENTS ASKING ABOUT ABORTION OR BASOTHO PATIENTS WHO HAD NON-PROFESSIONAL INDUCED ABORTION**

	Freq.*	Occas.	Rarely	Never had But heard	Never had Never heard	No Response
<b>Basotho asking about abortions</b>						
NURSES 1973 (n = 173)	8.1	9.2	32.9	--	48.0	0.5
NURSES 1976 (n = 170)	4.1	12.9	39.4	--	42.4	1.2
<b>Basotho patients with non-professional induced abortions</b>						
NURSES 1973 (n = 173)	8.7	18.5	22.5	38.1	10.4	1.7
NURSES 1976 (n = 170)	3.5	15.3	24.7	36.5	19.4	.6

\*Frequently = once or more per week; Occas. = once or twice a month; Rarely = once or twice a year.

**TABLE 25. CONTRACEPTIVE USE BY NURSES**

METHOD	NURSES (n = 142*)	
	USE PAST YEAR	USE RIGHT NOW
None	54.9	71.1
Pill	21.8	7.7
IUCD	9.2	9.8
Injectable	3.5	2.1
Condom/Diaphragm Foams, etc.	3.5	1.4
Sterilization	0.7	1.4
Other nonmedical methods	6.3	6.3

\*Figure does not include 27 nurses 50+ years old

**TABLE 26. AVERAGE PERFORMANCE LEVEL OF NURSES BY DISTRICT TO SIXTEEN KNOWLEDGE QUESTIONS (IN PERCENT OF CORRECT RESPONSES)**

DISTRICT	PERCENT CORRECT RESPONSES
Berea	
All nurses (n = 20)	52.2
Minus MCH/FP Cert Nurses (n = 19)	53.9
Butha Buthe	
All nurses (n = 8)	54.7
Minus MCH/FP Cert Nurses (n = 7)	49.1
Leribe	
All nurses (n = 21)	53.6
Minus MCH/FP Cert Nurses (n = 18)	52.1
Mafeteng	
All nurses (n = 18)	56.9
Minus MCH/FP Cert Nurses (n = 11)	50.6
Maseru	
All nurses (n = 55)	51.5
Minus MCH/FP Cert Nurses (n = 51)	50.4
Mohales Hoek	
All Nurses (n = 9)	43.1
Minus MCH/FP Cert Nurses (n = 8)	42.2
Mokhotlong	
All nurses (n = 11)	41.5
Minus MCH/FP Cert Nurses (n = 10)	41.3
Qaches Nek	
All nurses (n = 11)	50.6
Minus MCH/FP Cert Nurses (n = 9)	41.7
Quthing	
All nurses (n = 16)	48.0
Minus MCH/FP Cert Nurses (n = 15)	46.7

**TABLE 27.** PERCENT RESPONSES BY DISTRICT OF 229 NURSES AND DOCTORS TO Q.45 "HAVE YOU SEEN ANY FRANK KWASHIORKOR OR MARASMUS CASES THIS PAST YEAR?"

DISTRICT	NONE	LESS THAN 20 CASES PER YEAR	20 OR MORE CASES PER YEAR
1. Berea	3.8	53.8	42.3
2. Butha Buthe	0.0	55.5	44.4
3. Leribe	4.3	65.1	30.4
4. Mafeteng	0.0	95.0	5.0
5. Maseru	12.1	74.8	12.1
6. Mhales Hoek	10.0	60.0	30.0
7. Mkhhotlong	9.1	81.9	9.1
8. Qaches Nek	0.0	83.3	16.7
9. Quthing	5.6	77.8	16.7
AVERAGE PERCENT	7.4	72.5	19.2

**TABLE 28.** PERCENT RESPONSES BY DISTRICT TO Q.46 CONCERNING TRADITIONAL PRACTICE OF ABRUPT WEANING CONTRIBUTING TO MALNUTRITION CASES (n = 191 RESPONDENTS SEEING CASES)

DISTRICT	SOME CASES	ALL CASES	NONE OF THE CASES
Berea	91.3	0.0	8.7
Butha Buthe	100.0	0.0	0.0
Leribe	89.5	0.0	10.5
Mafeteng	88.9	11.1	0.0
Maseru	71.8	8.9	19.2
Mhales Hoek	55.6	0.0	44.4
Mkhhotlong	100.0	0.0	0.0
Quaches Nek	36.4	27.3	36.4
Quthing	86.6	6.7	6.7
AVERAGE PERCENT	78.5	6.8	14.6

## DISCUSSION

The results of the 1976 KAP survey are compared against the baseline data collected from essentially the same population reported in the 1973 results. The data was analysed by district as well as categorical group. As in the 1973 survey, the response by physicians was limited and is therefore not reported. Forty-eight student nurses participated in the 1976 survey in addition to the 170 graduate nurses whose comparative results comprise the bulk of this report.

Performance level on sixteen knowledge questions by the nurses as a group showed a five percentile improvement in 1976 over 1973. This is demonstrated to be primarily due to the improved performance of twenty-four nurses who had received certificates as MCH/FP nurse practitioners during the interim. Marginal improvement was demonstrated comparing double-qualified nurses with on-the-job training to those likewise qualified without on-the-job training. The performance level by district shows a ten percentile improvement in Mafeteng district compared to all other districts, and this is also due to the presence of seven MCH/FP certificate nurses in that district. When the districts were compared without the input of any MCH/FP certificate nurses, the achievement of the nurses was highest in Berea and Leribe districts.

QUESTIONNAIRE

KAP SURVEY

LESOTHO, JULY, 1976

PLEASE DO NOT PUT YOUR NAME ON THE PAPER. WE WILL USE THE INFORMATION OBTAINED FOR HEALTH PLANNING AND TRAINING PURPOSES. AFTER THE INFORMATION HAS BEEN CORRELATED, THE PAPERS WILL BE DESTROYED. NO ONE EXCEPT THE UNIVERSITY OF CALIFORNIA PROJECT STAFF WILL SEE OR HANDLE THE QUESTIONNAIRES. THE GENERAL INFORMATION WILL BE SUMMARIZED AND USED FOR MCH PROGRAM PLANNING WITHIN THE MINISTRY OF HEALTH.

THANK YOU FOR YOUR COOPERATION.

---

1. QUESTIONNAIRE NUMBER
2. BASIC EDUCATION (Underline the highest level achieved)
  1. Standard 6
  2. J.C.
  3. Matriculation
  4. Other (explain) \_\_\_\_\_
3. PROFESSIONAL TRAINING LEVEL: (Underline the highest level achieved)
  1. Single qualified nurse, single qualified midwife, enrolled nurse
  2. Double qualified nurse-midwife
  3. Public health nurse
  4. Sister tutor
  5. Other nursing speciality (explain) \_\_\_\_\_
  6. Doctor in general practice
  7. Doctor with speciality training
  8. Student Nurse
  9. Other (explain) \_\_\_\_\_
4. NATIONALITY: (underline one)
  1. Mosotho by birth
  2. Mosotho by naturalization
  3. Non-Mosotho
5. SEX (Underline which)
  1. Male
  2. Female

6. AGE (Write in ~~nu~~ number of years)

1. \_\_\_\_\_ years

7. MARITAL STATUS: (Underline one)

1..Single

3. Widowed

5. Separated

2. Married

4. Divorced

8. RELIGION: (Underline one)

1. Catholic

2. Protestant

3. Other

9. NUMBER OF CHILDREN: (State number in space provided. If you have no children born or living put "0" in all spaces)

1. \_\_\_\_\_ Sons born

2. \_\_\_\_\_ natural sons living

3. \_\_\_\_\_ sons adopted

4. \_\_\_\_\_ adopted sons living

5. \_\_\_\_\_ daughters born

6. \_\_\_\_\_ natural daughters living

7. \_\_\_\_\_ daughters adopted

8. \_\_\_\_\_ adopted daughters living

10. IN WHICH DISTRICT ARE YOU CURRENTLY EMPLOYED?

1. Bersa

4. Mafeteng

7. Mokhotlong

2. Butha-Buthe

5. Maseru

8. Qacha's Nek

3. Leribe

6. Mhale's Hoek

9. Quthing

11. WHAT POST DO YOU HOLD NOW? (Job category)

1. Staff nurse or nurse midwife

2. Nurse in charge, sister in charge, nursing sister

3. Tutor or sister tutor

4. Public Health nurse

5. Matron

6. Doctor or medical officer

7. Student Nurse

12. IS YOUR JOB PRIMARILY HOSPITAL BASED?
1. YES
  2. NO
13. IS YOUR JOB PRIMARILY BASED IN A RURAL HEALTH CENTER OR CLINIC?
1. YES
  2. NO
14. ARE YOU A PUBLIC HEALTH WORKER (NEITHER HOSPITAL NOR RURAL CLINIC BASED)
1. YES
  2. NO
15. WHO PAYS YOUR SALARY OR SPONSORS YOU?
1. Government or outside donor to the government
  2. Mission or outside donor to the mission
  3. C.R.S. or Red Cross
  4. L. FP. A.
  5. Other (explain) \_\_\_\_\_
16. HOW LONG HAVE YOU WORKED IN YOUR PRESENT LOCATION (THIS JOB AND THIS SETTING) IN LESOTHO?
1. Less than 3 months
  2. 3 months up to 6 months
  3. 6 months up to 1 year
  4. 1 year up to 2 years
  5. More than two years
17. WITH WHOM DO YOU WORK DAILY IN YOUR PRESENT POSITION? (Underline as many as apply)
1. With non-professionals (ward attendants, scrubbers, health aids)
  2. With trained nurses
  3. With one doctor or more than one doctor physically present
  4. Alone
18. WHERE DID YOU RECEIVE MOST OF YOUR PROFESSIONAL TRAINING? (Underline one only)
1. In Lesotho
  2. In the Republic of South Africa
  3. In some other country in Africa
  4. Other

19. THE HORMONE MOST DIRECTLY RESPONSIBLE FOR OVULATION IS (Underline one response)
1. Follicle stimulating hormone (FSH)
  2. Testosterone
  3. Estrogen
  4. Progesterone
  5. I don't know
20. DURING EACH CYCLE, THE OVUM IS AVAILABLE TO BE FERTILIZED FOR APPROXIMATELY:  
(Underline one response)
1. 10 days
  2. 1 day
  3. 4 days
  4. 8 hours
  5. I don't know
21. THE MALE HORMONE RESPONSIBLE FOR CHANGES IN THE YOUNG BOY AT PUBERTY IS:  
(Underline one response)
1. Progesterone
  2. Estrogen
  3. Testosterone
  4. Aldosterone
  5. I don't know
22. SPERM CAN LIVE IN THE FEMALE GENITAL TRACT AFTER INTERCOURSE FOR APPROXIMATELY:
1. Two to three days
  2. One week
  3. 24 hours
  4. Two hours
  5. I don't know
23. FERTILIZATION USUALLY TAKES PLACE: (Underline one response)
1. In the cervix
  2. In the Fallopian tube
  3. In the uterine cavity
  4. In the ovary
  5. I don't know

24. AT THE TIME OF FERTILIZATION, THE SEX OF THE NEW FETUS IS DETERMINED BY:  
(Underline one response)
1. The sex chromosome from the mother
  2. The sex chromosome from the father
  3. Purely by chance
  4. I don't know
25. THE PROBABLE MOST FREQUENT CAUSE OF INFERTILITY IS: (Underline one response)
1. Psychological
  2. Failure of ovulation
  3. Failure of spermatogenesis
  4. Infection of the Fallopian tubes or vas deferens
  5. I don't know
26. IN EVALUATION OF THE INFERTILE COUPLE, THE FIRST STEP IS TO OBTAIN:  
(Underline one response)
1. A sperm count
  2. A couple's medical history
  3. An endometrial biopsy
  4. An hysterosalpingogram
  5. I don't know
27. EVERY WOMAN WHO SEEKS COUNSELLING FOR EITHER INFERTILITY OR ASSISTANCE WITH CHILD SPACING SHOULD HAVE: (Underline one)
1. An electrocardiogram
  2. A chest X-ray
  3. A blood clotting time
  4. A breast examination
  5. I don't know
28. DURING THE PAST YEAR, HAVE YOU HAD BASOTHO CLIENTS WHO HAVE REQUESTED HELP WITH PROBLEMS OF INFERTILITY? (Underline one)
1. Frequently (once a week or more often)
  2. Occasionally (once or twice a month)
  3. Rarely (once or twice a year or less)
  4. Never

29. HAVE YOU EVER RECEIVED ANY TRAINING IN THE EVALUATION OF THE INFERTILE COUPLE?  
(Underline as many as apply)
1. Yes, in my basic professional schooling
  2. Yes, in my post-graduate training
  3. Yes, on the job or other short course work
  4. No, none at all
30. FROM A PHYSIOLOGICAL POINT OF VIEW, THE SAFEST AGE FOR WOMEN TO BEAR CHILDREN IS:  
(Underline one response)
1. Between the ages of 15 and 45 years
  2. Between the ages of 30 and 40 years
  3. Between the ages of 20 and 30 years
  4. Between the ages of 15 and 25 years
  5. I don't know
31. IN THE WORLD TODAY, THE MOST FREQUENTLY USED METHOD FOR AVOIDING UNWANTED CHILDREN IS: (Underline one response)
1. The contraceptive pill
  2. Abortion
  3. The intrauterine contraceptive device (IUCD)
  4. Abstinence
  5. I don't know
32. DURING THE PAST YEAR, HAVE YOU HAD BASOTHO CLIENTS WHO HAVE REQUESTED CHILD SPACING OR FAMILY PLANNING SERVICES (Underline one response)
1. Frequently (once a week, or more often)
  2. Occasionally (once or twice a month)
  3. Rarely (once or twice a year or less)
  4. Never
33. IF A YOUNG BASOTHO COUPLE YOU KNEW WERE GETTING MARRIED, HOW MANY CHILDREN DO YOU THINK THE COUPLE'S PARENTS WOULD WANT THEM TO HAVE? (State how many)
1. \_\_\_\_\_ boys
  2. \_\_\_\_\_ girls

34. IF A YOUNG BASOTHO COUPLE YOU KNEW WERE GETTING MARRIED, HOW MANY CHILDREN DO YOU THINK THE HUSBAND WOULD WANT AND THE WIFE WOULD WANT? (State how many)

HUSBAND

WIFE

1. \_\_\_\_\_ boys

1. \_\_\_\_\_ boys

2. \_\_\_\_\_ girls

2. \_\_\_\_\_ girls

35. WHAT CHILD SPACING METHOD(S) (INCLUDING COMBINATION OF METHODS) HAVE YOU USED PERSONALLY WITHIN THE PAST YEAR? (Record up to three answers. If none, write "none" in the first space.)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

36. WHAT CHILD SPACING METHODS INCLUDING COMBINATION OF METHODS ARE YOU USING RIGHT NOW? (If none, write "none" in the first space.)

1. \_\_\_\_\_

2. \_\_\_\_\_

37. THE SO-CALLED "SAFE PERIOD" IN A WOMAN WITH A REGULAR 28 DAY MENSTRUAL CYCLE FALLS: (Underline one response)

1. The second and third weeks of a 4 week cycle.

2. The last 10 days of one cycle and the first 7 days of the next.

3. The week of menstruation

4. Roughly the week just before and the week just after her menstrual flow.

5. I don't know

38. THE PRACTICE OF COITUS INTERRUPTUS (WITHDRAWAL) INVOLVES: (Underline one response)

1. Avoiding intercourse at a time during which impregnation can occur.

2. Preventing ejaculation

3. Avoiding deposition of sperm in the vagina only.

4. Avoiding deposition of sperm in the vagina and the external genitalia.

5. I don't know.

39. FOR BEST CONTRACEPTIVE EFFECTIVENESS, THE DIAPHRAGM MUST BE INSERTED (Underline one response)

1. With contraceptive jelly

3. Several hours before intercourse

2. With KY jelly

4. I don't know

40. THE DIAPHRAGM SHOULD BE REMOVED (Underline one response)

1. Immediately following intercourse.
2. The next day after intercourse.
3. Several days after intercourse.
4. I don't know.

41. IF A WOMAN FORGETS TO TAKE A CONTRACEPTIVE PILL AT THE SCHEDULED TIME, ON THAT DAY SHE SHOULD (Underline one response)

1. Skip that pill, since missing just one pill does not matter.
2. Take the forgotten pill at the end of the cycle.
3. Take the forgotten pill as soon as she remembers.
4. I don't know.

42. WHAT CHILD SPACING METHODS DO YOU THINK WOULD BE BEST FOR BASOTHO COUPLES? (Name up to four methods in the order of your preference, or underline "5")

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. I don't know

43. HAVE YOU EVER RECEIVED ANY TRAINING IN PROVIDING FAMILY PLANNING INFORMATION OR SERVICES? (Underline as many as apply)

1. Yes, in my basic professional schooling.
2. Yes, in post-graduate training.
3. Yes, on the job or other short courses.
4. No, none at all.

44. HAVE YOU RECEIVED CERTIFICATION AS AN MCH/FP NURSE PRACTITIONER? (Underline yes or no)

1. YES
2. NO

45. HAVE YOU SEEN ANY FRANK KWASHIORKOR AND/OR MARASMUS CASES THIS PAST YEAR? (Underline one response)

1. Yes, one or two cases this past year.
2. Yes, three to ten cases this past year.
3. Yes, more than ten but less than twenty cases this past year.
4. Yes, more than twenty cases this past year.
5. No, none at all this past year.

46. WERE ANY OF THE ABOVE KWASHIORKOR AND/OR MARASMUS CASES WHICH YOU SAW ABRUPTLY WEANED BECAUSE OF TRADITIONAL, NON-MEDICAL BELIEFS (LEBESE LE HLOEBILE, LEBESE LE SENYEHILE.)?

1. I did not see any Kwashiorkor or Marasmus cases this past year.
2. Yes, some of them.
3. Yes, all of them.
4. No, none of them.
5. I don't know.

47. INDICATE IF YOU AGREE OR DISAGREE BY UNDERLINING "YES" OR "NO" OR "UNDECIDED" IN FRONT OF EACH OF THE FOLLOWING COMPLETIONS TO THIS STATEMENT:

I THINK THAT A PROFESSIONAL HEALTH WORKER (NURSE, NURSE-MIDWIFE OR DOCTOR) SHOULD:

- |     |    |           |   |
|-----|----|-----------|---|
| Yes | No | Undecided | (1) Discuss Family Planning routinely with all patients regardless of age or marital status.                              |
| Yes | No | Undecided | (2) Discuss Family Planning routinely with all postpartum patients regardless of age.                                     |
| Yes | No | Undecided | (3) Discuss Family Planning routinely with all postpartum patients regardless of marital status.                          |
| Yes | No | Undecided | (4) Assess and inquire about Family Planning status and needs in almost every client contact.                             |
| Yes | No | Undecided | (5) Discuss Family Planning with all mothers in the Preschool or Under-Fives clinic.                                      |
| Yes | No | Undecided | (6) Discuss Family Planning with community group.   |
| Yes | No | Undecided | (7) Discuss Family Planning with men as often as possible.  |
| Yes | No | Undecided | (8) Discuss only those Family Planning methods that do not conflict with his (the health worker's ) own personal beliefs. |
| Yes | No | Undecided | (9) Discuss Family Planning only when he thinks that child spacing does not conflict with the client's personal beliefs.  |
| Yes | No | Undecided | (10) Discuss Family Planning with <u>any client</u> regardless of age.  |
| Yes | No | Undecided | (11) Discuss Family Planning with <u>any client</u> regardless of marital status.   |
| Yes | No | Undecided | (12) Never give Family Planning information.  |

48. DURING THE PAST YEAR HAVE YOU HAD BASOTHO CLIENTS WHO HAVE ASKED ABOUT ABORTION FOR AN UNWANTED PREGNANCY? (Underline one response)

1. Frequently (once a week or more often)
2. Occasionally (once or twice a month)
3. Rarely (once or twice a year or less)
4. Never

49. DURING THE PAST YEAR HAVE YOU HAD BASOTHO PATIENTS WHO HAVE HAD NON PROFESSIONAL INDUCED ABORTIONS ? (Underline one response)

1. Frequently (once a week or more)
2. Occasionally (once or twice a month)
3. Rarely (once or twice a year or less)
4. Never had them as patients, but have heard of them.
5. Never had them as patients and never heard of them.

50. IN YOUR OPINION, IF A CLIENT REQUESTED IT, A PREGNANCY COULD BE STOPPED BY PERFORMING AN ABORTION UNDER WHICH OF THE FOLLOWING CIRCUMSTANCES? (Underline if you "agree" or "disagree" or are "undecided" about each of the following responses.)

- |       |          |           |  |
|-------|----------|-----------|--|
| Agree | Disagree | Undecided | 1. Abortion should never be performed.   |
| Agree | Disagree | Undecided | 2. If a woman is pregnant because of rape or incest.   |
| Agree | Disagree | Undecided | 3. If a girl is younger than 12 years.   |
| Agree | Disagree | Undecided | 4. If a couple has an inheritable disease which might cause an abnormal child.                         |
| Agree | Disagree | Undecided | 5. If a couple cannot afford another child.  |
| Agree | Disagree | Undecided | 6. If a woman has a serious mental illness which might be made worse by continuing the pregnancy.      |
| Agree | Disagree | Undecided | 7. If a couple feel they have too many children. How many is "too many" children? State number _____   |
| Agree | Disagree | Undecided | 8. If a woman is too old. What age is "too old"? State age _____                                       |
| Agree | Disagree | Undecided | 9. If a woman is unmarried.  |
| Agree | Disagree | Undecided | 10. If a woman has severe medical illness which might cause her to die if she continues the pregnancy. |

Agree	Disagree	Undecided	11. If a woman does not want the pregnancy.
Agree	Disagree	Undecided	12. If a prostitute finds herself pregnant.
Agree	Disagree	Undecided	13. If a couple has been conscientious using a method of contraception, but the wife becomes pregnant anyway (method failure)
Agree	Disagree	Undecided	14. In the woman who chooses abortion as a method of preference for birth control.

THE END: THANK YOU AGAIN FOR YOUR ASSISTANCE AND COOPERATION!



SANTA CRUZ, CALIFORNIA 95064

RETROSPECTIVE SURVEY OF CONTRACEPTIVE ACCEPTORS  
IN LESOTHO, 1972 - 1974

A REPORT TO THE MINISTRY OF HEALTH OF THE GOVERNMENT OF LESOTHO

SUBMITTED BY: THE UNIVERSITY OF CALIFORNIA EXTENSION/SANTA CRUZ  
DIVISION OF INTERNATIONAL PROGRAMS, CONTRACT NO. AFR-799  
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

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RETROSPECTIVE SURVEY OF CONTRACEPTIVE ACCEPTORS  
IN LESOTHO, 1972 - 1974

TABLE OF CONTENTS

	Pages
1. General Purpose and Objectives of the Survey	1 and 2
2. Characteristics of Initial Acceptors	3 and 4
3. Study Design	5 and 6
4. Methodological Considerations	7
5. Descriptive Results	8 to 11
6. Discussion	12
7. Conclusions and Recommendations	12 and 13
 Appendix	
Figure 1 Contraceptive Acceptors by Method for Calendar Year 1972-1974	14
Figure 2 Percent Age Distributions by Method, 1972-1974	15
Figure 3 Cumulative Percent Distribution of Ideal Number of Children of Wife, Husband, and Parents of Young Basotho Couples as Perceived by Respondent	16
Figure 4 Age Group Distribution of Sample Compared to All Acceptors in Percent	17
Tables 1 - 7 Characteristics of All Initial Acceptors	18 to 21
Tables 8 - 43 Descriptive Tables of Sample	22 to 36

Questionnaire

THE RETROSPECTIVE SURVEY OF CONTRACEPTIVE ACCEPTORS IN LESOTHO (RSCAL)  
(1972 - 1974)

GENERAL PURPOSES AND OBJECTIVES

The Retrospective Survey of Contraceptive Acceptors in Lesotho (RSCAL) during 1972 to 1974 was undertaken at the request of Ministry of Health of Lesotho in April of 1975<sup>(a)</sup> to fulfill the following general purposes:

1. Evaluate existing medical record systems.
2. To establish the pattern and extent of contraceptive acceptance and use in Lesotho during the three years 1972 to 1974.
3. To provide information for program planning of health services disseminating contraceptives.
4. To provide baseline data which can be utilized for comparison with future descriptive and/or analytic surveys in Lesotho.

Based on these purposes a series of objectives was generated which, if met, would be sufficient to secure the accomplishment of the aforementioned general purposes. These objectives have been categorized into three areas of information needs which conveniently correspond to the three basic areas of statistics, i.e., description, estimation, and statistical inference or testing. The objectives relating to description can be further categorized to pertain to pre- or post-survey characteristics of acceptors. Hence, the following classification and objectives have resulted.

- I. Preliminary Descriptive Objectives Summary statistics of initial acceptance of contraceptives.
  - A. Collection of acceptance statistics from all health facilities in Lesotho which provided contraceptives during 1972 - 1974.
  - B. Determination of the number of acceptors of the three main methods of contraception in Lesotho for the period 1972 - 1974.
  - C. Comparison of acceptors of the different methods by age, marital status, parity, and number of living children.
- II. Secondary Descriptive Objectives. Compilation of summary statistics on clients' contraceptive and pregnancy experience subsequent to initial acceptance. It was desired to establish:
  - A. Status of clients' knowledge and attitudes toward contraception.

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(a) This project was supported and funded University of California Extension/ Santa Cruz, Maternal and Child Health Project in Lesotho.

- B. Duration of use of method of initial acceptance.
  - C. Extent of use of methods other than that initially chosen.
  - D. Extent of occurrences of planned and unplanned pregnancies.
  - E. Reasons for method changes.
  - F. Specific problems which clients encountered with the three contraceptive methods.
- III. Estimation-Related Objectives. It was deemed important to obtain estimates of:
- A. Number of clients discontinuing contraception.
  - B. Number of method changes per client.
- IV. Inferential Objectives. Assessment of statistically significant results.
- A. An important objective was to evaluate the relative impact of factors such as age, number of living children, education, etc., on clients' continued use of contraception.
  - B. Specifically it was desired to assess the relationship between employment status and continuation of contraception.

## CHARACTERISTICS OF THE INITIAL ACCEPTORS

Prior to the inception of the RSCAL survey a feasibility study was undertaken to ascertain the completeness and scope of existing medical record systems functioning for all the agencies providing family planning services in Lesotho. At this time cooperation was established with government hospitals and clinics, Lesotho Family Planning Association (LFPA), Private Health Association of Lesotho (PHAL) and private physicians. The latter group consisted of six physicians in Maseru who did not have separately filed medical records for contraceptive acceptors and a search through their medical records for a small number of acceptors was deemed not worthwhile to pursue. Two hospitals, Queen Elizabeth II and Maluti Hospital had absolutely no medical records on contraceptive acceptors. For the remaining agencies it was possible to retrieve data for each acceptor only on the following variables: method of contraception, date of acceptance, age, marital status, parity, and number of living children. Since there were only fifty acceptors of methods other than pills, intrauterine contraceptive devices (IUCD), or Depo Provera (Depo), it was decided to exclude this group of acceptors from this report.

The number of acceptors by method and year is contained in Table 1.<sup>1</sup> Maseru LFPA was the most active clinic, accounting for 1705 acceptors, or 40.0 percent of all acceptors in the study period. Inspection of Table 2 yields two observations deserving special mention. Relative to all methods accepted during 1972 to 1974, Depo Provera appears to be increasing in popularity. The percent by year accounted for by Depo climbs from 3.9 to 30.1 during 1972-4. The pill, on the other hand, steadily decreases in popularity from 68.7 percent to 55.0 percent. However, it should be mentioned that most providers of contraceptives in Lesotho have discontinued use of Depo except for selective cases since January of 1975. This decrease in Depo use has been accompanied by an increase in health personnel trained to insert IUCDs and manage patients using oral contraceptives. Figure 1 provides a graphic illustration of the numbers of acceptors during 1972-4 for each method. The number of acceptors of the pill as a method increased by more than 100 percent per year.

The median age of acceptors of all methods during 1972-4 is 30.3 years, and the age distributions for the study period for each method<sup>3</sup> can be compared by examining the percentage polygons of Figure 2. These polygons reflect the fact that pills are used by a younger group of women than IUCDs which are in turn used by a younger group of women than Depo. The median ages of 29.2 for pill users, 30.4 for the IUCD users, and 33.3 for Depo users substantiates this graphical finding.

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1 All subsequent numbered references are to tables in Appendix.

Only 1.2 percent of all acceptors for which data were available on marital status were single and data was unavailable for 8.1 percent of all acceptors.<sup>4</sup> Of all the women, at least 90.7 percent were married, separated, widowed, or divorced, i.e., ever married. This finding is consistent with the high median age for all acceptors.

The median parity for all acceptors is 2.71 births; the frequency, percent and cumulative percent distributions are given in Table 5. (For select groups of number of children, Table 6 shows the frequency and percent distributions by methods.) The median number of living children was 2.64, and the appropriate distributions for this characteristic are given in Table 7.

## STUDY DESIGN

The RSCAL questionnaire was developed from the objectives of the survey and from suggestions elicited from the Ministry of Health, the Lesotho Family Planning Association (LFPA), and from selected references.<sup>(b)</sup> The final questionnaire, after pretesting and revising, resulted from specific questions and interests generated by these groups. Special attention was paid to produce a questionnaire which would contain internationally comparable questions.

The interviewers for the survey were sought to have the following attributes: previous experience in field work, at least a J.C. level education, fluent in both English and Sesotho, and being at least 25 years of age and possessing a family. During the initial phase of the RSCAL survey these women also participated in the extraction of data from medical records of acceptors. The interviewers were all Basotho, and were given two weeks of training which consisted of approximately one week of classroom instruction and another week of supervised field experience. The classroom phase of the training consisted of: a general review of reproduction, contraception, medical and family planning terms, techniques of interviewing, and familiarization with the RSCAL survey and questionnaire. Due to the confidential nature of the survey, interviewers were apprised of the necessity of maintaining the absolute privacy of the client and of imparting this assurance to the client.

In June of 1975, both the questionnaire and the interviewers were scrutinized during a pilot study conducted at Peka and Maseru LFPA clinics of contraceptive acceptors not included in the report. After revisions suggested by the pilot survey were made, the questionnaire was further tested at Maseru LFPA clinic. The interviewers were observed by the field supervisor and often by other interviewers as well. The knowledge gained from this preliminary field experience was shared by the interviewers and project personnel in final classroom discussions prior to the inception of the actual survey.

The target population was well defined with the exception of a group of women who had received methods of contraception from the six private physicians in Maseru dispensing contraceptives and Maluti and Queen Elizabeth II Hospitals which had no medical records of contraceptive acceptors. The estimated number of women unavailable to be sampled for these reasons made up less than one percent of the acceptors in Lesotho during 1972-4.

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(b) A Manual for Surveys of Fertility and Family Planning: Knowledge, Attitudes, and Practice. Demographic Division, The Population Council. New York, 1970.

Bogue, Daniel J., A Model Interview for Fertility Research and Family Planning Evaluation. Number 3. Community and Family Study Centre, University of Chicago, 1970.

Sadik, Nafis, et al. Assessment of Acceptance and Effectiveness of Family Planning Methods, Report of an Expert Group, Asian Population Studies Series, No. 5, United Nations publication.

Cook, Sheila. A Report of an Evaluation of the IPPF Programme in Botswana, 1969-1973.

Concern was expressed by the project staff as to how to contact clients in such a way as to ensure a high rate of response and a high level of confidentiality. As data were collected from clinic medical records during the initial phase of the survey, the staff of the visited facilities were queried regarding proposals for the most effective means of contacting clients for interviews. The consensus was that contact should be established through the clinics since clients were familiar with the clinic staff; and additionally, the clinic field workers could provide aid in locating clients. A non-specific letter was agreed upon as the best method of patient contact since it would maintain the client's pact of confidentiality by requesting the client to come to the clinic for the interview rather than attempting the interview in the client's home. As an incentive to come to the clinic, the client was informed in this letter that her travel expenses to the clinic would be reimbursed. Clients were posted or delivered the contact letter requesting them to come into the clinic on either of two consecutive days. Clients who did not appear for an interview were sent a second letter with different interview dates.

To expedite obtaining a random sample of acceptors by method, all of the facilities in Lesotho disseminating contraceptives were categorized according to the number of clients seen over the study period. It was decided to draw a two stage stratified probability sample for acceptors of each method; and this entailed randomly selecting ten of the facilities from which to sample clients. Since Maseru LFPA was responsible for generating more than one half of all acceptors in Lesotho for the study period it was included in the sampled facilities, other facility selections were random. Five facilities which had seen more than 100 clients were chosen and four facilities which had seen less than 100 clients in that time were chosen.<sup>(c)</sup> The sample sizes by method and facility categorization are presented in Table 8.

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(c) The selected facilities were from the three main geographic regions of the country, i.e., lowlands, foothills and mountain regions.

In any survey, the potential bias introduced by a high non-response rate seriously jeopardizes the validity of the findings, due to the empirical evidence that non-respondents are basically different.<sup>(d)</sup> The obtained sample is believed to be unrepresentative of the target population in these instances, and any estimates or inferences based on the sample are not valid with respect to the original target population. The number of interviews obtained from contraceptive acceptors in Lesotho is 293 of a possible 502, or 58.4 percent, and the non-response rate therefore is 41.9 percent.

It is not at all surprising that a non-response rate of this magnitude was encountered. It is a well-documented fact that when samples of the general population in the United States have been invited for examination at research clinics, non-response rates from 28 to 45 percent have been observed,<sup>(e)</sup> and these studies were undertaken under much more favorable conditions than exist in Lesotho. There are several explanations for the 41.9 percent non-response rate. Most clinics did not have updated address listings for their clients. Another explanation is that the postal system was slower than anticipated; clients often did not receive the posted letter in time to attend the clinic for the interview, and in frequent cases the clients did not receive a letter at all. It was discovered that many of the clients had given vague or incorrect addresses and could not be reached. It was also learned that many acceptors shared dislike for a staff nurse at one of the clinics and refused to come into the clinic for an interview for that reason. Chen and Cobb found that unpleasant clinic experiences predispose subjects to nonparticipation in surveys in the United States. An extensive follow-up of a fifty percent sample of the non-respondents at the Maseru LFPA clinic yielded only twenty-four additional interviews from a possible sixty.

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(d) Hochstim, Joseph R. Evaluation of Three Approaches to Information Collection in an Epidemiologic Study of Cervical Cytology. Report to Human Population Laboratory, California State Department of Public Health, May 1973.

(e) Cobb, S., King, S., and Chen, E. Differences Between Respondents and Nonrespondents in a Morbidity Survey Involving Clinical Examinations. *J. Chron. Dis.* 6: 95, 1957.

Dawber, T. R. and Moore, F. E. Longitudinal Study of Heart Disease in Framingham, Massachusetts: An Interim Report. In *Research in Public Health*, Millbank Memorial Fund Quarterly, New York, 1952.

Tauber, J. Prevalence of Heart Disease and its Possible Relationships to Job Problems in an Adult Population. Thesis, University of Pittsburgh, 1955.

Trussell, R. E. Comparison of Various Methods of Estimation of the Prevalence of Chronic Disease in a Community. The Hunterdon County Study, *Am. J. Publ. Health* 46: 173, 1956.

Chen, E. and Cobb, S. Further Study of the Nonparticipation Problems in a Morbidity Survey Involving Clinical Examination. *J. Chron. Dis.*

On the basis of this twenty-four it can be estimated that if all non-respondents were followed up, one would still expect an overall non-response rate of at least 20 percent. This estimate of course assumes that one half of all non-respondents could be contacted and interviewed, and this assumption may or may not be realistic. It is the feeling of the field staff that non-respondents outside of Maseru would be even more difficult to interview. The follow-up of non-respondents in Maseru was accomplished by staff over a period of one month, and the time constraints imposed on the survey made it impossible to complete an extensive follow-up of all non-respondents.

In view of this unfortunately high non-response rate, there can be no meaningful statistical estimation of inference on the basis of the obtained sample of acceptors. There are statistical methods available for compensating this type of bias only for dichotomous (binary) variables, but some simple calculations have yielded convincing evidence that the non-response rate in this survey renders even these manipulations meaningless. Consequently, although the data for this portion of the survey has been examined and analyzed and will be useful in program planning, those wishing to make projections from this information must do so recognizing the limitations imposed on the validity of the inferences due to the high rate of non-response. For example, it is possible that all non-respondents might have discontinued contraception and therefore felt it unnecessary to be interviewed, thus possibly producing biases in the data.

## DESCRIPTIVE RESULTS

The age distribution of the sample obtained differs very little from the population of all acceptors, Figure 4, and the median ages are similar, i.e., 29.9 years for the sample and 30.3 years for the entire population of acceptors.<sup>9\*</sup> Only 2.7 percent of the sample women had received no education; 66.2 percent had completed Lower or Higher Primary, and 26.9 percent of the women completed their Junior Certificate or Matriculation.<sup>10</sup> Almost all of the women could read Sesotho, 98.0 percent, and a majority of the women, 57.7 percent, could read English as well.<sup>11</sup> A comparison of religious preference between the sample and the population census of 1966 is presented in Table 31. Catholics are slightly under-represented in the sample, and those women affiliated with the Lesotho Evangelical Church and the Anglican Church are over-represented in the sample.<sup>(f)</sup> As can be seen in Table 12, 57.0 percent of the women had been employed at some time since 1972, and most of these women had been employed for more than six months.<sup>13</sup> Table 12 also shows that 80 of the 240 married respondents, 33.3 percent, had professionally employed spouses, and 71 of the women, 29.1 percent, had spouses working in the mines. Not surprisingly, 189 of the women, 78.8 percent, stated that their spouses had been employed for more than six months since 1972.<sup>13</sup> The distributions for the sample by initial method are in Table 32.

More than one half of the women, 55.5 percent, reported that their travel time to the clinic was less than one hour, and 38.9 percent stated that their travel time was between one and four hours.<sup>20</sup> Public transport was the most popular mode of travel to the clinic as 61.1 percent of the women stated, and 33.4 percent of the women reported that they had walked to the clinic.<sup>21</sup>

The distribution of the sample by marital status is presented in Table 14, but it is difficult to compare the sample to the known population of acceptors for this characteristic due to the high non-response rate for the latter, 8.1 percent.<sup>4</sup> The frequency and percent distributions of number of living children by sex are presented in Table 15, and for total number of living children in Table 16. The median number of living children for the sample based on the data in Table 16 is 2.9. One can also learn from this table that a striking proportion of the women sampled, 33.1 percent, had one or more children who had died, and 12.6 percent had two or more children who had died. There was also a significant amount of pregnancy wastage among the women of the sample.<sup>17</sup> The percentage of women reporting one or more abortions or miscarriages was 22.9, but stillbirths were less frequently reported; only 7.8 percent reported having had one or more stillbirths. The concluding tables to complete this summarization of the women's pregnancy histories are in Table 18, showing the distribution of the women for parity where the median parity of the sample is 3.7; and Table 19, which presents the elapsed time in months between the woman's most recent pregnancy termination and her initial clinic visit. A simple calculation based on this data reveals that the median wait from the most recent pregnancy termination to the initial clinic visit is 16.1 months.

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(f) Population Census Report, Volume I, 1966. Government of Lesotho, Bureau of Statistics.

It should be noted that the definition of acceptor used here does not exclude women who have used contraception before 1972. In fact, Table 22 gives frequency and percent distributions for previous contraceptive use; and it can be seen that 15.7 percent of the sample had used pills, IUCDs and/or Depo prior to 1972. It is also worth noting that seven of the thirty-eight women who had previously used pills had obtained them from non-medical sources.<sup>23</sup>

All women who were interviewed were asked the three questions implied in the following: "If a young Basotho couple you know were getting married, how many (boys, girls) do you think the (husband, wife, couple's parents) would like (them) to have?" The question was phrased in terms of a young Basotho couple because it is a well-documented fact that posing the question "If you were getting married for the first time now, how many children would you like to have?" elicits a response bias to state that whatever size family the woman then has is the ideal size -- albeit the woman would perhaps have preferred fewer children.<sup>(g)</sup> Hence, what has been recorded here is the woman's ideal number of children by sex and the perceived ideal number (by sex) wanted by her spouse and parents. The data in Table 24 demonstrate that the women interviewed desire fewer children by sex than they perceive their spouse wanting, which in turn is far fewer than they perceive their parents wanting them to have. The median ideal number of children by sex indicates that the women on the whole prefer an even distribution of boys and girls, whereas the women perceive a preference for male children by their spouse and parents. The ideal number of children for each group was not extrapolated from the data by summing ideal number of boys and girls for each respondent, but was determined by a separate question, and the distributions in Table 25 resulted. One salient feature of this table is that 52.2 percent of women felt that the couple's parents would want them to have as many children as possible. Consequently, the median ideal number of children desired by a couple's parents is undefined, but we can infer from Table 25 that this number is quite large. The median numbers desired by the wife and her spouse are of the same magnitude, i.e., 3.42 children by the wife and perceived 3.78 children by her spouse. Figure 3 graphically demonstrates the differences among these three distributions as perceived by the women interviewed.

To contribute to existing knowledge of motivation for contraception, women were asked whether they had wanted more children when they had first attended the clinic, and also asked whether they desired more children now. Table 26 summarizes the responses of the acceptors to these two questions. These data indicate that a relatively large proportion of the women, 36.5 percent, were motivated to use contraception as a means of limitation of family size rather than as a means of child spacing. Parenthetically, it should be noted and understood for this question that there is a potential source of bias here, the direction of operation of which is uncertain, in asking respondents to recall their feelings at a time perhaps three years before. However, the far right half of Table 26 is consistent with this finding. Here it can be seen that an even greater proportion of the women, 47.8 percent, desire no more children at the time of the interview. This increase is certainly reasonable when account is taken of the number of planned or unplanned pregnancies which occurred among the acceptors during the study period. Undoubtedly, some of the women having pregnancies during this time achieved their desired family size and therefore reported that they wanted no more children at the time of the interview.

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(g) A Manual for Surveys of Fertility and Family Planning, op. cit.

In providing family planning services it is essential to educate acceptors about the correct use and potential side effects of the method of contraception they desire. To evaluate the acceptor's understanding of proper use of their particular method of contraception, they were asked the appropriate question(s) from the following: What is the proper way to take the pill? How often should you receive a Depo injection? and How can you know that the loop is still inside you? In the event that the respondent had used more than one of the three methods during the study period, she was asked the correct use of all the methods she had used. Compilation of all the responses to these questions generated Table 27. The percent of women understanding correct use was over 95 percent for both pill and IUCD users, but only 91.7 percent for those women who had used Depo.

As has been earlier suggested, although nearly one half of the women interviewed were motivated by family limitation, 83.3 percent of the women were aware that child spacing is good for a woman's health, and this percent included 48.5 percent of all acceptors responding who justified their belief by stating that child spacing gives the mother time to recover.<sup>29</sup> Forty of the women, 13.7 percent, replied that it allowed the woman more time for her other children.

Approximately one third of the women in the sample, 32.1 percent, used two or three methods of contraception during the period of study, and the remainder of the women, 62.9 percent, used only the initial method they chose. A more detailed account of this data is presented in Table 34, showing the various combinations of contraceptives used during the study period by the women.

Extreme caution should be exercised in interpreting the data in Tables 35 through 37. These tables merely describe the status at the time of the interview of women who had used any of the three methods of contraception. The percents of users stopping any of the methods given in these three tables cannot be construed as discontinuation rates since the appropriate means of calculating either discontinuation or pregnancy rates for contraceptive methods is agreed to be via life tables, and there was insufficient data for these calculations.

Among the 293 acceptors during the time from January of 1972 to June of 1975, there were thirty-four full-term pregnancies, nine miscarriages/abortions, and nine women pregnant at the time of their interview.<sup>38</sup> Thus, in all, there were 52 pregnancies. This is not to say that there were 52 cases of contraceptive (or method) failure, however. When questioned as to contraceptive use immediately prior to pregnancy, 39 women, or exactly three-quarters of the pregnancies, replied that they had used no contraception.<sup>39</sup> Only five of the 52 stated that contraception was correctly used, and another five women were found to have used contraception incorrectly, e.g., IUCD not in place, missed pills, etc. Exactly half of 52 pregnancies were planned, and "drifters" account for the remaining half of the pregnancies.<sup>40</sup> Drifters are defined as those women who are knowledgeable about contraception in both theory and practice but who do not actively avoid conception or who "drift" into an unplanned pregnancy.

The women who stopped a method of contraception were asked several questions which have been condensed into Tables 41 and 42. For women terminating the pill, it was most common for the woman herself to stop -- 71.0 percent of those women stopping the pill made the decision themselves. The most frequently

stated reasons for terminating pill use were undesirable side effects and desired pregnancy.<sup>42</sup> For the 61 IUCD users who terminated use, the decision was made by the doctor in 13 cases, 36.1 percent; by the woman in 10 cases, 27.8 percent; and expulsions accounted for 10 cases.<sup>41</sup> These 10 expulsions accounted for the bulk of the 16 other reasons, 44.5 percent, shown in Table 42. Service statistics in Lesotho indicate that a large number of multiparous women received Lippes loop sizes B or C when they should have received size D, and this may account for some of the expulsions. Side effects were quoted as the reason for IUCD termination by 12 of the 36 women terminating IUCD use. A total of sixty-one women ceased using Depo during the study period and in an equal number of cases, twenty-nine each, the doctor or woman made the decision to discontinue Depo use.<sup>41</sup> The most frequent reason for stopping Depo can be seen in Table 42 to be side effects, reported by 50.8 percent of those women discontinuing.

The subset of acceptors who ceased any method of contraception during the study period were further queried as to presence of specific side effects with their particular method. Consequently, this procedure determined a constellation of possible side effects per method. Special mention should be made here that there is a possible overlap between or even among the three columns of Table 43. That is to say, a woman terminating both pill and IUCD use during the study period was asked which side effects she had experienced on each method. Therefore, the columns of Table 43 are not necessarily mutually exclusive.

Among the 76 women ceasing to use contraceptive pills during the study period, there were 32 reports of experiencing headaches or dizziness while taking pills. However, one must remember that the side effects reported are only for women terminating contraceptive use, and any percents in Table 43 apply only to those women. Hence, the percents appear exaggerated, and are not representative of occurrence rates of side effects for pill users in general.

Of the women terminating IUCD use, there were three side effects which were each reported by more than one half of those women, i.e., heavy menses, severe pain or cramps, and heavy discharge. However, as before, one must remember that these women are a self-selected group and are quite likely terminating use because of side effects.

An illuminating phenomenon can be harvested by examining the data on women terminating Depo use, which is included in the far right column of Table 43. Specifically, two of the possible side effects during Depo use, no menses or more frequent menses, are obviously mutually exclusive; i.e., occurrence of one side effect precludes occurrence of the other. No women could report having experienced both of these side effects. With this in mind, it is interesting to note that 88.6 percent of the women ceasing use of Depo had menstrual complications -- either no menses or too frequent menses. To reiterate, one must exercise caution interpreting some of these findings. Nevertheless, it is quite striking that of 128 women in the sample given Depo injections during the study period, at least 54 of the women, 42.2 percent experienced menstrual complications.

## DISCUSSION

Family planning sources are only just beginning to be available in Lesotho. Likewise, records and information systems are in embryo. Even so, retrospective data on some characteristics (age, parity, etc.) of almost all acceptors in the country were available. The limitations of the sample negate the possibility for statistical inferences from the data; however, based upon similarity of the sample characteristics of age, parity and educational attainment to these variables of all known acceptors in Lesotho, the Tables accruing to the sample results (Tables 8 - 32) are a useful base upon which to plan continued development of these services in Lesotho.

From Tables 1 - 7 it has been seen that the number of acceptors of the three methods of contraception of interest here has approximately doubled in Lesotho over the three years 1972-1974. Figure 1 can be interpreted to indicate that the numbers of women receiving contraceptive pills are greatest for all years, but that the numbers of women accepting Depo-Provera were increasing the most rapidly as of 1974. The age percent distribution by method of acceptors displayed in Table 3 and in Figure 2 is perhaps the most noteworthy since marital status, parity and number of living children are variables which are high related to age, and can be thought of to be loosely speaking age dependent. The age distributions of acceptors by method are similar to those found in other developing countries in that there are few acceptors 15-19 years of age. The ASFR for that population in Lesotho in 1973 is 2.94 per 10 women.<sup>(h)</sup>

## CONCLUSIONS AND RECOMMENDATIONS

Lesotho is a very mountainous country where much of the mail service relies on the district post offices. The response rate observed here is as high as could be expected considering the circumstances existing in the country. Several reasons for the high non-response rate encountered here have been suggested, but there is one other possible reason to consider. Contraceptive acceptors in Lesotho may be reluctant to come into a clinic for a requested appointment. There is no way to foresee such a circumstance as this, but future studies of this nature should be of a prospective design. In this way clients can be routinely examined or interviewed every three or four months. This procedure is a necessity if any data is to be collected on discontinuation, pregnancy or complication rates since these rates are calculated using the life table methods.

It should be noted that the government policy in Lesotho is not, at this time, aimed towards population reduction nor any demographic impact on the society but towards improving the level of health of those who wish to use family planning as one means of achieving an improved quality of life within their families. This document represents basic research in Lesotho on the experience of women exercising this alternative.

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(h) Monyake, A. M. Report on the National Population Symposium, Maseru, Lesotho, 1974.

FIGURE 1 CONTRACEPTIVE ACCEPTORS BY METHOD FOR  
CALENDAR YEARS 1972-4

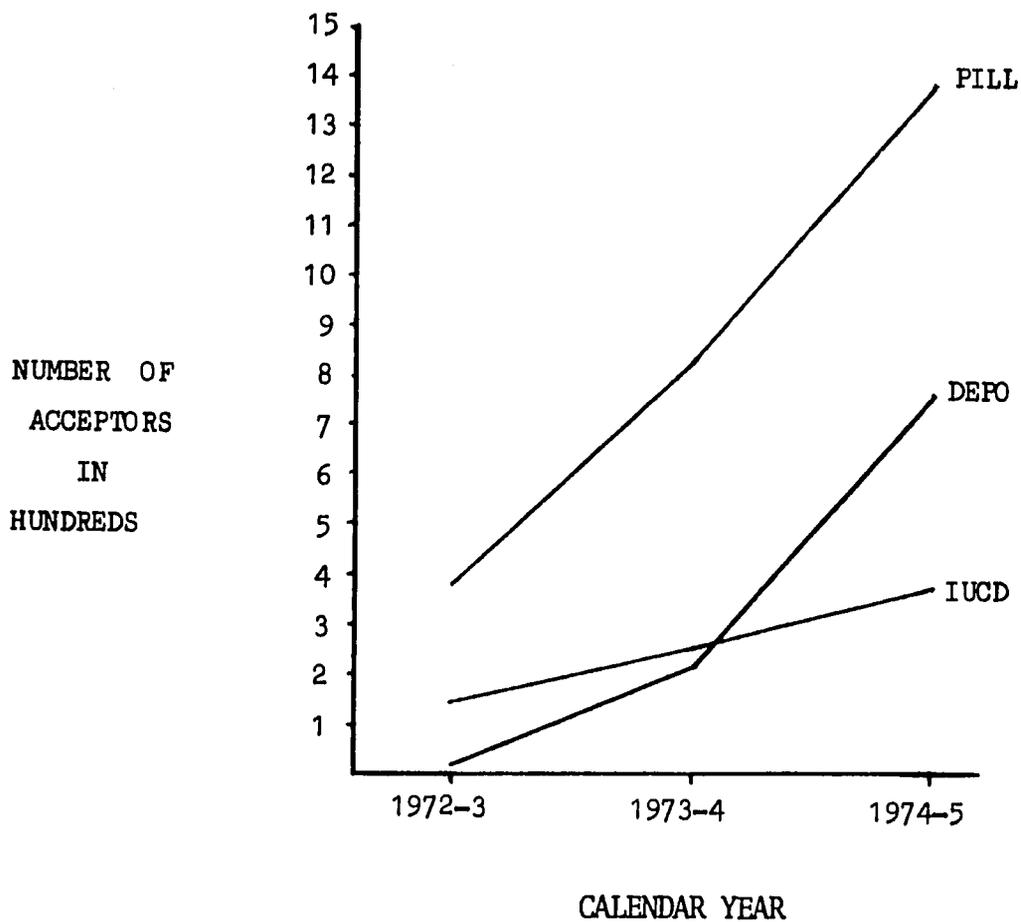


FIGURE 2: PERCENT AGE DISTRIBUTIONS BY METHOD, 1972-4

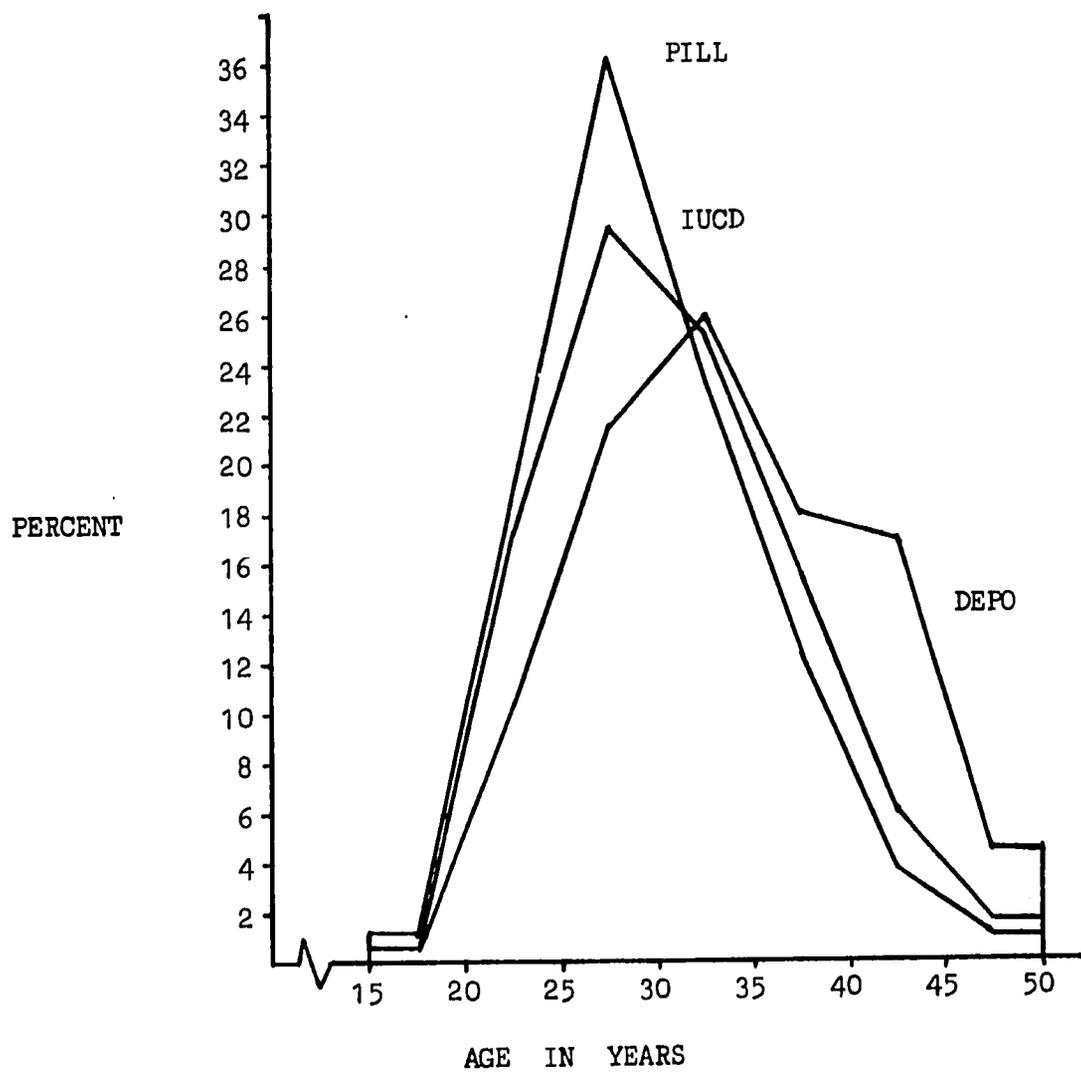
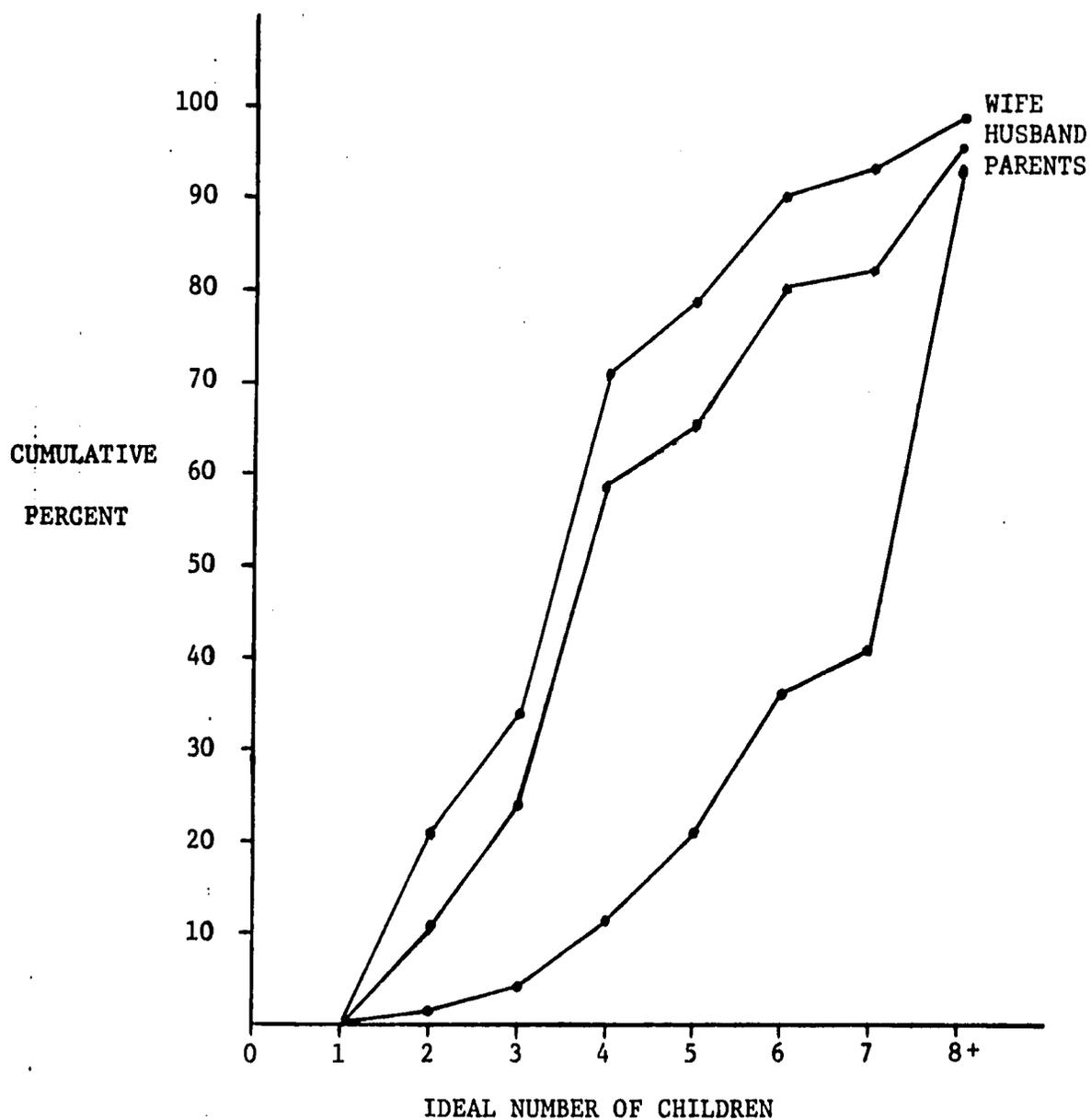


FIGURE 3 CUMULATIVE PERCENT DISTRIBUTION OF IDEAL NUMBER OF CHILDREN OF WIFE, HUSBAND, AND PARENTS OF YOUNG BASOTHO COUPLES AS PERCEIVED BY RESPONDENT



8+ INCLUDES "AS MANY AS POSSIBLE"; GRAPHS DO NOT REACH 100% BECAUSE "DON'T KNOW (AS MANY AS GOD GIVES)" ARE EXCLUDED



TABLE I

CONTRACEPTIVE ACCEPTORS IN LESOTHO BY METHOD, FACILITY AND YEAR

FACILITY	1972				1973				1974				1972-4 ALL METHODS
	PILL	DP	IUCD	ALL	PILL	DP	IUCD	ALL	PILL	DP	IUCD	ALL	
LFDS <sup>a</sup>	1	0	0	1	0	0	0	0	10	10	12	32	33
TEBELLONG HOSP.	2	0	0	2	16	0	0	16	8	2	2	12	30
Q.E.II HOSP.	0	0	0	0	0	0	1	1	0	0	17	17	18
THABA-BOSIU LFPA	0	0	0	0	0	0	0	0	4	11	0	15	15
ST. JAMES HOSP.	0	0	0	0	2	5	0	7	3	5	0	8	15
TEYATEYANENG LFPA	11	0	6	17	33	2	8	43	142	60	6	208	268
PEKA LFPA	0	0	0	0	8	0	5	13	28	21	3	52	65
LERIBE LFPA	34	0	4	38	145	11	45	201	141	30	60	251	470
MOHALE'S HOEK LFPA	0	0	0	0	103	16	5	124	99	36	10	145	269
OACHA'S NEK LFPA	0	0	0	0	0	0	0	0	148	63	1	212	212
MOKHOTLONG LFPA	0	0	0	0	1	0	0	1	70	28	0	98	99
TS'AKHOLO HEALTH CENTRE	0	0	0	0	18	23	10	51	5	8	13	26	77
BUTHA-BUTHE LFPA	0	0	0	0	70	7	27	104	109	42	41	192	296
QUTHING <sup>b</sup>	0	0	0	0	27	10	7	44	156	70	17	243	287
SCOTT HOSPITAL	2	0	0	2	6	2	0	8	36	30	9	75	85
MORIJA LFPA	0	0	0	0	0	0	0	0	41	63	10	114	114
MAFETENG HOSP.	1	0	0	1	0	0	0	0	17	13	19	49	50
MAFETENG LFPA	103	2	2	107	84	1	5	90	51	16	10	77	274
MASERU LFPA	235	20	136	391	323	137	137	597	320	252	145	717	1705
	384	22	148	554	836	214	250	1300	1388	760	375	2523	4377

a LESOTHO FLYING DOCTOR SERVICE

b QUTHING INCLUDES THREE OUTLYING VILLAGES

TABLE 2

FREQUENCY AND PERCENT DISTRIBUTIONS  
OF ACCEPTORS BY METHOD BY YEAR

YEAR	1972		1973		1974		1972-4	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
Pill	384	68.7	836	64.3	1388	55.0	2608	59.6
Depo	22	3.9	214	16.5	760	30.1	996	22.6
IUCD	148	26.4	250	19.2	375	14.9	773	17.7
TOTAL	554	100.0	1300	100.0	2523	100.0	4377	100.0

TABLE 3

FREQUENCY AND PERCENT DISTRIBUTIONS FOR AGE OF THREE  
METHODS OF CONTRACEPTION FOR 1972-4

METHOD	PILL		DEPO		IUCD		ALL METHODS	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
AGE								
15-19	17	.6	7	.7	9	1.2	33	.8
20-24	492	18.8	106	10.5	134	17.3	732	16.6
25-29	944	36.1	218	21.7	229	29.4	1391	31.6
30-34	614	23.6	262	26.0	196	25.3	1072	24.4
35-39	328	12.5	181	18.0	119	15.4	628	14.3
40-44	98	3.7	172	17.2	47	6.1	318	7.2
45-49	26	1.0	44	4.4	13	1.7	83	1.9
No Response	97	3.7	15	1.5	28	3.6	140	3.2
TOTAL	2616	100.0	1006	100.0	775	100.0	4397	100.0

TABLE 4

FREQUENCY AND PERCENT DISTRIBUTIONS BY MARITAL STATUS OF THREE  
METHODS OF CONTRACEPTION FOR 1972-4

METHOD STATUS	PILL		DEPO		IUCD		ALL METHODS	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
Ever Married	2365	90.4	917	91.1	706	91.1	3988	90.7
Single	32	1.2	9	.9	10	1.3	51	1.2
No Response	219	8.4	80	8.0	59	7.6	358	8.1
<b>TOTAL</b>	<b>2616</b>	<b>100.0</b>	<b>1006</b>	<b>100.0</b>	<b>775</b>	<b>100.0</b>	<b>4397</b>	<b>100.0</b>

TABLE 5

## PARITY

FREQUENCY AND PERCENT DISTRIBUTIONS FOR  
ALL ACCEPTORS 1972-4<sup>5a</sup>

NUMBER OF PREGNANCIES	FREQUENCY	PERCENT	CUMULATIVE PERCENT
0	61	1.4	1.4
1	650	14.8	16.2
2	872	19.9	36.1
3	846	19.3	55.4
4	712	16.3	71.7
5	521	11.9	83.6
6	297	6.8	90.4
7	176	4.0	94.4
8	110	2.5	96.9
9	60	1.4	98.3
10	31	.7	99.0
11	21	.5	99.5
12 +	20	.5	100.0
<b>TOTAL</b>	<b>4377</b>	<b>100.0</b>	

5a 20 records without parity excluded from these calculations.

TABLE 6

FREQUENCY AND PERCENT DISTRIBUTIONS  
FOR NUMBER OF CHILDREN BY METHOD

METHOD No. of Children	PILL		DEPO		IUCD		ALL METHODS	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
0-2	1092	41.8	222	22.0	278	35.9	1592	36.2
3-5	1204	46.0	507	50.4	373	48.1	2084	47.4
6-8	215	8.2	232	23.1	90	11.6	537	12.2
9 +	13	.5	39	3.9	8	1.0	60	1.4
No Resp.	92	3.5	6	.6	26	3.4	124	2.8
<b>TOTAL</b>	<b>2616</b>	<b>100.0</b>	<b>1006</b>	<b>100.0</b>	<b>775</b>	<b>100.0</b>	<b>4397</b>	<b>100.0</b>

TABLE 7

FREQUENCY, PERCENT AND CUMULATIVE PERCENT DISTRIBUTIONS OF  
NUMBER OF LIVING CHILDREN FOR ALL ACCEPTORS 1972-4 <sup>6a</sup>

NUMBER OF CHILDREN	FREQUENCY	PERCENT	CUMULATIVE PERCENT
0	88	2.1	2.1
1	650	15.2	17.3
2	854	20.0	37.3
3	840	19.7	57.0
4	743	17.4	74.4
5	501	11.7	86.1
6	289	6.8	92.9
7	149	3.5	96.4
8	99	2.3	98.7
9	35	.8	99.5
10	15	.3	99.8
11	5	.1	99.9
12+	5	.1	100.0
<b>TOTAL</b>	<b>4273</b>	<b>100.0</b>	

6a 124 records with no data excluded from this table.

TABLE 8

PROPOSED SAMPLE DISTRIBUTION OF ACCEPTORS  
BY METHOD AND TYPE OF CLINIC

CLINIC \ METHOD	PILL	DEPO	IUCD	ALL
MASERU	60	67	88	215
LARGE CLINIC	108	77	60	245
SMALL CLINIC	12	20	10	42
TOTAL	180	164	158	502

FREQUENCY AND PERCENT DISTRIBUTIONS OF SAMPLE  
BY AGE COMPARED TO PERCENT ALL ACCEPTORS BY AGE

AGE	SAMPLE FREQUENCY	SAMPLE PERCENT	ALL ACCEPTORS PERCENT
15 - 19	5	1.7	0.8
20 - 24	55	18.8	16.6
25 - 29	89	30.4	31.6
30 - 34	74	25.3	24.4
35 - 39	39	13.3	14.3
40 - 44	20	6.8	7.2
45 - 49	6	2.0	1.9
50 - 54	2	0.7	0
DK/NR	3	1.0	3.2
TOTAL	293	100.0	100.0

Median Age Sample = 29.9  
Median Age All Acceptors = 30.3

TABLE 10

EDUCATIONAL STATUS OF THE SAMPLE

EDUCATION COMPLETED	FREQUENCY	PERCENT	CUMULATIVE PERCENT
NONE	8	2.7	2.7
LOWER PRIMARY	101	34.5	37.2
HIGHER PRIMARY	93	31.7	68.9
JUNIOR CERTIFICATE	64	21.8	90.8
MATRICULATION	15	5.1	95.9
HIGHER EDUCATION	1	0.3	96.2
OTHER	11	3.8	100.0
TOTAL	293	100.0	

LITERACY LEVEL

		FREQUENCY	PERCENT
READ SESOTHO?	YES	287	98.0
	NO	<u>6</u>	<u>2.0</u>
		293	100.0
READ ENGLISH	YES	169	57.7
	NO	<u>124</u>	<u>42.3</u>
		293	100.0

TABLE 12

TYPE OF EMPLOYMENT SINCE 1972

TYPE OF EMPLOYMENT	RESPONDENT		SPOUSE	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT
NONE	123	42.0	10	4.2
TRADITIONAL	70	23.9	12	5.0
NON-TRADITIONAL	48	16.4	63	26.2
PROFESSIONAL	49	16.7	80	33.3
MINES	0	0.0	71	29.6
FARMER	0	0.0	3	1.3
DON'T KNOW	3	1.0	1	.4
<b>TOTAL</b>	<b>293</b>	<b>100.0</b>	<b>240</b>	<b>100.0</b>

TABLE 13

LENGTH OF EMPLOYMENT

DURATION OF EMPLOYMENT	RESPONDENT		SPOUSE	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT
MORE THAN 6 MOS.	154	90.6	189	78.8
LESS THAN 6 MOS.	11	6.5	10	4.2
DON'T KNOW/NO RESPONSE	5	2.9	41	17.0
<b>TOTAL</b>	<b>170</b>	<b>100.0</b>	<b>240</b>	<b>100.0</b>

TABLE 14

## MARITAL STATUS OF RESPONDENT

STATUS	FREQUENCY	PERCENT
SINGLE	14	4.8
DIVORCED, WIDOWED SEPARATED	39	13.3
MARRIED	240	81.9
TOTAL	293	100.0

TABLE 15

## NUMBER OF LIVING CHILDREN BY SEX

NUMBER	BOYS			GIRLS		
	FREQUENCY	PERCENT	CUMULATIVE PERCENT	FREQUENCY	PERCENT	CUMULATIVE PERCENT
0	47	16.0	16.0	48	16.4	16.4
1	84	28.7	44.7	91	31.1	47.4
2	69	23.5	68.3	68	23.2	70.6
3	56	19.1	87.4	46	15.7	86.3
4	18	6.1	93.5	26	8.9	95.2
5	12	4.1	97.6	9	3.1	98.3
6	4	1.4	99.0	4	1.4	99.7
7	2	0.7	99.7	0	0.0	99.7
DON'T KNOW NO RESPONSE	1	0.3	100.0	1	.3	100.0
TOTAL	293	100.0		293	100.0	

TABLE 16

NUMBER OF CHILDREN

NUMBER	LIVING			DEAD	
	FREQUENCY	PERCENT	CUMULATIVE PERCENT	FREQUENCY	PERCENT
0	2	0.7	0.7	195	66.6
1	29	9.9	10.6	60	20.5
2	63	21.5	32.1	26	8.9
3	56	19.1	51.2	6	2.0
4	50	17.1	68.3	4	1.4
5	42	14.3	82.6	0	0.0
6	15	5.1	87.7	0	0.0
7	15	5.1	92.1	1	0.3
8	11	3.8	96.6	0	0.0
9	4	1.4	98.0	0	0.0
10	4	1.4	99.3	0	0.0
11	1	0.3	99.7	0	0.0
99	1	0.3	100.0	1	0.3
<b>TOTAL</b>	<b>293</b>			<b>293</b>	<b>100.0</b>

TABLE 17  
MISCARRIAGES OR ABORTIONS

NUMBER	MISCARRIAGES/ABORTIONS			STILLBIRTHS		
	FREQUENCY	PERCENT	CUMULATIVE PERCENT	FREQUENCY	PERCENT	CUMULATIVE PERCENT
0	226	77.1	77.1	270	92.2	92.2
1	43	14.7	91.8	18	6.1	98.3
2	16	5.5	97.3	3	1.0	99.3
3	2	0.7	98.0	1	.3	99.7
4	4	1.4	99.3	0	0.0	99.7
5	1	0.3	99.7	0	0.0	99.7
DON'T KNOW NO RESPONSE	1	0.3	100.0	1	.3	100.0
<b>TOTAL</b>	<b>293</b>	<b>100.0</b>		<b>293</b>	<b>100.0</b>	

NUMBER OF TIMES PREGNANT

PARITY	FREQUENCY	PERCENT	CUMULATIVE PERCENT
0	1	0.3	0.3
1	19	6.5	6.8
2	46	15.7	22.5
3	40	13.7	36.2
4	55	18.8	54.9
5	35	11.9	66.9
6	33	11.3	78.2
7	23	7.8	86.0
8	15	5.1	91.1
9	11	3.8	94.9
10	7	2.4	97.3
11	2	0.7	98.0
12+	5	1.6	99.7
DON'T KNOW/ NO RESPONSE	1	0.3	100.0
TOTAL	293	100.0	

TABLE 19

INTERVAL BETWEEN LAST PREGNANCY AND INITIAL CLINIC VISIT

INTERVAL IN MONTHS	FREQUENCY	PERCENT	CUMULATIVE PERCENT
0-6	61	20.8	20.8
7-12	57	19.5	40.3
13-18	42	14.3	54.6
19-24	29	9.9	64.5
25-30	32	10.9	75.4
31-36	16	5.5	80.9
37-42	10	3.4	84.3
43-48	46	15.7	100.0
49+			
TOTAL	293	100.0	

TABLE 20

CLIENT'S TRAVEL TIME TO CLINIC

TIME	FREQUENCY	PERCENT
LESS THAN 1 HR.	162	55.3
1 - 4 HRS.	114	38.9
OVER 4 HRS.	13	4.4
DON'T KNOW/ NO RESPONSE	4	1.3
TOTAL	293	100.0

TABLE 21

MODE OF TRAVEL TO CLINIC

MODE	FREQUENCY	PERCENT
WALKING	98	33.4
HORSE	2	0.7
PUBLIC TRANSPORT	179	61.1
PRIVATE CAR	10	3.4
DON'T KNOW/ NO RESPONSE	4	1.4
TOTAL	293	100.0

TABLE 22

PREVIOUS CONTRACEPTIVE USE

TYPE	FREQUENCY	PERCENT
NONE	241	82.3
PILLS/DEPO/IUCD	46	15.7
OTHER	5	1.7
NO RESPONSE	1	.3
TOTAL	293	100.0

SOURCE OF CONTRACEPTIVES

SOURCE	FREQUENCY	PERCENT
PILL FROM DR./CLINIC	31	10.6
PILL FROM NON-MED.	7	2.4
N/A	253	86.3
DON'T KNOW/NO RESPONSE	2	0.6
TOTAL	293	100.0

TABLE 24

CUMULATIVE PERCENT DISTRIBUTIONS OF IDEAL NUMBER OF CHILDREN BY SEX  
WANTED BY WIFE, HUSBAND AND PARENTS OF A YOUNG BASOTHO COUPLE AS  
PRESCRIBED BY RESPONDENT

NUMBER OF CHILDREN	WIFE		HUSBAND		COUPLE'S PARENTS	
	BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS
0	0.0	0.0	0.0	1.0	0.0	0.0
1	27.3	31.4	13.0	25.9	2.7	5.8
2	78.8	74.4	58.0	68.6	15.0	26.6
3	91.1	89.4	75.4	82.9	33.4	46.4
4	94.9	93.9	84.0	87.4	49.8	60.8
5	97.3	95.6	88.4	90.1	75.1	81.2
6	97.9	96.9	91.5	92.5	85.0	87.0
7	97.6	96.9	92.2	92.5	85.7	87.4
AS MANY AS POSSIBLE	98.0	98.0	95.2	95.6	93.9	93.9
DON'T KNOW **	100.0	100.0	100.0	100.0	100.0	100.0
MEDIAN NUMBER	1.44	1.43	1.82	1.56	4.01	3.25

\*\* DON'T KNOW CATEGORY ALSO INCLUDES RESPONDENTS ANSWERING  
"AS MANY AS GOD GIVES."

TABLE 25

PERCENT DISTRIBUTION AND CUMULATIVE PERCENT DISTRIBUTION  
IDEAL NUMBER OF CHILDREN WANTED BY YOUNG BASOTHO COUPLE  
AND THEIR PARENTS.

	WIFE			HUSBAND			PARENTS		
	FREQ.	%	CUM. %	FREQ.	%	CUM. %	FREQ.	%	CUM. %
1	0	0.0	0.0	1	.3	.3	0	0.0	0.0
2	63	21.5	21.5	31	10.6	10.9	5	1.7	1.7
3	36	12.3	33.8	35	11.9	22.9	7	2.4	4.1
4	112	38.2	72.0	102	34.8	57.7	24	8.2	12.3
5	20	6.8	78.8	23	7.8	65.5	28	9.6	21.8
6	37	12.6	91.5	44	15.0	80.5	43	14.7	36.5
7+	3	1.0	92.5	4	1.4	81.9	16	5.5	42.2
AS MANY AS POSSIBLE	16	5.5	98.0	39	13.3	95.2	153	52.2	94.2
DON'T KNOW/ AS MANY AS GOD GIVES	6	2.0	100.0	14	4.8	100.0	17	5.8	100.0
TOTAL	293	100.0		293	100.0		293	100.0	
MEDIAN			3.42			3.78			

TABLE 26

DESIRE FOR MORE CHILDREN

RESPONSE	AT INITIAL CLINIC VISIT?		AT TIME OF INTERVIEW?	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT
YES	180	61.4	143	48.8
NO	107	36.5	140	47.8
DON'T KNOW	6	2.1	10	3.4
TOTAL	293	100.0	293	100.0

TABLE 27

KNOWLEDGE OF CORRECT USE OF  
METHODS OF CONTRACEPTION USED DURING STUDY PERIOD

METHOD	PILL		IUCD		DEPO	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT	FREQUENCY	PERCENT
KNOWS CORRECT USE	152	96.2	90	95.7	121	91.7
DOES NOT KNOW CORRECT USE	6	3.8	4	4.3	11	8.3
	158	100.0	94	100.0	132	100.0

TABLE 28

WOMEN'S BELIEF IN POTENTIAL EFFECTS OF THEIR  
PARTICULAR METHOD OF CONTRACEPTION

METHOD OF RESPONDENT	PILL % YES	IUCD % YES	DEPO % YES	ALL ACCEPTORS % YES
COULD YOUR METHOD PERMANENTLY AFFECT YOUR HEALTH?	13.9	19.1	19.5	17.1
COULD YOUR METHOD CAUSE STERILITY?	10.1	5.3	27.3	14.7
	n = 158	n = 94	n = 128	n = 380

TABLE 29

WHAT IS THE EFFECT OF CHILD SPACING?

EFFECT	FREQUENCY	PERCENT
IMPROVES MOTHERS' HEALTH	102	34.8
ALLOWS WOMAN TO RECOVER	142	48.5
ALLOWS TIME FOR OTHER CHILDREN	40	13.7
UNRELATED TO MOTHERS' HEALTH	5	1.7
BAD FOR MOTHER'S HEALTH	4	1.4

HUSBAND'S KNOWLEDGE OF SPOUSE'S USE OF CONTRACEPTION

RESPONSE	FREQUENCY	PERCENT
YES	179	61.1
NO	79	27.0
NOT APPLICABLE	31	10.6
DON'T KNOW/ NO RESPONSE	4	1.3
TOTAL	293	100.0

TABLE 31

RELIGIOUS PREFERENCE

CHURCH ATTENDED	FREQUENCY	PERCENT	1966 CENSUS PERCENT
CATHOLIC	111	37.9	41.2
L.E.C.*	93	31.7	25.0
ANGLICAN	48	16.4	11.0
OTHER	35	11.9	22.8
	6	2.1	
TOTAL	293	100.0	100.0

LESOTHO EVANGELICAL CHURCH

TABLE 32

INITIAL METHOD RECEIVED

METHOD	FREQUENCY	PERCENT
PILL	109	37.2
DEPO	106	36.2
IUCD	77	26.3
OTHER	1	0.3
TOTAL	293	100.0

NUMBER OF METHODS USED PER ACCEPTOR DURING STUDY PERIOD

NUMBER OF METHODS	FREQUENCY	PERCENT
1	199	67.9
2	88	30.0
3	6	2.1
TOTAL	293	100.0

TABLE 34

ALL METHODS USED DURING STUDY PERIOD

METHOD(S)	FREQUENCY	PERCENT
PILL	77	26.3
DEPO-PROVERA	70	23.9
IUCD	52	17.7
PILL, DEPO	44	15.0
PILL, IUCD	28	9.6
DEPO, IUCD	9	3.1
DEPO, TUBAL STERILIZATION	2	0.7
DEPO, OTHER	2	.7
PILL, OTHER	3	1.0
PILL, IUCD, DEPO	5	1.7
PILL, OTHER TUBAL	1	.3
TOTAL	293	100.0

TABLE 35

CONTINUATION OF PILL USE

STATUS OF ACCEPTOR	FREQUENCY	PERCENT
USED PILL BUT STOPPED	74	46.8
STILL USING PILL	82	51.9
NO RESPONSE	2	1.3
TOTAL	158	100.0

TABLE 36

CONTINUATION OF CONTRACEPTION WITH IUCD

OUTCOME	FREQUENCY	PERCENT
IUCD STILL IN PLACE	57	60.6
FELL OUT	16	17.0
REMOVED BY MEDICAL PERSON	18	19.2
DON'T KNOW	3	3.2
TOTAL	94	100.0

TABLE 37

CONTINUATION OF DEPO INJECTION

STATUS	FREQUENCY	PERCENT
STOPPED	61	47.7
STILL USING	67	52.3
TOTAL	128	100.0

TABLE 38

PLANNED AND UNPLANNED PREGNANCIES AMONG ACCEPTORS  
SUBSEQUENT TO BEGINNING CONTRACEPTIVE USE.

OUTCOME	FREQUENCY	PERCENT
FULL-TERM PREGNANCIES	34	65.4
MISCARRIAGES/ABORTIONS	9	17.3
PREGNANT AT INTERVIEW	9	17.3
TOTAL	52	100.0

TABLE 39

ACCEPTORS USE OF CONTRACEPTION IMMEDIATELY PRIOR TO PREGNANCY

USE	FREQUENCY	PERCENT
NO USE OF CONTRACEPTION	39	75.0
USED CORRECTLY	5	9.6
USED INCORRECTLY	5	9.6
UNCERTAIN	3	5.8
<b>TOTAL</b>	<b>52</b>	<b>100.0</b>

TABLE 40

PLANNED VERSUS UNPLANNED PREGNANCY

TYPE	FREQUENCY	PERCENT
PLANNED	26	50.0
UNPLANNED	24	46.2
DON'T KNOW	2	3.8
<b>TOTAL</b>	<b>52</b>	<b>100.0</b>

TABLE 41

DECISION TO STOP METHOD OF CONTRACEPTION BY METHOD

METHOD	PILL		IUCD		DEPO		ALL	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
DOCTOR	16	21.1	13	36.1	29	47.5	58	33.5
WOMAN	54	71.0	10	27.8	29	47.5	93	53.8
OTHER*	0	0	10*	27.8	2	3.4	12	6.9
DON'T KNOW	6	7.9	3	8.3	1	1.6	10	5.8
<b>TOTAL</b>	<b>76</b>	<b>100.0</b>	<b>36</b>	<b>100.0</b>	<b>61</b>	<b>100.0</b>	<b>173</b>	<b>100.0</b>

\* FOR IUCD, EXPULSIONS

REASONS FOR TERMINATING CONTRACEPTION BY METHOD

METHOD REASON	PILL		IUCD		DEPO		ALL	
	FREQ.	PERCENT	FREQ.	PERCENT	FREQ.	PERCENT	FREQ.	PERCENT
SIDE EFFECTS	24	31.6	12	33.3	31	50.8	67	38.7
HUSBAND WANTED	5	6.6	0	0.0	1	1.6	6	3.5
DESIRED PREGNANCY	23	30.3	5	13.9	2	3.4	30	17.3
OTHER	22	28.9	16	44.5	26	42.6	64	37.0
DON'T KNOW	2	2.6	4	8.3	1	1.6	6	3.5
TOTAL	76	100.0	36	100.0	61	100.0	173	100.0

TABLE 43

PERCENT OF WOMEN STOPPING METHOD REPORTING VARIOUS SIDE EFFECTS

SIDE EFFECT	PILL		IUCD		DEPO	
	METHOD	%	METHOD	%	METHOD	%
NAUSEA	21/76	27.6	NA		NA	
SPOTTING	24/76	31.6	NA		NA	
HEADACHE, DIZZINESS	32/76	42.1	NA		NA	
WEIGHT GAIN	17/76	22.4	NA		25/61	41.0
SKIN OR HAIR CHANGES	17/76	22.4	NA		NA	
PREGNANCY <sup>1</sup>	12/76	15.8	2/36	5.6	4/61	6.5
HEAVY MENSES	NA		20/36	55.6	NA	
BLEEDING BETWEEN MENSES	NA		12/36	33.3	17/61	27.9
SEVERE PAIN CRAMPS	NA		19/36	52.8	NA	
HEAVY DISCHARGE	NA		19/36	52.8	NA	
NO MENSES	NA		NA		32/61	52.5
MORE FREQUENT MENSES	NA		NA		22/61	36.1
	N=76		N=36		N=61	

NA SIGNIFIES INFORMATION NOT AVAILABLE

1 PLANNED OR UNPLANNED

ID NO :

District				
Facility				
Agency				
Ref. No.				

Place of interview : \_\_\_\_\_

Date of interview : \_\_\_\_\_

Time started : \_\_\_\_\_

Is your name \_\_\_\_\_ ?

1. How long does it take you to get from your house to this clinic?

Ho u nkile nako e kae ha tloha lapeng ho tla fihla moo cliniki?

Less 1 hr	1
1 - 4 hrs	2
Over 4 hrs	3

2. What mode of travel do you use ?

U tlile kang ?

Walking	1
Horse	2
Public transport	3

Private car	4
Other (specify)	5

\_\_\_\_\_

3. Have you ever attended school ?

Na u kile oa kena sekolo ?

YES 1

NO 2

Go to b and c

a) What was the highest level that you completed ?

U tsoile u balang ?

Stand. 1 - 4	1	Go to b and c
Stand. 5 - 6	2	
Form 1 - 3	3	Go to Q. No 4
Form 4 - 5	4	
Higher Education	5	
Other:(specify):	6	

b) Can you read a newspaper in Sesotho ?

Na u ka bala pampiri ka Sesotho ?

YES 1

NO 2

c) Can you read a newspaper in English ?

Na u ka bala pampiri ka Sekhooa ?

YES 1

NO 2

4. Have you had any regular paid job or business since the beginning of 1972 ?

Na u kile oa sebetsa mosobetsi o tlisang chelete ho tloha ka 1972 ?

YES  1

NO  2

Go to Q. No 5

a) What kind of work did you do ?  
Mosebetsi 'ngoo ? \_\_\_\_\_

b) For how long have you worked ?  
Nako e kae ?  
More than 6 months  1  
Less than 6 months  2

5. Are you now or have you been married in the past 3½ years ?

Ka lilemo tse th. o le halofo tse fetileng na u no so ntso u nyetsoe ?

YES  1

NO  2

Go to Q. No 7

a) Are you now :  
Le ntse le phela 'moho ?  
Married  1  
Widowed  2  
Divorced  3  
Separated  4  
Go to Q. No 7

6. Has your husband had a regular paid job or business since the beginning of 1972 ?

Ntate o hirile kapa oa 'itsobetsa ?

YES  1

NO  2

Go to Q. No 7

a) What kind of work did he do ?  
Ke mosobetsi ofe ? \_\_\_\_\_

b) Eka ba nako ekac ?  
More than 6 months  1  
Less than 6 months  2

7. Have you been pregnant ?

Na u kile oa ithoala ?

YES  1

NO  2

Go to Q. No 8

Go to Q. No 8

a) How many children born to you, do you have who are alive now ?

Bana bao u ba tsoetseng ba phelang ba bakae ?

NO. LIVING BOYS: + \_\_\_\_\_  
NO. LIVING GIRLS: + \_\_\_\_\_

b) Have you had any children born alive who are now dead ?

Na u na le ba kileng ba hlaha ba phela feela ba fota leamorao ?

YES  1                      NO  2

Go to c

How many children born alive are now dead ?

Ba bakae ?

NO. DEAD: + \_\_\_\_\_

c) Did any of your pregnancies result in miscarriage or abortion ?

Na u kile oa ba le limpa tse qhalehang kapa ea senyeheloa ?

YES  1                      NO  2

Go to d

How many abortions or miscarriages were there ?

Ho qhalehile kapa ho senyehile tse kae ?

NO. MIS/ABORT: + \_\_\_\_\_

d) Did any of your pregnancies result in stillbirths ?

Na u na le limpa tse kileng tsa hlaha li khthatse ?

YES  1                      NO  2

Go to e

How many pregnancies resulted in stillbirths ?

Li kae ?

NO. STILLBIRTHS: + \_\_\_\_\_

TOTAL A - D: \_\_\_\_\_

e) Did any pregnancies result in multiple live births ?

Na u kile oa ithoala mafahla a hlahileng a phela ?

YES  1

NO  2

Go to f

How many children were born from multiple live births ?

Ke bana ba bakao ba mafahla ba hlahileng ba phela ?

NO. CHILDREN: \_\_\_\_\_

How many pregnancies resulted in multiple live births ?

Ke limpa tse kae tsa mafahla a ileng a hlaha a phela ?

NO. PREGNANCIES:- \_\_\_\_\_

(INTERVIEWER: Subtract no. of pregnancies from no. of children)

\_\_\_\_\_

TOTAL NO. OF PREGNANCIES : \_\_\_\_\_

8. Did you ever use a method of contraception before you came to this clinic on \_\_\_\_\_?

(date)

Na u kile oa sebelisa letho le sireletsang pele u tla moo ?

YES  1

NO  2

Go to Q. No 9

a) What methods did you use before you came to this clinic ?

U ne u sebelisang pele u tla cliniking moo ?

Pills  1  
DEPO  2  
IUCD  3

Others: (specify)  4

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b) Before you came to this clinic, for how many months did you use the :

E ne kaba khoeli tse kae, pele u tla cliniking moo ?

Pills - No. months \_\_\_\_\_

IUCD - No. months \_\_\_\_\_

Depo - No. months \_\_\_\_\_

c) Where did you get your (pills, IUCD, Depo) before you came to this clinic ?

U ne u lifumane kae pele u tla noo ?

Pills: \_\_\_\_\_

IUCD: \_\_\_\_\_

Depo: \_\_\_\_\_

9. a) When you first accepted a method of contraception at this clinic, were you planning to have any more children ?

Ha u qala hofumana litsireletsi tsee u no u hopotse ho tsoela pele ka thari ?

YES  1

NO  2

D/K  3

b) Now, at this time, are you planning to have any more children ?

Le ha joale u ntse u hopotse ho tsoela pele ka thari ?

YES  1

NO  2

D/K  3

10. a) Have you attended any other family planning clinic in Lesotho ?

Na u kile oa kena e mong oa mokhatlo oa tlhopho ea malapa Lesotho ?

YES  1

NO  2

Go to Q. No 11

b) Did you start attending since the beginning of 1972 ?

U ile oqala ho kena ho tloha qalong ea 1972 ?

YES  1

NO  2

INTERVIEW: ... card to see when the client first came to the clinic ... received. Fill the blanks of ... the client.

11. Our records show that you first visited \_\_\_\_\_ clinic on \_\_\_\_\_ and that you received a (method) \_\_\_\_\_. Is this correct?
Lip ephara tor rna. litenses hore u qalile ho tla cliniking ana ka la \_\_\_\_\_ . Ho joalo ?

YES [ 1 ]

NO [ 2 ]

Fill in method code in month she received it.

Go to Q. no. 12 :

a) When did you first get a method from the clinic ?

U ile oa qala ho e fuca ka khoeli efe ?

Month \_\_\_\_\_

b) What method did you receive ?

U ile oa fuca se sireletsi safe ?

Method \_\_\_\_\_

Fill in method code for month she received it. Go to Q. no. 12.

12. Have you used the (method from no. 11) until now, without interruption
Na u sebelisitse \_\_\_\_\_ usa khoatse hofihlela joale ?

YES [ 1 ]

NO [ 2 ]

Fill in method code in all months until the time of interview

Go to Q. no. 17

Go to Q. no. 13

13. When did you stop using the (method from no. 12) ?
Ua se khoatsa neng ?

Month & Year \_\_\_\_\_

Fill in method code in all months she used it.

14. After you stopped the (method from no. 13) did you use another method ?

Ka morao hore u khoatsa \_\_\_\_\_ u ile oa sebelisa se sireletsi se seng ?

YES [ 1 ]

NO [ 2 ]

Go to a,b,c

Go to Q. no. 17

- a) What method did you use ?  
U ile oa sebelisa sefe ? \_\_\_\_\_
- b) When did you start using it ?  
U ile oa se qala neng ? \_\_\_\_\_  
Month & Year
- c) When did you stop using it ?  
Ua se khautsa neng ? \_\_\_\_\_  
Month & Year

Fill in method code in months she used it  
If still using, go to Q. no. 17

15. Have you used another method of contraception since you stopped using the (method from no. 14) ?

Na u kile oa sebelisa mokhoa o mong oa litsireletse haesale u khautsa ho sebelisa \_\_\_\_\_ ?

YES  1

NO  2

- a) What method did you use?  Go to Q. no. 17  
U ile oa sebelisa sefe ? \_\_\_\_\_
- b) When did you start using it ?  
U ile oa se qala neng ? \_\_\_\_\_  
Month & Year
- c) When did you stop using it ?  
Ua se khautsa neng ? \_\_\_\_\_  
Month & Year

Fill in method code in months she used it  
If still using, go to Q. no. 17

16. Have you used another method of contraception since you stopped using the (method from no. 15) ?

Na u kile oa sebelisa mokhoa o mong oa litsireletso haesale u khautsa ho sebelisa \_\_\_\_\_ ?

YES  1

NO  2

Go to Q. no. 17

Ask no. 15 a,b,c for any other method she used and fill in method code in months she used it. Ask no. 16 again.

17. INTERVIEWER: Tick below all methods you see on her contraceptive history chart. Ask her the question for each method you ticked.

a) PILLS [1] What is the proper way to take the pill ?  
U tsoanela ho nea lipilisi joang ?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b) DEPO [2] How often should you receive an injection ?  
U tsoanela ho junana e nte ka mora nako e kae ?

\_\_\_\_\_

c) IUCD [3] How can you know that the loop is still inside you ?  
U ka tseba joang hore loop e ntse e le ka hare ?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

13. Have you been pregnant since you first received contraception at this clinic ? Include stillbirths, abortions, and miscarriages.

Na u kile oa nka mpa haesale u qala ho nka litsireletso cliniking ee ? Kapa oa senycheloa, kapa a hlaha a khathetse.

YES [1]

NO [2]

Go to Q. no. 21

a) When did the pregnancy end ?

U qeteleste neng ho ithoala ? \_\_\_\_\_  
Month & Year

b) Was it a full-term pregnancy ?

E ne ole linako tsa hae ?

YES [1]

NO [2]

Fill in X for 9 months she was preg.

How many months did it last ?

No. months \_\_\_\_\_

Fill in X for months she was pregnant

19. Before you became pregnant, had you stopped using the (method listed on chart before pregnancy) ?

Pole u nka mpa oe u no u kile oa khotsa ho sebelisa \_\_\_\_\_ ?

YES [1]

NO [2]

Go to b)

Go to a)

b) Why did you stop using the (method) ?  
U ile oa hohellang ho  
● sebelisa ?

WANTED PREGNANCY  1  
OTHER REASON  2

a) INTERVIEWER: Describe correct use to the client.  
PILLS: Were you taking your pill daily, without forgetting and finishing the whole packet ? Had you started the packet on the fifth day of menses? If using 28-type pill had you not stopped taking them, during menses?  
DEPO: Had you received you injectic on date you were told by clinic? (Interviewer, allow her 14 days beyond that date for correct use)  
IUCD: Did you know for certain that the loop was still in place by feel. the strings? Or having it checked c clinic?

Were you using it correctly?  
U no u sebelisa ka nepo ?

YES  1                      NO  2  
NOT SURE  3

20. Have you had any other pregnancy since the one you just told me about?  
Na u kile oa nka mpa ungoe ntle le eo u song u mpoelletse ka eona ?

YES  1

NO  2

↓  
 Fill out additional pregnancy form

↓  
 Go to Q. no. 21

INTERVIEWER: Did she use the pill since she came to the clinic ?  
 YES  NO   
 Fill out this page      Go to q. no 22

21. a) Are you still taking the pill now ?  
 U nsto u nca lipilisi na ?

YES  1      NO  2  
 Go to f)

b) Why did you stop taking pills ?  
 U ile oa li tlohellang ?

INTERVIEWER: write what she says

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

c) At the time you stopped taking the pills were you :  
 Na ka nako eo u neng u tlobela lipilisi u no u :

- |  | <u>YES</u>                 | <u>NO</u>                  |
|--|----------------------------|----------------------------|
| 1) Nauseous, having stomach problems<br>U nyekeloa ke p. lo kapa u tsoaroa ke mala na ? - - - - -        | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| 2) Bleeding between menses<br>Kapa u phetela khoeli - - - - -  | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| 3) Having dizziness, headache, weakness<br>U tsekela u oquoa ke hlooho kapa u utloa u jokela ? - - - - - | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| 4) Having swelling or weight gain<br>U na le borurusi le ho nona ? - - - - -                             | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| 5) Changes in skin and hair<br>Liphetocho tse letlalo le moriri ? - - - - -                              | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |
| 6) Pregnant<br>Kapa ua ba nakhoehona ? - - - - -   | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 |

d) Did you stop taking the pill because the doctor or nurse ordered you to stop ?  
 Ke ka taelo oa naka kapa maoki u li tlohetseng ?  
 YES  1      NO  2

e) Did you stop using the pill because you wanted to stop ?  
 U li khaolitse ka bo oena ?  
 YES  1      NO  2

f) Now, at this time, do you think that the pill could permanently affect your health ?  
 Ha joale, u hopola hore lipilisi li ka u senya bophelo ba hau ?  
 YES  1      NO  2      D/k  3

g) Now, at this time, do you think that the pill can make you permanently sterile, even after you stop taking them ?  
 Ha joale u hopola hore lipilisi li ka u enisetsa ruri le ha u se u se li sebelise ?  
 YES  1      NO  2      D/k  3



g) Was it removed because you asked that person to remove it ?

E ne e le kabaka la kopo ea hau ?

YES  1

NO  2

h) Now, at this time, do you think the IUCD could permanently affect your health ?

Ha joale u hopola hore loop e ka senya bophelo ba hau ?

YES  1

NO  2

DKK  3

i) Now, at this time, do you think an IUCD can make you permanently sterile, even after it's been taken out ?

Ha joale u hopola hore loop e ka u koatla ruri le ha e se ntsitsoe ?

YES  1

NO  2

DKK  3

INTERVIEWER: Did she use Depo since she first came to the clinic ?  
 YES  NO   
 Fill in this page | Go to Q. No 24

23. a) Are you still using the injection now ?  
 Na u ntse u sebelisa ente le ha joale ?

YES  1  
 Go to f)

NO  2

b) Why did you stop using Depo ?  
 U e tlohetsong ?

INTERVIEWER: write what she says

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

c) At the time when you stopped the injection were you:  
 Ha u no tlohella ente e ne e le hobane u no u :

	YES	NO
1) Bleeding between menses Phetela khoeli - - - - -	<input type="checkbox"/> 1	<input type="checkbox"/> 2
2) Gaining weight U ba motonya - - - - -	<input type="checkbox"/> 1	<input type="checkbox"/> 2
3) Not having your menses U sa bone linako tsa hau - - - - -	<input type="checkbox"/> 1	<input type="checkbox"/> 2
4) Having menses more often than usual Matsatsi a hau a ne a etla khafetsa ho feta pela - - - - -	<input type="checkbox"/> 1	<input type="checkbox"/> 2
5) Having nausea dizziness headache U nyekeloa ke pelo, u tsekela, u tsoaroa - -	<input type="checkbox"/> 1	<input type="checkbox"/> 2
6) Pregnant U no u le moimana - - - - -	<input type="checkbox"/> 1	<input type="checkbox"/> 2

d) When you stopped getting injections, was it because the Dr. or nurse ordered you to stop ?

Ke ka taelo ea ngaka kapa moeki u e tlohetsong ?

YES  1 NO  2

e) When you stopped getting injections, was it because you wanted to stop ?

U li khaolitse ka bo oena ?

YES  1 NO  2

f) Now, at this time, do you think the injections would permanently affect your health.?

Ha joale u hopela hore ente e ka u sonya bophelo ba hao ?

YES  1 NO  2  3

g) Now, at this time, do you think the injections would make you permanently sterile, even after you stop having them ?

YES  1 NO  2  3

24. Would you please list for me all the ways you know of to keep from getting pregnant. Include the ones used by men and those you don't get at the clinic.

Ke kopa u npelelle mekhoa eohle eo u e tsebang ea litsireletso here u se nke npa. Le tse sebelisoang ke banna le tse sa fumanoeng mona.

_____	_____
_____	_____
_____	_____
_____	_____

25. If a young Basotho couple you know were getting married, how many children do you think the husband & wife would like to have ?

Basotho ha ba nyalana u hopola here ba lakatsa hoba le bana ba ba kae ?

Husband would like:	Wife would like :
NO. BOYS _____	NO. BOYS _____
NO. GIRLS _____	NO. GIRLS _____

26. If a young Basotho couple you know was getting married, how many children do you think the couple's parents would like them to have ?

Batsoali ba banyalani ba basotho bona ba ka lakatsa ha bana ba bona ba ba le bana ba ba kae ?

NO. BOYS \_\_\_\_\_

NO. GIRLS \_\_\_\_\_

27. What do you think child-spacing does for a mother's health ?  
U hopola here ho thlathlanisa e ntle ea bana e na le thuso e feng ba pheleng ba 'me ?

MAKES IT BETTER	<input checked="" type="radio"/>
MAKES IT WORSE	<input type="radio"/>
NO DIFFERENCE	<input type="radio"/>

a) Why do you think so ?  
U hopola joale ho baneng ?

(INTERVIEWER: write what the client says:)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

28. (If she has a husband and he is alive )  
Does your husband know that you were using something to keep from becoming pregnant ?

Na monna oa hau oa tseba here u sebelisa letho ho itsireletsa?

YES <input type="checkbox"/>	NO <input type="checkbox"/>	NO ANSWER <input type="checkbox"/>
Go to Q. no 29	Go to a)	Go to Q. No 29



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TSAKHOLO VILLAGE LEADERS SURVEY

1972

A REPORT TO THE MINISTRY OF HEALTH OF THE GOVERNMENT OF LESOTHO

SUBMITTED BY: THE UNIVERSITY OF CALIFORNIA EXTENSION/SANTA CRUZ  
DIVISION OF INTERNATIONAL PROGRAMS, CONTRACT NO. AFR-799  
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

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TSAKHOLO VILLAGE LEADERS SURVEY

1972

TABLE OF CONTENTS

	Pages
1. Introduction	1 and 2
2. General Characteristics of the Leaders, the Villages and the Constituents	3 and 4
3. Causes of Specific Illnesses in Children	4 and 5
4. Traditional Medicine	5
5. Traditional Birth Attendants	5
6. Beliefs, Customs, Traditions	5 to 7
7. Discussion	8 and 9
8. Conclusions	9 and 10
9. Recommendations	10

Appendix I - Statistical Tables 1 to 30

Appendix II - Questionnaire

## ABSTRACT

The data presented herein from the baseline survey conducted at Ts'akholo in 1972, are intended to supplement continuing government surveys and record systems developed for the demonstration zone. Ts'akholo, which is a two hour drive from the capital city of Maseru, is the site selected for the development of a model rural health center and national rural health training center. A total of 176 village leaders were interviewed about health-related matters concerning themselves, their village, and their people. This report includes the results and methodological shortcomings of the survey. Thirty statistical tables are contained in Appendix I; a copy of the questionnaire is contained in Appendix II.

## TS'AKHOLO VILLAGE LEADER SURVEY 1972

### INTRODUCTION

#### Target Population

The Ministry of Health's Ts'akholo Demonstration Project established by the Lesotho Ministry of Health was undefined in 1972. The first undertaking by University of California/Extension, Santa Cruz (UCSC) under Agency for International Development Contract AFR-799 was to provide the Ministry with some idea of the size and characteristics of the population expected to need health centre services. Very little information was available at that time for the area aside from the 1966 population census enumeration of the country and limited health service statistics. Government surveys subsequent to 1966, such as agriculture and demographic surveys, were based upon countrywide samples and had not been completed in reporting form in 1972. (Villages within the demonstration zone are not analysed separately.)

The 1966 population census enumeration report was defined by village and confined to a head count of each village. With this report as a basis, in consultation with personnel attached to Ts'akholo, a determination of villages within a walking distance of the health centre were identified and listed. It was expected that the survey itself would help in defining the demonstration zone. The survey comprises a total of 135 reported villages, and a total reported population of 21,399. (a,b)

#### Objectives

The broad objectives of the survey were to:

1. Gain understanding of the community's knowledge, attitudes and practices in regard to health, as viewed by village leaders.
2. Identify socio-cultural factors influencing health.
3. Identify traditional practitioners, the services which they provide and their training needs.

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(a) The survey initially concentrated on enumeration areas 38.01 - 38.03, 38.11 - 38.13, 39.01 - 39.16.

(b) As a result of the survey, the demonstration zone was expanded to include census enumeration areas 40.01, 40.03, 40.04 and 40.05, or 15 additional villages not reported in the baseline survey.

4. Provide a foundation for planning health centre services including health education to the community.
5. Establish rapport with and secure the cooperation of village leaders.

#### Development of the Survey

The survey was limited by time, existing documents and available manpower. In addition to Ministry of Health support, other organizations within the government cooperated by providing two interviewers and accommodations at various locations from which the survey was launched.

The interviewers totalled two full-time and three part-time individuals who received a full four-day orientation which included:

1. Orientation to public health concepts
2. Discussion of survey objectives
3. Sample selection and definition to be used for "village leader"
4. Interviewing techniques and role-play of the process
5. Use of the questionnaire
6. Assuring confidentiality
7. Field practice and supervision
8. Organization of activities.

Two of the five interviewers were experienced health personnel and were designated as principal counterparts to the two UCSC technicians during this period. The counterparts assisted in completing and translating the questionnaire and supervising the survey in the field.

In view of the need to generate community interest and cooperation, certain questions were eliminated at this juncture. Also it was probable that the Ministry of Health could analyze more detailed demographic data at some later time for the villages included in the countrywide samples for the Demographic Survey then being carried out by the Bureau of Statistics. It was not the intention of this survey to duplicate more detailed surveys to which the Ministry of Health already had access.

The actual field survey began on July 14, 1972, and was completed by August 14, 1972. A total of 176 village leaders were interviewed.

### Shortcomings

The difficulties presented to a surveyor using the enumeration of villages outlined in the 1966 census are many and well documented in other reports. (c) No household or village mapping of the area was available. Villages said to exist, had been renamed, or sometimes could not be found at all.

In addition, the definition of "village leader" came to include who was "most accessible", i.e., in addition to chiefs, chieftainess, village headmen, and advisors to the chief, the definition of village leader was expanded to include teachers, clergy and officers of recognized village organizations. All were Basotho.

### Description of Village Leaders

A brief description of the village leaders interviewed should provide insight to aid evaluation of the following results of the survey. More than one-half of the 176 leaders interviewed were over 50 years of age.<sup>1</sup> Some 91 of the leaders (51.7 percent) were either chief/chieftainess, village headman or acting chief.<sup>2</sup> Most of the leaders interviewed were male, 74.4 percent<sup>3</sup>, and a majority of the leaders, 73.9 percent, were currently married.<sup>4</sup> Only 6.8 percent of the village leaders had received no education, and 54.0 percent had completed lower primary, grades 1-4.<sup>5</sup> Thirty-seven of the leaders had lived twenty or fewer years in their villages and three-fourths of leaders, 76.7 percent, had lived twenty-one or more years in their respective villages.<sup>6</sup>

When asked whether they knew of the clinic at Ts'akholo 89.8 percent of the leaders replied that they did<sup>7</sup>, and of those aware of the clinic 40.9 percent had been informed by their chief.<sup>8</sup> Only 12.5 percent of the village leaders reported no radios in their villages, and 32.4 percent claimed of one or two radios in working order in their villages.<sup>9</sup>

The leaders were also questioned about the existence of latrines in their villages and 31.8 percent replied affirmatively.<sup>10</sup> Of these 56 leaders aware of latrines in their villages, 73.2 percent knew of open pit type and the remaining 15, or 26.8 percent of the leaders said they were aware of closed pit latrines.<sup>11</sup> Twenty-seven of these 56 leaders, 48.2 percent<sup>12</sup>, judged the latrines of which they were aware to be in good condition.

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(c) Population Census Report. Vol. 1, 1966. Bureau of Statistics, Kingdom of Lesotho.

1 All numbered references refer to tables in the Appendix.

When asked to assess the literacy level of their village inhabitants, 131 of the leaders, 74.4 percent, replied that most of the people in their village were capable of reading and writing Sesotho.<sup>13</sup> Remarkable also is the fact that 32 of the leaders, 18.2 percent, believed that most of the people in their village could read and write both Sesotho and English. However, only 42 or 23.9 percent of the leaders reported the presence of a school in their village. It was their understanding that all of these primary schools were church-sponsored.<sup>14</sup> Of the 104 leaders who stated that their villages had other resources, 73 of these leaders, 70.2 percent, specified that the other resources were health related, e.g., nutrition education programs, village healer, or health committees.<sup>15</sup>

All village leaders reported that their village had a water supply and 112 of the leaders, 63.6 percent, stated that it was within one half mile of the village.<sup>16</sup> Only fifteen of the leaders, 8.2 percent, reported that their village water supply was protected from human or animal fecal contamination.<sup>17</sup> There was no single female gathering place in the village reported by a majority of the leaders although 140 of the leaders, 79.5 percent, reported that the leader's house or yard was the gathering place for the men of their village.<sup>18</sup>

With one exception, all of the village leaders interviewed reported occurrence of specific illnesses among the children of their village, and the greatest proportion of the leaders, 84.1 percent knew of children in their village with diarrhea and gastro-intestinal symptoms. Recent occurrences of skin infections among children in their village were reported by 39.2 percent of the leaders, and occurrences of pneumonia or respiratory disease were reported slightly more frequently, i.e., by 44.9 percent of the leaders.<sup>19</sup>

A vast majority of the leaders, 94.9 percent<sup>20</sup>, said that they believed that the people of their villages wanted health information, and the most frequent categories of response were information on health of mothers and children, 21.4 percent, and information on sanitation and water supply, 25.1 percent.<sup>21</sup>

#### CAUSES OF SPECIFIC ILLNESSES IN CHILDREN

In addition to specific illnesses noted by the village leaders to occur amongst children in their villages, it is important to determine why the village leaders thought children became ill from these conditions. Their perceived reasons for each condition were recorded in narrative and grouped according to four main categories. The first group consists of village leaders who perceived the condition to be associated with germs, unfavorable hygiene, and other scientifically known causes of the condition. The second group of village leaders perceived the illness as caused by evil spirits, bad omens, witchcraft, etc. The third group included those who believed in a combination of the aforementioned causes. The fourth group consists of those who gave other reasons, not related to a knowledge of either germ theory or belief in evil spirits. The results of this grouping, (based upon the responses of those who indicated that the condition existed in their villages),

are shown in Table 27. It is noteworthy that the highest percent of the village leaders (84.1 percent) believed the cause of diarrhea and other gastrointestinal symptoms to be related to evil spirits whereas only 4.3 percent perceived skin infections to be related to evil spirits. It should also be noted that the highest response (43.0 percent) to perceived reasons for pneumonia and other respiratory conditions, including tuberculosis, was "I don't know".

#### TRADITIONAL MEDICINE

In order to be effective in providing alternatives to the customs and traditions practiced in the Ts'akholo area, several questions were aimed at learning more about the traditional health care delivery system, who provides it, what they provide, and what kinds of beliefs perpetuate the practice of traditional medicine. One hundred and sixteen (65.9 percent) of the village leaders stated that there was a traditional practitioner (boloi, masela-mose, etc.) in their village.<sup>22</sup> In these villages, 68.6 percent of the leaders had the impression that most of the villagers used this service.<sup>23</sup> Further, 43.1 percent stated that their villagers were likely to consult the traditional practitioner first, and failing there, go to the health centre or medical doctor for care. Of the leaders, 7.8 percent stated that they may go to the traditional practitioner either first or last, and 26.7 percent stated that they believed the traditional practitioner to be a last resort.<sup>24</sup> A large percent, 22.4 percent, stated that they did not know when, in the course of a perceived illness or circumstance, the villagers were likely to use the traditional practitioner.

#### TRADITIONAL BIRTH ATTENDANTS

The village leaders were asked "Who delivers babies in your village?" Of the village leaders, 40.9 percent knew of specific people in their village who delivered babies, all of them older women with two exceptions, namely two known traditional medicine men; 39.8 percent of the leaders indicated "grandmothers" usually deliver the babies in their villages; 13.1 percent stated that no one in their village delivers babies.<sup>25</sup> From the narrative, none of the persons listed had received any training in home delivery, other than that which was handed down by custom. Traditions associated with delivery were described by four of the female village leaders. Noteworthy is the cutting of the cord with a sharp reed, traditionally taken from the interior thatching of the roof.

#### BELIEFS, CUSTOMS, TRADITIONS

Table 26 summarizes the number of village leaders responding to the question "Do people in this village have beliefs, customs, or traditions concerning pregnancy, delivery, causes of abnormal children, concerning the newborn, post-partum period, or concerning nutrition and other beliefs?" The following sections examine the leader's descriptions which were taken in narrative form.

## Pregnancy

Of all the traditions and beliefs, those to be observed by the pregnant woman are most extensive. More than 70 percent reported that the pregnant woman must observe certain traditions concerning physical activity and attire. All of those reported are harmless or potentially harmless customs. For example, to avoid crossing the path of evil spirits or bewitched areas, she must not walk all over the place, and she must wear special charms. Other precautions are to avoid sleep during the day, which is believed to cause the baby to sleep during delivery, and to avoid sitting in the sun next to the door or window which is believed to be a cause for giving birth to an abnormal child. Special relay races are sometimes played by pregnant women which are believed to encourage rain to fall.

Food taboos during pregnancy are another area of widespread belief according to the village leaders. Thirty-six respondents, or 28.9 percent, indicated that the pregnant women in their village observe certain food taboos. These are listed in the order of their frequency from the narrative:

<u>Food taboos in pregnancy</u>	<u>Reason for the taboo</u>
Eggs	To prevent the appearance of an "egg" (membranes) during delivery. Eating eggs causes membranes not to rupture in delivery.
Certain meat, internal organs and bones	To avoid a difficult labor and delivery.
Meat from an animal who died in obstructed labor	This meat will cause the woman to have an obstructed labor.
Fish	Eating fish causes the baby's nose to secrete too much mucus.
Duck	Eating duck causes the baby to be born with clubbed fingers and feet.
Too many oranges	To avoid birth of an abnormal child.

Many references were made to the use of Sesotho medicine during the course of pregnancy, labor and delivery. According to the village leaders, special Sesotho medicines are used to:

1. Secure the pregnancy
2. Induce labor
3. Make labor easy and to ease a difficult labor
4. Turn or position the fetus
5. Protect against evil spirits.

### Concerning Birth of Abnormal Child

One hundred seven, or 95.5 percent of the village leaders who responded affirmatively to this question, stated that their people believe birth of an abnormal child is related to failure to carry out local customs and failure to observe certain taboos. According to the village leaders, in addition to observing the food taboos, pregnant women are to avoid getting too cold, becoming scared, angry or teased, and looking or laughing at an abnormal person, all of which were described as causes for giving birth to an abnormal child. Pregnant women are not to "peep into the birds nest" as another precaution against giving birth to an abnormal child. Wearing of special charms, attire of her clan, and avoidance of bewitched areas and certain medicines are also important to prevent this occurrence. It is noteworthy that 11.6 percent of the respondents understood that being beaten, badly cared for in pregnancy, malpositions, and heredity can cause this malady.

### Newborn/Postpartum Period

Of the 176 village leaders interviewed, 166 or 94.3 percent, indicated that their people carry out certain beliefs and traditions regarding the newborn baby and newly delivered mother. Most often described, by 106 village leaders, is the placing of a reed, usually in the roof outside the door of the hut, to signify the presence of a newborn baby. Of these respondents, 63.9 percent described the reed as a means of prohibiting entry to specific groups of people believed likely to bring evil spirits or to have crossed the path of evil spirits. The most frequently mentioned group who are prohibited entry are people who use local medicines, the concern being that they may bring bad medicine, bad charms or evil omens and thus bewitch the newborn baby. Of the respondents, 20.7 percent indicated that men are prohibited entry, the belief being that they may have crossed over local medicine and the baby will not grow well; 18.7 percent specifically prohibited prostitutes and others who behave badly. Young women and nubile are prohibited by some, being described as too sensual and capable of bewitching the baby. Mourners are excluded, male and female, as they may bring misfortune to the newborn, and visitors and travellers from afar are excluded since they may have passed over bewitched places and bring ill health to the baby. There is a period of time beyond which certain prohibitions are lifted. For example, some leaders said that young girls can go in after the cord drops off (7-10 days) and certain visitors can ritualize with ash so as to remove evil spirits before entering the hut. It is interesting that two respondents specifically indicated that the custom is practiced to prevent infection of the newborn from germs and diseases.

Dangerous or potentially dangerous traditional practices associated with the newborn and postpartum period were stated by less than five percent of the respondents. These included placing raw or dried kraal manure beneath the baby, not allowing the mother to breastfeed immediately after birth, and believing that the mother should bleed heavily after delivery.

## Nutrition

Beliefs and customs to be practiced by their people concerning nutrition were mentioned by 140, or 79.6 percent, of the village leaders. The largest group who are required to observe food taboos are young boys and girls. Of the respondents, 92 or 65.7 percent indicated that the young people in their village are not allowed to eat the internal organs of sheep and goats. This is believed to cause a young couple to have difficulties in marriage and the young person is told that it will be extremely cold on their wedding day if they eat this food. Pregnant women are also not allowed this food which is believed to be the cause of difficult labor and delivery. Sixty of the respondents, 42.9 percent, indicated that eggs are also withheld from young people, including new wives and primiparas. With this group, eggs are thought to be the cause of too much sensuousness, and are believed to cause fertility in young boys. In addition, eggs are said to cause marital difficulties to a young couple. Their restriction during pregnancy is described under that section.

Nutrition of the new mother received special emphasis under the questions concerning the postpartum period and nutrition. 45.6 percent indicated that in their villages new mothers are allowed and encouraged to eat anything, especially soft sorghum porridge to produce a good milk supply.

## Other Beliefs, Traditions

Initiation and circumcision schools were stated to be an important tradition for the boys and girls in the villages of 45 of the leaders. 10.2 percent of the respondents gave reference to use of charms, injections, and herbal creams for preventing people and houses from being hit by lightning. Noteworthy in the category of miscellaneous customs and traditions is that several leaders stated their people are accustomed to working in cooperative groups.

## Family Size Ideal

It was found that 56.8 percent of the leaders believed that the ideal number of children is four or fewer, and the median number of children desired was 3.7.<sup>28</sup> The distribution of ideal number of children by sex is shown in Table 29 and the median number of each sex desired is 1.7. Quite surprisingly, when queried about the ideal gap between the births of successive children, 47.1 percent of the leaders responded that two years or less is ideal.<sup>30</sup>

## DISCUSSION

It should be mentioned that all results presented here are necessarily qualified by the nature of the survey, and consequently some potential criticisms should be addressed. The interviewer, when confronted by the necessity of selecting one leader from among several to interview, attempted to select the most literate leader to facilitate comprehension of the questions asked. Most questions that the village leaders were asked were objective: e.g., "How many people in village have radios in working order?" However,

some questions called for a judgment on the part of the leader, and the data on this type of question is based on the leaders' personal perceptions: e.g., "Do most people in the village read Sesotho?" etc. The assumption is made here that the village leaders are aware of what their people know and practice with regard to health, and this assumption and the consequent results presented here have been independently substantiated by the experiences of the staff in the demonstration zone. Furthermore, some questions, as above, were village-oriented and others were leader-oriented, e.g., question 20 asks for the leader's perceived ideal number of children for a hypothetical newly-married village couple and concerns the individual leader's belief whereas question 10, i.e., "Where do women gather to talk?" is a village-oriented question. It is important to be aware of this distinction in orientation. Noteworthy also is the fact that this survey was undertaken in the Winter of 1972. The importance of the time of the survey is that the illnesses reported herein are seasonal, and account must be taken of this fact when evaluating these particular findings.

#### CONCLUSIONS

These results are objective responses and subjective impressions of 176 village leaders from 135 villages in the demonstration zone around the Ts'akholo health centre, a catchment of approximately 21,000 people in 1972. More than three quarters, 76.7 percent, of those interviewed had lived 21 or more years in their villages. It was reported by 131 leaders, 74.4 percent, that most of their villagers could both read and write Sesotho.

Very few of the leaders, only 15, reported closed pit latrines in their villages. Also of interest is the fact that only 15 leaders (not necessarily the same as those reporting closed pit latrines) stated that their village had a protected water supply. This fact is perhaps related to a high percentage, 84.1 percent, of the village leaders being cognizant of occurrences of diarrhea and gastro-intestinal symptoms among village children.

From the interviews of the 176 village leaders it is evident that traditional medicine continues to be a primary source of care for villages in the demonstration zone. Traditional practitioners can be herbalists, spiritualists (magical healers), or so-called medicine men. It was learned that traditional practitioners have a role in preventive care, such as antenatal care, as well as curative care for a perceived illness or circumstance.

With two exceptions it was found that older women, "grannies", are the traditional birth attendants mentioned by over 80 percent of the village leaders reporting births in their villages. None of the traditional birth attendants were known to have received any training beyond that handed down by custom. It was beyond the scope of the survey to interview people said to deliver babies, however they would be helpful and essential baseline information if work with traditional birth attendants becomes acceptable in Lesotho. The low known incidence of neonatal tetanus in Lesotho is interesting when one considers reported traditional practices.<sup>(d)</sup> The use of Sesotho medicines during pregnancy and childbirth requires further study.

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(d) Ministry of Health, Annual Statistics Reports, 1968 - 1971.

Beliefs and customs affecting health extend over the entirety of enumeration areas in the demonstration zone. Some of these customs can be categorized as harmless or potentially harmless and some appear to have merit. Less than five percent of the village leaders reported traditional practices deemed to be dangerous or potentially dangerous. More study needs to be carried out countrywide in this area.

#### RECOMMENDATIONS

The survey was undertaken to assist the government and in developing a model maternal and child health care program for Lesotho. Research methodology was limited. Records initiated at Ts'akholo Health Centre in 1972 serve the government as baseline for a more rigorous evaluative component to their demonstration project. In addition the government has access to the following statistical data for fertility and mortality rates which should be analyzed for their evaluative and demographic purposes in the demonstration zone:

- (a) Countrywide Demographic Survey, Bureau of Statistics  
Includes demographic data since May, 1971 on the following samples from the demonstration zone:

Enumeration Areas No. 39.07, 39.15, 39.09, 39.04

Certain demographic data are also available from Enumeration Area 39.06 for 1968.

- (b) Population Census, past and project (1966 and 1976). The government should request the Bureau of Statistics to supply a specific age-sex pyramid for both de jure and de facto population in the Enumeration Areas of the demonstration zone, for both 1966 and 1976.

APPENDIX I: STATISTICAL TABLES

TABLE 1

AGE OF VILLAGE LEADERS

AGE AT LAST BIRTHDAY	FREQUENCY	PERCENT	CUMULATIVE PERCENT
20 - 29	9	5.1	5.7
30 - 39	23	13.1	18.8
40 - 49	44	25.0	43.8
50+	96	54.5	98.3
NO RESPONSE	4	2.3	100.0
TOTAL	176	100.0	

TABLE 2

POSITION OF LEADER IN VILLAGE

POSITION	FREQUENCY	PERCENT
CHIEF/CHIEFTAINNESS, VILLAGE HEADMAN ACTING TO THE CHIEF	91	51.7
OTHER (TEACHER, OFFICERS OF RECOGNIZED VILLAGE ORGANIZATIONS, CLERGY)	85	48.3
TOTAL	176	100.0

TABLE 3

SEX DISTRIBUTION OF  
THE VILLAGE LEADERS

SEX	FREQUENCY	PERCENT
MALE	131	74.4
FEMALE	45	25.6
TOTAL	176	100.0

TABLE 4MARITAL STATUS OF THE LEADERS

STATUS	FREQUENCY	PERCENT
SINGLE	9	5.1
CURRENTLY MARRIED	130	73.9
WIDOW/WIDOWER	11	6.2
NO RESPONSE	26	14.8
TOTAL	176	100.0

TABLE 5COMPLETED EDUCATION OF THE VILLAGE LEADERS

EDUCATION COMPLETED	FREQUENCY	PERCENT	CUMULATIVE PERCENT
NONE	12	6.8	6.8
LOWER PRIMARY - STD 1-4	95	54.0	60.8
HIGHER PRIMARY - STD 5-6	26	14.7	75.5
JR CERTIFICATE- FROM 1-3	20	11.4	86.9
SR CERTIFICATE - FORM 4-5	3	1.7	88.6
NO RESPONSE	20	11.4	100.0
TOTAL	176	100.0	

TABLE 6DURATION OF RESIDENCE IN VILLAGE

NUMBER OF YEARS LIVED IN VILLAGE	FREQUENCY	PERCENT	CUMULATIVE PERCENT
0 - 5 YR	8	4.5	4.5
6 - 11 YR	10	5.7	10.2
11 - 20 YR	19	10.8	21.0
21+ YR	135	76.7	97.7
NO RESPONSE	4	2.3	100.0
TOTAL	176	100.0	

TABLE 7KNOWLEDGE OF CLINIC AT TSAKHOLO

STATUS	FREQUENCY	PERCENT
HAD HEARD ABOUT CLINIC	158	89.8
HAD NOT HEARD	18	10.2
TOTAL	176	100.0

TABLE 8SOURCE OF KNOWLEDGE OF TSAKHOLO CLINIC

SOURCE	FREQUENCY	PERCENT
WORD OF MOUTH (OTHER THAN CHIEF)	56	35.4
RADIO	11	7.0
PITSO	20	12.6
CHIEF	65	41.2
OTHER MEANS	5	3.2
NO RESPONSE	1	0.6
TOTAL	158	100.0

TABLE 9KNOWLEDGE OF RADIOS IN WORKING ORDER IN VILLAGE

NUMBER OF RADIOS IN WORKING ORDER IN VILLAGE	FREQUENCY	PERCENT	CUMULATIVE PERCENT
NONE	22	12.5	12.5
1-2	57	32.3	44.9
3-4	39	22.2	67.0
5-10	51	29.0	96.0
11+	6	3.4	99.4
NO RESPONSE	1	0.6	100.0
TOTAL	176	100.0	

TABLE 10LEADERS' KNOWLEDGE OF LATRINES IN VILLAGE

STATUS	FREQUENCY	PERCENT
KNEW OF ONE OR MORE LATRINES	56	31.8
KNEW OF NONE	120	68.2
TOTAL	176	100.0

TABLE 11TYPE OF LATRINES REPORTED

TYPE	FREQUENCY	PERCENT
OPEN PIT	41	73.2
CLOSED PIT	15	26.8
TOTAL	56	100.0

TABLE 12CONDITION OF REPORTED LATRINES

CONDITION	FREQUENCY	PERCENT
GOOD	27	48.2
FAIR	24	42.9
POOR	5	8.9
TOTAL	56	100.0

TABLE 13LITERACY OF VILLAGERS AS ASSESSED BY THE LEADERS

CAPABILITY OF MOST VILLAGERS	FREQUENCY	PERCENT
READ AND WRITE SESOTHO	131	74.4
READ AND WRITE BOTH SESOTHO AND ENGLISH	32	18.2
NONE OF ABOVE	13	7.4
TOTAL	176	100.0

TABLE 14IS THERE A SCHOOL IN YOUR VILLAGE?

RESPONSE	FREQUENCY	PERCENT
YES	42	23.9
NO	134	76.1
TOTAL	176	100.0

TABLE 15TYPES OF SERVICES OR RESOURCES IN VILLAGE

TYPE OF RESOURCE	FREQUENCY	PERCENT
HEALTH RELATED	73	70.2
COMMERCIAL BUSINESS	20	19.2
OTHER	11	10.6
TOTAL	104	100.0

TABLE 16DISTANCE OF WATER SOURCE FROM VILLAGE

DISTANCE	FREQUENCY	PERCENT	CUMULATIVE PERCENT
LESS THAN HALF MILE	112	63.6	64.2
MORE THAN HALF MILE	62	35.2	99.4
DON'T KNOW/NR	2	1.2	100.0
TOTAL	176	100.0	100.0

TABLE 17IS WATER SOURCE PROTECTED?

RESPONSE	FREQUENCY	PERCENT
YES	15	8.5
NO	161	91.5
TOTAL	176	100.0

6

TABLE 18

LOCATION OF MALE GATHERING PLACES

LOCATION	FREQUENCY	PERCENT
LEADER'S HOUSE OR YARD	140	79.4
ANOTHER SPECIFIED RESIDENCE	4	2.3
PUBLIC PLACE	9	5.1
GARDENS	7	4.0
NO PLACE	11	6.3
NO RESPONSE	5	2.9
TOTAL	176	100.0

TABLE 19

LEADERS' KNOWLEDGE OF INCIDENCE OF  
VARIOUS CONDITIONS AMONG VILLAGE CHILDREN

CONDITION	SKIN INFECTIONS		DIARRHEA GI SYMPTOMS		PNEUMONIA RESPIRATORY DISEASE	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT	FREQUENCY	PERCENT
KNOWLEDGE OF INCIDENCE AMONG VILLAGE CHILDREN						
YES	69	39.2	148	84.1	79	44.9
NO	107	60.8	28	15.9	97	55.1
TOTAL	176	100.0	176	100.0	176	100.0

TABLE 20

DESIRE FOR HEALTH INFORMATION

RESPONSE	FREQUENCY	PERCENT
YES	167	94.9
NO	9	5.1
TOTAL	176	100.0

TABLE 21TYPE OF HEALTH INFORMATION NEEDED

TYPE	FREQUENCY	PERCENT
HEALTH OF MOTHER AND CHILD	71	42.5
OTHER PHYSICAL HEALTH	29	17.4
NUTRITION	11	6.6
SANITATION WATER SUPPLY	42	25.1
COMMUNAL GARDENS	8	4.8
OTHER	3	1.8
DON'T KNOW/NO RESPONSE	3	1.8
TOTAL	167	100.0

TABLE 22TRADITIONAL DOCTOR OR HEALER IN VILLAGE

RESPONSE	FREQUENCY	PERCENT
YES	116	65.9
NO	60	34.1
TOTAL	176	100.0

TABLE 23DO MOST PEOPLE IN VILLAGE GO TO TRADITIONAL DOCTOR OR HEALER?

RESPONSE	FREQUENCY	PERCENT
YES	81	68.6
NO	37	31.4
TOTAL	118	100.0



TABLE 24

VILLAGERS' PREFERENCE WHEN ILL

MOST PEOPLE'S ORDER OF CONSULTING	FREQUENCY	PERCENT
TRADITIONAL PRACTITIONERS 1ST	50	43.1
TRADITIONAL PRACTITIONERS LAST	31	26.7
BOTH OF ABOVE	9	7.8
I DON'T KNOW	26	22.4
TOTAL	116	100.0

TABLE 25

WHO DELIVERS BABIES IN THIS VILLAGE?

PERSON	FREQUENCY	PERCENT
SPECIFIC PERSON (S)	72	40.8
GRANDMOTHERS	70	39.8
OTHER	1	.6
NO ONE IN VILLAGE	23	13.1
DON'T KNOW/NO RESPONSE	10	5.7
TOTAL	176	100.0

TABLE 26

FREQUENCY AND PERCENT OF VILLAGE LEADERS REPORTING THEIR VILLAGES TO HAVE BELIEFS, CUSTOMS AND TRADITIONS CONCERNING PREGNANCY, DELIVERY, BIRTH OF ABNORMAL CHILD, NEWBORN, POSTPARTUM, NUTRITION AND OTHER BELIEFS OR TRADITIONS.

QUESTION: DO MOST OF THE PEOPLE IN THIS VILLAGE HAVE BELIEFS, CUSTOMS OR TRADITIONS CONCERNING :	FREQUENCY REPORTED			PERCENT REPORTED		
	YES	NO	DK/NR.	YES	NO	DK/NR.
PREGNANCY	126	47	3	71.6	26.7	1.7
DELIVERY	98	57	21	55.7	32.4	11.9
CAUSE OF ABNORMAL CHILD	112	51	13	63.6	29.0	7.4
NEWBORN/POSTPARTUM PERIOD	166	9	1	94.3	15.1	0.6
NUTRITION	140	30	6	79.6	17.0	3.4
OTHER THAN THE ABOVE	130	42	4	73.8	23.9	2.3

DK/NR = DON'T KNOW, NO RESPONSE  
ALL FIGURES ARE BASED UPON INTERVIEWS OF 176 VILLAGE LEADERS

TABLE 27

BELIEFS CONCERNING CAUSES OF VARIOUS CONDITION AMONG VILLAGE CHILDREN

CONDITION	SKIN INFECTION		DIARRHEA GI SYMPTOMS		PNEUMONIA OR RESPIRATORY DISEASE	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT	FREQUENCY	PERCENT
GERM THEORY	23	33.3	36	24.3	7	8.9
EVIL SPIRITS	3	4.3	45	30.3	13	16.5
BOTH OF ABOVE	15	21.7	25	16.9	11	13.9
OTHER REASON	10	14.5	14	9.5	14	17.7
DON'T KNOW/NO RESPONSE	18	26.2	28	19.0	34	43.0
TOTAL	69	100.0	148	100.0	79	100.0

TABLE 28

LEADERS' IDEAL NUMBER OF CHILDREN

NUMBER	FREQUENCY	PERCENT	CUMULATIVE PERCENT
0	1	0.6	0.6
1	2	1.1	1.7
2	31	17.6	19.3
3	25	14.2	33.5
4	41	23.4	6.9
5	22	12.5	69.3
6	12	6.8	76.1
7	5	2.8	79.0
8	5	2.8	81.8
9	2	1.1	83.0
10	8	4.5	87.5
11	1	0.6	88.1
12	2	1.1	89.2
OTHER NARRATIVE (e.g. IT'S UP TO GOD)	7	4.0	93.2
DON'T KNOW/NO RESPONSE	12	6.9	100.0
TOTAL	176	100.0	

TABLE 29

LEADERS' IDEAL NUMBER BY SEX

IDEAL NUMBER	BOYS			GIRLS		
	FREQUENCY	PERCENT	CUMULATIVE PERCENT	FREQUENCY	PERCENT	CUMULATIVE PERCENT
0	1	0.6	0.6	1	.6	.6
1	45	25.6	26.1	49	27.8	28.4
2	59	33.4	59.7	57	32.5	60.9
3	25	14.2	73.9	26	14.8	75.7
4	11	6.3	80.1	8	4.5	80.2
5	5	2.8	83.0	8	4.5	84.7
6	4	2.3	85.2	1	.6	85.3
7 OR MORE	1	0.6	85.8	1	.6	85.9
OTHER NARRATIVE (IT'S UP TO GOD)	7	4.0	89.7	8	4.5	90.4
DON'T KNOW	18	10.2	100.0	17	9.6	100.0
TOTAL	176	100.0		176	100.0	

TABLE 30

IDEAL INTERVAL BETWEEN CHILDREN

IDEAL INTERVAL IN MONTHS	FREQUENCY	PERCENT	CUMULATIVE PERCENT
0-12	6	3.4	3.4
13-24 MO	77	43.7	47.1
25-36 MO	76	43.2	90.3
37-48 MO	15	8.5	98.9
49+ MO	1	0.6	99.4
DON'T KNOW	1	0.6	100.0
TOTAL	176	100.0	

APPENDIX II: QUESTIONNAIRE

DATE \_\_\_\_\_ CENSUS ENUMERATION  
Letsatsi AREA

CODE

VILLAGE \_\_\_\_\_ E.A. No.  
Motse

NAME \_\_\_\_\_ POSITION IN VILLAGE \_\_\_\_\_  
Lebitso Boemo/Motseng

AGE \_\_\_\_\_ MALE/FEMALE \_\_\_\_\_ HOW LONG HAVE YOU LIVED IN THIS  
Lilemo Monna/Mosali VILLAGE?  
Ke nako e kae u lula motseng oo?

MARITAL STATUS \_\_\_\_\_  
NAME OF VILLAGE CHIEF/CHIEFTAINNESS \_\_\_\_\_  
Lebitso la Morena

WHO ARE THE LEADERS IN THIS VILLAGE?  
Baetapele ba sechaba ke bomang motseng oa heno ntle le morena?

NAME	POSITION
<u>Lebitso</u>	<u>Boemo</u>
_____	_____
_____	_____
_____	_____

HAVE YOU HEARD ABOUT THE HEALTH CLINIC AT TS'AKHOLO?

1. Na u kile oa utloa ka Motebo oa lithhare le ts'ebetso cliniking ea Ts'akholo? YES \_\_\_\_\_ NO \_\_\_\_\_  
Ee \_\_\_\_\_ Che \_\_\_\_\_

HOW DID YOU HEAR THIS INFORMATION?

2. U utloile ka mang? \_\_\_\_\_

HOW MANY PEOPLE IN YOUR VILLAGE HAVE RADIOS IN WORKING ORDER?

3. Ke batho ba bakae bao u ba tsebang ba nang le lialemoea tse sebetsang motseng oa heno? \_\_\_\_\_

HAVE YOU HEARD THE HEALTH BROADCASTS?

4. Na u ke u mamele lenaneo la tsa bophelo sealemoeeng? YES \_\_\_\_\_ NO \_\_\_\_\_  
Ee \_\_\_\_\_ Che \_\_\_\_\_

QUESTIONNAIRE

DO MOST PEOPLE IN THE VILLAGE READ SESOTHO?

- 5. Na batho ba bangata ba tseba ho bala Sesotho?
- "    "    "    "    "    "    WRITE SESOTHO?
- "    "    "    "    "    "    ngola Sesotho?
- "    "    "    "    "    "    READ ENGLISH?
- "    "    "    "    "    "    ho bala Senyesemane?
- "    "    "    "    "    "    WRITE ENGLISH?
- "    "    "    "    "    "    ho ngola Senyesemane?

YES	NO
Ee	Che
YES	NO
Ee	Che
YES	NO
Ee	Che
YES	NO
Ee	Che

HOW MUCH EDUCATION DID YOU COMPLETE?

6. U thoile Sekolong u bala'ng? (Check one)

Lower primary (Grade A-Std.4)...../ /

Higher primary (Std. 5-6)...../ /

Junior Certificate or BPTC form 1-3 ...../ /

Senior Certificate or P.H. Form 4-5 ...../ /

Hihger Education ...../ /

DO THE PEOPLE NEED INFORMATION ON HEALTH?

7. Na batho ba laba-labela ho utloa ka tsa bophelo

YES	NO
Ee	Che

IF SO WHAT KINDS?

8. Ha ho le joalo ke life? \_\_\_\_\_

WHAT HEALTH ACTIVITIES GO ON IN THE VILLAGE?

9. Lits'ebeletso tsa bophelo tse teng ka har'a motse oa heno ke life?  
\_\_\_\_\_

WHERE DO WOMEN GATHER TO TALK?

10. Basali ba kopanela kae ho qoqa? \_\_\_\_\_

WHERE DO MEN GATHER TO TALK?

11. Banna ba kopanela kae ho qoqa? \_\_\_\_\_

DO YOU HAVE THE FOLLOWING RESOURCES IN YOUR VILLAGE?

12. Na tse latelang li teng motseng oa heno?

(a) WATER/SOURCE \_\_\_\_\_ WHAT DISTANCE? \_\_\_\_\_ IS IT PROTECTED \_\_\_\_\_  
Metsi a khuoa kae? Bohole bo bokae? Boemo ba Seliba

(b) DO YOU HAVE LATRINES? \_\_\_\_\_ WHAT KINDS? \_\_\_\_\_  
Matloana a boithuso a teng? Mofuta ofe?

WHAT CONDITIONS?

A boemo bofe? \_\_\_\_\_

(c) SCHOOLS? \_\_\_\_\_ WHAT KINDS? \_\_\_\_\_ DESCRIBE: \_\_\_\_\_  
 Likolo? \_\_\_\_\_ Mofuta ofe? \_\_\_\_\_ Tsamaiso: \_\_\_\_\_

(d) MISSIONS? \_\_\_\_\_ OF WHAT ORDER? \_\_\_\_\_  
 'Mishone? \_\_\_\_\_ Oa kereke efe? \_\_\_\_\_

ARE THERE OTHER RESOURCES (SERVICES)? PLEASE EXPLAIN: \_\_\_\_\_  
 13. Na ho na le lits'ebeletso tse ling? U hlalose: \_\_\_\_\_

DO MEN AND WOMEN OF YOUR VILLAGE HAVE CERTAIN BELIEFS ABOUT THE FOLLOWING:  
 14. Na banna kapa basali ba motseng oa heno ba na le litumelo tse itseng mabapi le tse latelang?  
 Ak'u hlalose:

(a) DURING PREGNANCY (CARE, NUTRITION ETC.) YES \_\_\_\_\_ NO \_\_\_\_\_  
 Nakong ea bokhachane (mabapi le lijo, le tse ling);  
 PLEASE EXPLAIN: \_\_\_\_\_  
 Ak'u hlalose: \_\_\_\_\_

(b) DELIVERY? YES \_\_\_\_\_ NO \_\_\_\_\_ PLEASE EXPLAIN \_\_\_\_\_  
 Ho pepa Ee \_\_\_\_\_ Che \_\_\_\_\_ Ak'u hlalose \_\_\_\_\_

(c) ABOUT DEFORMED (HANDICAPPED) CHILDREN? YES \_\_\_\_\_ NO \_\_\_\_\_ PLEASE EXPLAIN \_\_\_\_\_  
 Bana ba hlahang ba holofetse? Ee \_\_\_\_\_ Che \_\_\_\_\_ Ak'u hlalose \_\_\_\_\_

(d) DURING POSTPARTUM YES \_\_\_\_\_ NO \_\_\_\_\_  
 Nakong ea Setsoetse hang ka mor'a ho pepa? Ee \_\_\_\_\_ Che \_\_\_\_\_  
 PLEASE EXPLAIN \_\_\_\_\_  
 Ak'u hlalose \_\_\_\_\_

(e) CUSTOMS CONCERNING FOOD? YES \_\_\_\_\_ NO \_\_\_\_\_ PLEASE EXPLAIN \_\_\_\_\_  
 Meetlo e amanang le lijo? Ee \_\_\_\_\_ Che \_\_\_\_\_ Ak'u hlalose \_\_\_\_\_

ARE THERE ANY OTHER CUSTOMS OR BELIEFS IN YOUR VILLAGE YOU CAN TELL ME ABOUT? YES \_\_\_\_\_ NO \_\_\_\_\_  
 15. Na hona le meetlo e meng eo u ka mpoellang ka eona? Ee \_\_\_\_\_ Che \_\_\_\_\_

PLEASE EXPLAIN \_\_\_\_\_  
 Ak'u hlalose \_\_\_\_\_

WHAT ARE COMMON DISEASES OF THE CHILDREN IN THIS VILLAGE? \_\_\_\_\_

16. Mafu a khathatsang bana ke afe? \_\_\_\_\_

WHAT CAUSES THEM? \_\_\_\_\_

17. A bakoa keng? \_\_\_\_\_

IS THERE A DOCTOR IN THE VILLAGE? ANY KIND EVEN A TRADITIONAL DOCTOR? \_\_\_\_\_

YES \_\_\_\_\_

NO \_\_\_\_\_

18. Na le na le ngaka motseng? Ea mofuta ofe kapa ofe, le ngaka matsetsela? Ee \_\_\_\_\_

Che \_\_\_\_\_

(a) IF SO, GIVE NAME: \_\_\_\_\_

AGE \_\_\_\_\_

MALE/FEMALE \_\_\_\_\_

Haeba e teng, fana ka lebitso: \_\_\_\_\_

Lilemo \_\_\_\_\_

Monna/Mosali \_\_\_\_\_

(b) DO MOST PEOPLE GO TO HIM? \_\_\_\_\_

YES \_\_\_\_\_

NO \_\_\_\_\_

Na batho ba bangata ba ea ngakeng ee? \_\_\_\_\_

Ee \_\_\_\_\_

Che \_\_\_\_\_

(c) WHAT SERVICES DOES HE GIVE? \_\_\_\_\_

Ba sebeletsoa ka mekhoe efe? \_\_\_\_\_

Ak'u hlalose: \_\_\_\_\_

(d) DO PEOPLE GO TO THE VILLAGE DOCTOR BEFORE GOING TO THE EUROPEAN DOCTOR OR VICE-VERSA? \_\_\_\_\_

Na batho ba ea ngakeng ea motse pele ba e-ea ho ea sekhoaa ka ho ea sekhoaa e hlotsoe? \_\_\_\_\_

WHO DELIVERS BABIES IN YOUR VILLAGE? \_\_\_\_\_

19. Ke mang ea pepisang motseng oa heno? \_\_\_\_\_

PLEASE GIVE NAMES \_\_\_\_\_

AGE \_\_\_\_\_

Ak'u fane ka lebitso \_\_\_\_\_

Lilemo \_\_\_\_\_

ABOUT HOW MANY BABIES DID SHE/HE DELIVER LAST YEAR? \_\_\_\_\_

Mabitso, le hona o se a pepisitse ba bakae selemong se fetileng? \_\_\_\_\_

IS SHE/H/ TRAINED? \_\_\_\_\_

YES \_\_\_\_\_

NO \_\_\_\_\_

WHERE \_\_\_\_\_

Na o kile a rupeloa? \_\_\_\_\_

Ee \_\_\_\_\_

Che \_\_\_\_\_

Ho kae? \_\_\_\_\_

IF A YOUNG COUPLE IN YOUR VILLAGE WERE TO GET MARRIED, HOW MANY CHILDREN DO YOU THINK THEY WOULD WANT TO HAVE? \_\_\_\_\_

20. Baroetsana le bahlankana ba holileng ha ba nyaloa kapa ba batla ho nyala, ekaba ha u nahana ba ka thabela ho ba le bana ba bakae? \_\_\_\_\_

CODE

IV

QUESTIONNAIRE

HOW MANY BOYS WOULD THEY LIKE TO HAVE? \_\_\_\_\_ GIRLS? \_\_\_\_\_  
Ba ka thabela bashanyana ba bakae? \_\_\_\_\_ Banana? \_\_\_\_\_

HOW LONG A TIME WOULD YOU LIKE BETWEEN ONE CHILD AND THE NEXT ONE? \_\_\_\_\_  
Uena u ka thabela hore bana ba hau ba sieane ha kae kapa ba hlahlamane ka lilemo tse kae? \_\_\_\_\_

CODE



MODEL VILLAGE BASELINE SURVEY OF HA PHECHELA

TS'AKHOLO DEMONSTRATION PROJECT

JANUARY 1976

A REPORT TO THE MINISTRY OF HEALTH OF THE GOVERNMENT OF LESOTHO

SUBMITTED BY: THE UNIVERSITY OF CALIFORNIA EXTENSION/SANTA CRUZ  
DIVISION OF INTERNATIONAL PROGRAMS, CONTACT NO. AFR-799  
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

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MODEL VILLAGE BASELINE SURVEY OF HA PHECHELA  
TSAKHOLO DEMONSTRATION PROJECT

TABLE OF CONTENTS

	Pages
I. BACKGROUND	
A. Model Village Concept	1 and 2
B. Objectives of the Survey	2 and 3
C. Target Population and Geographic Location	3
D. Characteristics of the Area	3 and 4
E. Definition of Household and Study Design	4 to 6
II. RESULTS OF THE THREE-PART SURVEY	
PART I : Head of Household	7 to 12
PART II : Women in Fertile Years (15-49)	13 to 18
PART III: Older Women	19 to 20
III. DISCUSSION	21 and 22
IV. CONCLUSIONS	23
V. RECOMMENDATIONS	24

FIGURES

Figure 1 - Age-Sex with Defacto and Dejure Population and Table 1 Supplement	25
Figure 2 - Household Heads. Perceived Ideal Number of Children Desired by Young Couple and Parents of the Young Couple	26
Figure 3 - Women (15-49 Years). Perceived Ideal Number of Children Desired by Young Couple and Parents of the Young Couple	26

APPENDICES

A. Tables 1 to 50. Head of Household Results.	A-1 to A-18
B. Tables 1 to 41. Women in Fertile Years (15-49).	B-1 to B-16
C. Tables 1 to 11. Older Women Results.	C-1 to C- 5
D. Questionnaire.	

## MODEL VILLAGE BASELINE SURVEY OF HA PHECHELA

### BACKGROUND

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#### A. Model Village Concept

Early in 1974 the broadly defined "health team" at the Ministry of Health's Ts'akholo Demonstration Maternal and Child Health Project indicated concern about the applicability to villagers of certain demonstration efforts carried out at the clinic site, such as poultry production, communal garden project, etc. This team consisted of a collaborative effort of health personnel, various extension workers from the Ministry of Health as well as other government and private groups and members of the community. The team believed that the idea of a demonstration would be most relevant and would "snow-ball" to the villagers if it took place in a village itself rather than at a prescribed institutional setting. The team began to meet regularly to determine how such a scheme might be accomplished. (a)

The following purposes for a "Model Village" were agreed upon: It was desired to

1. Motivate the people in the village to become aware of their broadly defined health needs (i.e., improved crop methods, use of clinic, etc.);
2. Motivate the people to take measures to promote a healthier environment and to carry out health practices for themselves and their children;
3. Provide a learning model for other villages through the effort of the village itself.

Some assumptions were defined. It was assumed that:

1. The people are interested in improving the status of their own health.
2. Community health can be improved in large measure by the efforts of the community itself.
3. Agencies and individuals working in health and health related fields (agronomy, livestock, nutrition, etc.) can use teamwork and motivation effectively to carry out the above objectives.
4. This effort would bring better organization and utilization of health resources but not increase cost or manpower requirements.
5. Demonstration in the village is more effective than demonstration at the health centre or outside the village.

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(a) Acknowledgement to Ts'akholo Team.

The team met with outside consultants and their respective department heads to determine the best way to define selection criteria for a model village. Based upon available population data, and accessibility for trainees coming for field work at Ts'akholo, five village groups of 250 people or more were identified as potential 'model villages'. The respective chiefs or headmen were gathered to "draw from the hat" that village which would be accepted as the model village. At this juncture a "control village" received consideration by the group but was rejected due to the possible implications of favoritism and bias. The group realized the importance of gathering baseline data, prior to initiation of the scheme, to measure the village's progress against itself in two years time and again in five years time. Every team member contributed to the list of baseline data which he or she felt was essential and could be measurable as an index of accomplishment. This took several months, during which time various experts met with the team to advise them on their questions.

The lists were reduced to a workable size by the respective department heads in Maseru who met regularly with both the project staff and the Senior Medical Officer of Health who were more familiar with already existing national baseline data which included the chosen model village, Ha Phechela.

The format for final framing and wording of questions was determined by the Health Education and MCH Project staff in Maseru in consultation with others who were conducting surveys in Lesotho who could advise on collection of comparable data. The survey was not intended to duplicate on-going or projected national surveys for the area. The process herein described took place over a period from late 1974 through much of 1975. At this time other health institutions indicated an interest in a similar effort in their regional areas. This was encouraged and the final questionnaire became a pilot survey in itself, to determine the validity and practicability of administering a relevant public health survey in a rural village which could be replicated in other parts of the country using similar techniques, given the constraints of limited manpower and budget.<sup>(b)</sup> The remainder of this document reports the findings and constraints of this pilot survey and includes a copy of the three-part questionnaire in its revised form.

## B. Objectives of the Survey

The pilot questionnaire was administered at Ha Phechela to accomplish the following objectives:

1. To gather data about a village, its population and its public health and health-related practices. Portions of this data are to be baseline data, measured against certain targets in two years time and five years time as indices of accomplishment in that village.

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(b) Acknowledgement needs to be made to the S.M.O.H., Dr. S. G. Mohale, who recognized and encouraged the important implications of a broad replicable public health survey for various villages in the country and for the appropriation of time and manpower in developing a model questionnaire.

2. Test the pilot questionnaire in terms of its validity for framing of questions, understanding of questions by villagers, and ease in administration.
3. Establish a teaching and evaluation tool for those concerned with public health status in the country.
4. Develop a final model questionnaire which would have relevance to public health and could be replicated in other rural areas of Lesotho.
5. Supplement clinical data and other survey work in the Ministry's demonstration zone at Ts'akholo.

#### C. Target Population and Geographic Location

Ha Phechela was selected as a model village through a selection process agreed upon by chiefs in that area as described under Background, Page 2. It is listed in the 1966 Population Census report under Enumeration Area 39.14 as comprising a population of 390 people, and is located approximately one quarter kilometre east of the Ts'akholo Health Centre, Mafeteng District.

At the time of the survey, January 1976, the reported population of Ha Phechela according to lists provided by household heads was de jure 573, de facto 467. This difference is primarily due to the absence of fifty-eight males as shown in the Age-Sex population pyramid for Ha Phechela, Figure 1. The discrepancies between this pyramid and the classic textbook age-sex pyramid can be attributed to sampling variation, i.e., the pyramids of Figure 1 are for a single small village. Age-sex pyramids of populations are generally based on data from much larger populations. There appears to be relatively fewer males under five years in Ha Phechela for which there is no obvious explanation of which the authors are aware. The age-sex distribution presented in Table 1 and Figure 1 appears to be a reasonable finding for a single small village.

Ha Phechela itself is by estimate about one by one-half kilometres in area. The boundaries are established in the traditional way and have remained reasonably stable over the past twenty-plus years under the chieftainship of Chieftainess (Mofumahali) Maqoli Seliane and Ward Chief Sentle Mojela. To its north and east it is approximately ten kilometres from Lesotho's boundary with the Republic of South Africa (RSA); approximately twenty-five kilometres, or one hour travel time west by motor vehicle, is Lesotho's district camp of Mafeteng. This region of Lesotho is considered to be dry lowland with arable land inside its entire boundary.

#### D. Characteristics of the Area

About one-half kilometre north of Ha Phechela is a small veterinary clinic established under the Ministry of Agriculture which recently, in 1975, added a cooperative wool/mohair shed. A dairy scheme under the Ministry of Agriculture was introduced to this general area in 1964 and turned over to the community to maintain in 1968. It was found to be lacking any substantial milk production by 1973. Also under the Ministry of Agriculture is a nutrition extension scheme located at Mapotu, about eight kilometres south of Ha Phechela. Community and Rural Development assisted in the development of protected, piped water for

Ha Pechela completed in 1970. A large borehole windmill was installed one-half kilometre west to supply several villages in the vicinity of Ha Pechela and the Health Centre. Ha Pechela itself has a separate, year-round, protected spring with piped water which is often depended upon by surrounding areas, including the Health Centre, when other supplies fail or droughts affect the area.<sup>(c)</sup>

Within the boundaries of Ha Pechela is a large primary school originally established by Roman Catholic missionaries but now under government sponsorship. In 1975 it had an enrollment of 450 day students. The school has a latrine built in 1975 by the students. A Young Farmers Club was organized in a near-by village, Boiketlo, in 1971.

In close proximity to the village is a well-established traditional circumcision school for boys and initiation school for girls. There are a number of traditional practitioners (herbalists, medicine men, etc.) within easy access to the villagers.

Weather and road conditions permitting, a bus arrives daily within one kilometre of Ha Pechela. The usual customary transportation is by horseback, or cart or walking.

None of the afore-mentioned development schemes had, as an aim, appreciable employment for the villages and it was the impression of the Health Centre team that a large number of the men were employed outside of Lesotho, particularly in the mines of South Africa. The survey included questions geared to a determination of the employment pattern.

As previously mentioned, the Health Centre initiated the plan of bringing together extension workers affiliated with a wide variety of schemes to work together as a health team in the area.

#### E. Definition of Household and Study Design

Prior to the survey, the village of Ha Pechela was delineated by the Chieftainess as falling within certain boundaries. The task of household definition within those boundaries was given to the health statistics unit of the Bureau of Statistics who used the following definition: "a household is a group of people living together and sharing the same cooking facilities; they may sleep in different dwelling units of that household, but share the same cooking facilities."

Using this definition, each household was listed, numbered and painted with that number in November, 1975, in preparation for the survey. The list totaled 121 defined households.<sup>(d)</sup> It should be noted that by January, 1976, two of these households had been abandoned and not re-established due to family death in the interim. Two household heads and family were away in Johannesburg

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(c) Community and Rural Growth Centres of Lesotho, Department of Community Development, Government of Lesotho, 1971.

(d) Acknowledgement is made to the statistical officer Health Statistics Unit of the Bureau of Statistics for supervision of the household enumeration.

attending funerals, and one household head was said to have disappeared. One hundred and fifteen households were interviewed of the listed 121 in November.

The questions are taken from field problems which a variety of extension workers and Health Centre staff faced in trying to answer:

1. What practices affecting health are observed in the village?
2. What would you like to see being done differently two years from now, five years from now?

Practices affecting health were realistically broad, hence it became as important to know about selected agricultural practices as use of the current health delivery system traditional and modern. Knowledge about certain subjects was felt to be important; for example, it was determined if the child had received BCG, then the mother was asked if the child was protected against tuberculosis to see if she related the vaccination to its purpose. Some of the questions were designed to learn the prevalence of certain customs and traditions being practiced in the village, e.g., "Do the young women in this household eat eggs?"

It was concluded that, in addition to observations, photographs, and discussion with the chief, three specific groups of people would need to be surveyed:

1. All household heads;
2. All women in their reproductive years;
3. All older women.

When appropriate, questions were worded within the context of a specific time frame for easy recall and later comparability, for example, "Did you ever sell part or all of this oil in the past three months?"

Translations into Sesotho were provided by MCH Project counterparts.

The interviewers for the survey were sought to have the following attributes:

1. At least a J. C. level education;
2. Fluent in both English and Sesotho;
3. At least 25 years old and possessing a family.

Three of the four interviewers were recruited from a recently completed precoded health survey where they had been given two weeks of training including a general overview of terminology used in the survey, techniques of interviewing, and extensive supervised field practice. They were joined by an additional trained health worker from Scott Hospital, Morija, who would be gaining experience in interviewing in order to help to carry out the same survey in that region.

A field supervisor was also hired. Her qualifications were:

1. A University graduate with experience in research;
2. At least 25 years old and possessing a family;
3. Fluent in both English and Sesotho;
4. Experience in supervision of personnel;
5. A Mosotho.

Two of the interviewers and the field supervisor assisted in the final wording of the three-part questionnaire and participated in a supervised field test of fifteen rural households and thus gained experience prior to the pilot survey. Unfortunately, some of the coding systems incorporated into the field test questionnaire were incomplete and remained so until after the pilot survey at Ts'akholo. It was found on translation back into English that four questions were lost on the female 15 - 49 years survey and two questions on the older women's survey. The interviewers felt that more instruction should be included in the questionnaire. These changes are reflected in the three-part questionnaire, Appendix D.

## PART I: HEAD OF HOUSEHOLD SURVEY RESULTS

### CHARACTERISTICS OF THE PERSONS INTERVIEWED

It has been emphasized that over one-half of the men aged 20-49 in Ha Phechela were away from home working at the time of the survey, and it is therefore not surprising that in forty-three of the 115 households, 37.4 percent, the head was away working.<sup>1</sup> In all cases where the head of the household was present that person was interviewed, and in those 43 cases where the head was absent the acting head of the household (usually the wife) was interviewed. For simplicity the term head or household head will be used to include both actual household heads and acting household heads unless stated otherwise. The information herein concerns itself specifically with the characteristics of the household head regardless of whether or not that person was interviewed.

The household heads were seldom younger than thirty years old, only 17.4 percent, and the median age was 48.2.<sup>2</sup> As before, it is also not surprising that the majority of the household heads were female, 55.7 percent.<sup>3</sup> Only four of the household heads were never married and the vast majority, 93.9 percent, were either currently married or widowed.<sup>4</sup> Twenty-seven of the 115 household heads, 23.5 percent, had completed at least higher primary, and 85 of those responding, 75.2 percent, had completed no more than lower primary school.<sup>5</sup>

At the time of the survey, forty-six of the actual household heads, present or absent, 40.0 percent, had been employed in the previous six months for cash payment, and the median revenue received by the household for its support from the household head was R60.34 for six months or approximately R10 per month. Table 6 presents the reported revenue received by the households from the actual household heads. For the household heads in general, including acting heads, the frequencies and percents for various savings/credit activities revealed in Table 7 show that sixty-nine of those interviewed, 60.0 percent, were involved in no savings/credit activities.

It was deemed of importance to gather information as to the household heads' knowledge of health related topics, and consequently the heads were asked selected questions concerning nutrition, causes of disease, and desired family size. For example, it was believed by health workers in the area that households tended to look upon peas and beans as cash crops, not as a valuable adjunct to their diet. However, when asked to choose two foods most nutritious to their family from the list of foods in Table 8, forty-five of the heads, 39.1 percent, chose beans as one of their two choices, 16.5 percent chose peas, and forty-six, 40.0 percent, stated wheat, maize or rice as one of their choices. The responses by the household heads to the question "Do girls and young women in this family eat eggs?" are consistent with the findings reported by the authors in the Ts'akholo Village Leaders Survey.<sup>(a)</sup> Forty-eight of the household heads, 41.7

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1. All numbered references refer to like numbered Tables in Appendix A.

(a) Stubbs, H. A. and Goodale, P. K., Ts'akholo Village Leaders Survey, 1972, A Report to the Ministry of Health, Government of Lesotho.

percent, reported that girls and young women in their family did not eat eggs.<sup>9</sup> In the Village Leader's Survey, 1972, 42.9 percent of 176 village leaders responded that young women in their village were not allowed to eat eggs.

All household heads who were interviewed were asked the four questions nested in the following: "If a young Basotho couple you know were getting married, how many (boys, girls) do you think the couple (couple's parents) would like (them) to have?" The question was couched in terms of a young Basotho couple because it is a well documented finding that posing the question "If you were getting married for the first time now, how many children would you like to have?" elicits a response bias to state that whatever size family that the respondent then has is the ideal size, albeit he (she) would perhaps have preferred fewer children.<sup>(b)</sup> Hence, what has been recorded here is the household head's ideal number of children (by sex) wanted by the couple's parents for the couple. The cumulative percent distributions of ideal number of children desired by a young Basotho couple and the parents of the couple as perceived by the household indicates, in Table 10, that there is a preference for male children, and that the household heads believe that the parents of a young Basotho couple would want them to have (on the average) at least one more child of each sex than the couple themselves would prefer. The frequency, percent and cumulative percent distributions for ideal number of children desired by a young Basotho couple and the parents of the couple are displayed in Table 11 and one can again see a tendency for larger desired families by the parents of the couple. The median number in both instances is quite high, 5.7 for the couple and 6.4 for the couple's parents. It will be noticed that a potential distortion is introduced into the calculation of those medians through the inclusion of the response "As many as God gives" in the median calculations. The justification for this inclusion is that it has been our experience that the people who respond in this way, when probed, state that the desired number of children is "as many as possible".

#### GENERAL CHARACTERISTICS OF THE HOUSEHOLD

The types of family dwellings have already been described. Another important facet of the household is the actual size of the household. It was found that the number of members per household in Ha Phechela varied between one and twelve, inclusively, and median household size was then 4.05.<sup>12</sup> Eight of the 115 households had between one and five hired workers, and the total number of hired workers was sixteen. One-half of those hired workers were evenly divided among four households, i.e., two hired workers per household. There were a total of sixty-six household members who had worked for cash in the past year and sixty of these sixty-six, 90.0 percent, had been employed full time for that year. The major type of employment was underground mines, accounting for 80.3 percent of all those employed.<sup>13</sup>

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(b) A Manual for Surveys of Fertility and Family Planning: Knowledge, Attitudes, and Practice. Demographic Division, The Population Council, New York, 1970.

Approximately one-quarter of the households, 26.1 percent, owned radios which were in working order.<sup>14</sup> Table 15 presents the frequencies and percents of various types of involvement of household members in organizations. A striking proportion of the households, 92.2 percent, had at least one of their members involved in a church organization. Involvement in political organizations was less pervasive; 40.9 percent of the households reported that they had member(s) in political organizations. It can also be seen from this table that approximately one household in seven had one or more members on the Village Water Supply Committee. Only five household heads stated that no one in their household was involved in organizational activities.

A variety of handicraft skills among the household members was reported by the heads, and only four households had members with no skills such as sewing, knitting, beadworking, grass weaving or working with clay.<sup>16</sup> The most common skill among the households was clay-working, 89.6 percent, but also a majority of the households, 56.5 percent, had members who could knit or crochet. Weaving with grass was another skill available to almost one-half of the households, 49.6 percent.

Information was collected on pertinent environmental factors which influence the health of the people of Ha Phechela. Since this village is composed almost entirely of traditional dwellings, it would be expected that some of the households would have sleeping quarters with open-pit traditional fireplaces and indeed this expectation is confirmed by the data collected. As can be seen in Table 17, approximately one-third of the households, 34.8 percent, included sleeping quarters in which there was an open-pit traditional fireplace. Sixteen of the household heads, 13.9 percent, responded that their household had a latrine and the remainder, 86.1 percent, replied that their household did not have a latrine to use.<sup>14</sup>

A new piped water supply had been completed for some time prior to the survey at Ha Phechela, and the household heads were asked whether they used water from this protected source during the entire year and how they evaluated the source. Almost all of the household heads, 95.7 percent, reported that they had used the protected, piped source of drinking water the entire year, and only five of the heads, 4.3 percent, reported having used an unprotected source of drinking water at some time during the previous year. Since all of the household heads had used both water sources in the past, they were asked whether they thought that the water from the protected, piped source was higher, equivalent, or lower quality than that of the previous water source. Of the 115 household heads, 103, 89.6 percent, claimed they believed the new water source provided water of higher quality.<sup>18</sup> Furthermore, only five of the household heads stated that the protected, piped source was less reliable than the previous water source.<sup>19</sup>

Kitchen vegetable gardens were quite prevalent at the time of the survey in Ha Phechela; eighty-four of the heads reported having a garden of this type and thirty-one households did not.<sup>20</sup> Table 21 shows there is ample room for improvement in these statistics because of the thirty-one household heads stating that they had no kitchen vegetable garden, twenty-four or 77.4 percent, divulged the

fact that their household did have a suitable site for this kind of garden. Most of the gardens that did exist in Ha Phechela were in close proximity to the dwellings, with 98.8 percent of the kitchen gardens within a five-minute walk of the households maintaining them.<sup>22</sup> However, whereas the gardens were in close proximity, the source of water for the garden was often more than five minutes walk from the dwellings as 47.6 percent of the household heads reported.<sup>23</sup> It is reasonable to conjecture from Table 24 that much of the water used for the gardens was from an unprotected source or dam since sixty-one of the household heads whose households had gardens, 72.6 percent, stated that the source of drinking water was not the same as the source of water for their gardens.

The Basotho diet is believed to be deficient in high protein foods, and it was of interest to examine what high protein foods and nutritional vegetables were being grown in these kitchen gardens. The different combinations of some selected vegetables high in nutritional value are delineated in Table 25. Only fifteen of the household heads, 17.9 percent, reported that they had grown beans or peas, vegetables high in protein, in their kitchen gardens. Almost one-half of the heads, 47.6 percent, replied that neither squash, beans, nor peas were grown in their gardens. The number of households growing peas or beans was too small for descriptive purposes, but it can be seen from Table 26 that a majority of the households growing squash, 76.6 percent, did so strictly for household consumption. The source of seeds for the squash grown in these gardens was Co-op Lesotho in only four cases, 10.8 percent of the households, and seeds were most commonly saved from the previous year's crop.<sup>27</sup> Irrespective of maintaining gardens, seventy-three of the households, 63.5 percent, had fruit trees.<sup>28</sup>

Most of the households, 76.5 percent, reported having livestock<sup>29</sup> and fifty-six of the households, 48.7 percent, raised poultry.<sup>30</sup> Seventeen of the households, 14.8 percent, had eleven or more chickens at the time of the survey, and almost 10 percent of the households each had more than twenty-one chickens. The type of chickens owned, brooder or layer, was unspecified during the collection of data, but from Table 31 it can be surmised that most of the chickens owned were layers. Of all the chickens owned by the households in Ha Phechela, only nineteen had been slaughtered in the previous six months for household consumption. Additionally, only nine chickens had been slaughtered for sale during the same time.

Thirty-four of the households, nearly three of every ten, or 29.6 percent, reported that they had milk cows,<sup>32</sup> and the amount of milk produced by these cows for each season is given in Table 33. Seasonal fluctuation of milk production presented in this Table is possibly due to the animals being bred. It is encouraging to see in Table 34 that over three-quarters of the households owning milk cows, 76.5 percent, used the milk produced by these animals for household consumption only. The remaining households consumed and sold the milk produced by their cows. The amount of milk acquired by the households in Ha Phechela through purchase, exchange or work is depicted in Table 35. One can surmise that perhaps thirty-four of the thirty-eight households not acquiring milk by these means in the last six months were the households which had milk cows, and hence, had no need to acquire milk.

#### AGRICULTURAL ASPECTS

As befitting an agrarian community, only six of the 115 households, 5.2 percent, owned no fields, and fifty-three of the households, or 46.1 percent, had

three or four fields.<sup>36</sup> For whatever reason, however, it is discouraging to see the low level of application of modern agricultural practice evinced in Table 37. One can glean from this Table that ninety-one of the households owning fields, 83.4 percent, utilized their previous crop as the source for some, or in eighty-eight of the cases all, of their seeds. The reliance on this source of seeds by the households may be due either to ignorance or economics. The most reliable source of seeds is the Lesotho Co-op, but this source may be under-utilized by the households since the Co-op does not extend credit. The rate of use of seeds treated for protection against cutworm and other pests is perhaps low for these same reasons.<sup>38</sup> There appears to be a lack of knowledge about treated seeds since a large portion of the heads, 59.1 percent, were unaware that seeds treated as protection against cutworm and other pests were poisonous.<sup>39</sup> It is interesting to notice that only fifteen of the households grew beans or peas in their kitchen gardens, and of the 115 household heads, 109, or 94.8 percent, chose beans or peas from a list of other crops as being good cash crops.<sup>40</sup>

Twelve of the household heads, 10.4 percent, reported that one of their household members had attended an agricultural course in the previous year, and the majority of those members, eight of twelve, attended this course during January, February or March of 1975.<sup>41</sup> However, five of the twelve household heads whose households had members attending agricultural courses stated that they perceived no changes in fertilization, seed source, or cultivation practices after the return of this member. Also, only six of the household heads, 5.2 percent, stated that they sought advice from the Agricultural Department concerning seed selection during 1975.<sup>42</sup>

Household participation in such soil conservation efforts as tree-planting, terracing or damming were reported by thirty of the households, 26.1 percent.<sup>43</sup> Participation of the households on tree-planting day (March 21, 1975) was widespread. Sixty percent of the households planted at least one tree that day, and 11.4 percent of the household heads stated that members of their household planted ten or more trees on that day.<sup>44</sup>

Selected indices to establish illness patterns among the households of Ha Phechela are contained in Table 45 which gives the frequencies and percents of incidence of these health problems among the households in the three months prior to the interview. For future comparison, allowance must be made for the fact that these conditions are perhaps seasonal and this survey was conducted in the unusually wet summer of 1975-76. The most commonly reported ill condition was cough; 62.6 of the households reported members manifesting that particular problem. Skin sores, diarrhea and vomiting were each reported by more than one-fifth of the households, and incidence of pellagra had occurred in one household in ten. No households had more than one case of tuberculosis; there were nine cases reported,<sup>46</sup> of which only two were currently on treatment.<sup>47</sup> This does not, however, indicate that there were seven untreated cases of tuberculosis since some or all of these cases not on treatment may have been old cases. There were sixteen births in Ha Phechela during 1975 and no instances of child birth deaths. Seventy-six household heads, 66.1 percent, stated that one or more of their household members had been sick in the previous three months.<sup>48</sup> Only 6.6 percent (5 cases) of all sicknesses reported were untreated. A modern source of treatment was sought in sixty-one of the seventy-six instances.<sup>49</sup> In ten situations a traditional healer was sought, but in seven of these ten cases a modern type of medical care (doctor, nurse, clinic, etc.) was also sought.

Since Ts'akholo clinic is within one-half of a kilometre of Ha Pechela, information was obtained on the frequency and nature of clinic attendance by members of the household. Table 50 displays the utilization pattern of the Ts'akholo clinic by the households, and it can be seen that the most common mode of care sought at the clinic was either general care, 41.7 percent of the households, or pre-school care, 36.5 percent.

PART II: WOMEN IN THE FERTILE YEARS (15-49 YEARS)

The women in Ha Pechela aged 15-49 years were interviewed at approximately the same time as the heads of households, and, in almost all cases, exclusively in private with the interviewer. It is known from the household lists that the number of women in this age group in Ha Pechela at the time of the survey was 104, and the final sample of women obtained numbered 93, 89.4 percent. The interviews were accomplished during an intensive two-week period, and women who had been missed during this time period were sought out at a later date. Initially there were twenty-three women not interviewed, and the follow-up during a two-day weekend in March was successful in interviewing fourteen of these women. The reasons given for the missing women during this second stage of interviewing were most commonly that either the women were away at school, shopping or in another village delivering their first child. Consequently, an examination of Table 1, Appendix B,<sup>1</sup> will yield the fact that the women in the age groups 15-19 years and 20-24 years are under-represented in the sample when one compares this table to the age-sex distribution presented in the introduction. Some discrepancies exist due to the fact that the household heads were interviewed privately, and their perception of their household members' ages cannot be assumed to be precise. The median age of the ninety-three women interviewed was 30.12 years, and the complete age distribution is represented in Table 1. The respondent's relationship to the household head was most frequently the spouse of the head, 60.2 percent of the women responding thus.<sup>2</sup> Only seven of the women, 7.5 percent, were never married and the vast majority of the women, 83.9 percent, were currently married.<sup>3</sup> Almost all of the women, eighty-eight of the ninety-three interviewed or 84.6 percent, had completed either lower or higher primary school, one woman had no education, and four had completed Junior Certificate.<sup>4</sup> Table 5, Handicraft Skills, should suffice to complete this profile of general characteristics of the women in the fertile years in Ha Pechela. Consistent with the data reported by the household heads, 95.7 percent of the women stated they could work clay, and 55.9 percent reported that they could crochet or knit.

CHILD SPACING AND PREGNANCY HISTORY

The women were asked careful questions about their entire pregnancy history and their participation in any recent deliveries. Much of this information was collected as baseline data and will not be given extensive treatment in this report. There were seventeen nulligravid (never pregnant) women, 18.3 percent, and the remainder of the women interviewed had been pregnant, 81.7 percent.<sup>6</sup> The distribution of number of pregnancies terminated in the last five years is displayed in Table 7 of Appendix B. The modal number of pregnancies terminated during the five years was one, and it is also of interest that there were sixteen multiparous women, 17.2 percent, who had not conceived during that time. It can also be seen that sixty women accounted for the ninety-three pregnancies during 1971-75. There was some pregnancy wastage among those women pregnant during the

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1. All numbered references refer to like numbered Tables in Appendix B.

five years, and six of the women, 10.0 percent of those pregnant, each experienced a stillbirth or abortion, and there was one woman who accounted for two.<sup>8</sup> If one cares to calculate a stillbirth/abortion rate on the basis of this information, it would be eight per ninety-three pregnancies terminated, or approximately eighty-six per thousand. The number of births among the women interviewed in Ha Pechela was twelve in 1974 and sixteen in 1975. The distributions of numbers of living children by sex will be deferred at this point until the upcoming comprehensive discussion of the children themselves.

The complete pregnancy histories were also used for determination of birth interval baseline for the women in Ha Pechela. For the purpose of this document, recent birth interval refers to the interval in months between the most recent pregnancy termination and the termination of the pregnancy immediately prior to that in all women 15-49 years old, whose most recent birth occurred in the five-year interval 1971-75. For obvious reasons, this does not include women pregnant at the time of the survey, nor primiparas. Using a chart, spacing in months was counted from the month following her second to last pregnancy termination, to and including the month in which she most recently terminated a pregnancy. The outcome of each pregnancy was noted, whether ending in stillbirth, abortion, live term or live premie. If she had had two or more pregnancies during that time interval, only the most recent was counted.

Table 9 shows the age distribution of the 46 women whose pregnancies met this criteria. As noted, the four age groups 25-29, 30-34, 35-39 and 40-44 have similar total numbers and comparisons were made in average birth interval. It is important to bear in mind that we are not looking at the same woman over time but at different women in different age groups at that time. With this fact clear, the observer will notice a significant shift amongst younger women, 25-29, where the average interval was 38.5 months, to the women ten years older, 35-39, where the average interval was 28.4 months. The lengthy spacing in older women, 40-44, is skewed by two pregnancies with intervals of 70 and 74 months in known women who had considered themselves menopausal and who either were not using or not properly using means to prevent pregnancy. The distribution of spacing interval in the women 40-44 was 24 months to 61 months when these two extremes were excepted, or an average interval of 40.5 months between pregnancy terminations. Amongst women 25-29, the distribution was quite different, being from 19 months to 58 months, and in women 35-39, from 23 to 36 months.

Because of the apparent shift in average birth intervals between younger women 25-29, and women 35-39, it was important to examine the pregnancy interval in the latter group when they were younger, ten years previously, to see if any patterns emerged. Table 10 compares these findings. Table 10 demonstrates a different pattern amongst the same woman over time, which is in marked contrast to the current generation of women 25-29.

The latter situation may be partially explained by total pregnancy histories and now-alive status of all babies born alive to ever-pregnant women 15-45 in Ha Pechela. Table 11 shows the total pregnancies of all ever-pregnant women 15-45 in that village, a total of 66 women, with the number of babies born alive and now alive further elaborated in Table 12.

All of the ever-pregnant women were asked the location of their most recent birth (last baby). It should be remarked here that due to the nature of the question, some women perhaps alluded to a birth ten or fifteen years previous to the interview; and it will be recalled that there were sixteen multiparous women

who had not terminated a pregnancy in the five years before the interview. Consequently the data in Table 13 can be considered to be partially contaminated by these women who had perhaps referred to a long-past birth. Thirty-four of the seventy-six ever-pregnant women stated that their most recent birth had been delivered at their homes in Ha Phechela, and twenty-eight of the women, 36.8 percent, reported delivering in either a hospital or health centre. The person who assisted the most recent delivery was often a relative, 48.7 percent of these delivering, and a trained midwife delivered twenty-eight of the women, 36.8 percent.<sup>14</sup>

All women were asked why they thought some women preferred to deliver at home rather than at a clinic or health centre, and the various responses are included in Table 15. Only one of the ninety-three women stated that traditional beliefs or customs was the possible reason for a woman preferring to deliver at home. In the narrative several women volunteered finances as a reason. This became a separate category in the revised questionnaire.

All of the women in Ha Phechela who were interviewed were queried about the number of deliveries in which they assisted in the previous twelve months, and ten of the women, 10.9 percent, reported that they had assisted in one or more deliveries. Six of these ten women had assisted in more than one delivery and two women reported assisting in eight deliveries.<sup>16</sup> The practices revealed in Table 17 are consistent with those presented in the Ts'akholo Village Leaders Survey referred to earlier. Eight of the ten women stated that a sharp reed (probably taken from the roof of the hut as custom dictates) was used to cut the umbilical cord. However, the most often applied dressing or binder was reported to be of modern type.<sup>18</sup> It should be emphasized that these statistics presented can be misleading since the four women who reported using no dressing or a traditional poultice may have been the four women in Table 16 who had attended the most deliveries. The interpretation is further complicated by the fact that in Lesotho it is common for more than one woman to assist a delivery. It has been reported that there were sixteen births in Ha Phechela in 1975 and Table 16 accounts for thirty-four delivery attendance experiences. Therefore, either many of the women were referring to births assisted in other villages or some of these women were simultaneously present for at least some of the births.

The questionnaire included several questions concerning attitudes and practice of breastfeeding, and Table 19 reveals that most children are weaned before their second birthday and that of the sixteen women with children aged 1-2 years, fourteen, or 87.5 percent, were still breastfeeding that child. The women who were breastfeeding children under one year of age were asked when they planned to wean their baby and twelve of those women, 66.7 percent, stated that they would like to fully wean the child at two years.<sup>20</sup> The remaining women were asked the manner and weaning age of their last baby. The distribution of the latter is presented in Table 21 where the median weaning age is 22.0 months, almost two years. The statistics collected from these women about the manner of weaning their last baby is quite disconcerting in that twenty-seven of the thirty-eight women, 71.1 percent, related that their last baby had been weaned overnight.<sup>22</sup>

Similarly, as in the household head survey, the women were asked a series of questions concerning the ideal number of children by sex for a young Basotho couple and the number of children their parents would want them to have. As seen in the previous section, there is a slight preference for male children, and a

consistent perception that the parents of the young couple would want them to have at least one more child of each sex than the couple themselves would want.<sup>23</sup> However upon examination of the data presented in Table 24, one finds that the average (median) woman's perceived ideal number of children is 5.02 for the couple and 6.16 for the couple's parents. Overall then, the women responding to these questions perceived the couple's parents desiring the couple to have approximately one more child than the couple would desire. One must notice that these questions frequently were answered by the women by "I don't know". The percent of the time this response was given varied by question from 19.4 percent to 32.3 percent.

The logical extension of these questions regards knowledge of ways to attain one's ideal number of children, and consequently women were asked if they were aware of two methods to plan their families. If the assumption is made that a woman would mention a modern method of contraception before a traditional method, then one can deduce from Table 25 that only 43.0 percent of the women knew of at least one modern method of contraception, and 48.4 percent of the women knew of no methods, whether traditional or modern with which to plan their families. Of the modern methods, the pill was the most widely known since 36.5 percent of the women stated the pill as the first or second contraceptive method of which they had knowledge.

To ascertain the extent of the women's knowledge of protein foods important to their children, all the women were asked to name two foods for growth of children (body building food), and their responses were categorized according to Table 26. The striking feature of this Table is that 91.3 percent of the women named either meat, poultry, fish, milk or eggs as their first choice. Another 41.8 percent of the women chose another food from these five as their second choice. To provide corroboration with data in other parts of the survey, the women were also asked if their female teenagers eat eggs, an available source of protein in Ha Phechela. Consistent with both the Village Leaders Survey and the household head portion of this survey, it was found that 40.9 percent of the women reported that female teenagers in Ha Phechela did not eat eggs.<sup>27</sup>

There were fifty-two women in Ha Phechela who had at least one child under five years old and were therefore eligible to receive food and cooking oil from the Ts'akholo pre-school clinic; and all but four of these eligible women, 92.3 percent, received food and cooking oil from the clinic.<sup>28</sup> Most of the women receiving food or oil, 79.2 percent, used this food or oil for other members of the family.<sup>29</sup> For more than one-half of the women, the food or cooking oil received was used by four or more other family members.<sup>30</sup> It is encouraging that none of the women receiving cooking oil reported that they traded or sold the oil nor did any of the women state that they used the oil for preparing food (e.g., Makoonya (fat cakes)) to sell.

#### THE CHILDREN OF THE WOMEN

Before departing on a discussion of the children fifteen years of age and under, it should be emphasized that discrepancies which exist between the age-sex distributions in the introduction, and the following age-sex distributions, are principally due to the household heads, and particularly male household heads, not knowing the correct age of the children in their household. Furthermore, the

data presented here are for women aged fifteen to forty-nine years and their children of ages under fifteen years. Consequently, there is no information here regarding children of these ages whose mothers are older than forty-nine years old; and the data presented is for children under fifteen years of age whose mothers are under forty-nine years and not for all children in Ha Phechela under fifteen years old. Table 31 contains the frequency, percent, and cumulative percent distributions of the number of living children aged five to fifteen years by sex of ever-pregnant women. Exactly one-half of the ever-pregnant women had at least one girl in this age range, and more than one-half of the seventy-six ever-pregnant women, 52.6 percent, had at least one boy of age five to fifteen years. The children under five years are of particular interest, and the numbers of women with children in the various age groups are given in Table 32. Registration in the pre-school clinic of the Ha Phechela children of those ages was almost complete. Sixteen of the eighteen infants under one year, 88.9 percent, and all fifty-seven of the children aged one to five, had been registered at the Ts'akholo pre-school clinic.<sup>33</sup>

For the children under one year the status of immunization for various diseases was frequently unknown by their mothers. For smallpox, tuberculosis and Rubeola (measles), diseases for which immunization normally requires one vaccination or injection, from three to six of the eighteen women, 16.7 percent to 33.3 percent, did not know whether their child had been immunized.<sup>34</sup> At least one-half of the women reported that their children had been immunized for tuberculosis and Rubeola, but only six of the women, 33.3 percent, knew that their children had been immunized against smallpox. Table 35 further demonstrates a lack of knowledge on behalf of the women of received immunizations of their children. Five of the women, 27.8 percent, did not know how many shots of the three-shot series for Diphtheria, Whooping Cough, and Tetanus (DWT) their child had received, and seven of the women, or 38.8 percent, did not know the number of polio oral vaccine doses their child had been given.

The level of basic immunization for polio, DWT, and tuberculosis among the children in the ages one to five years was extremely high, however. At least 93.0 percent and as high as 98.2 percent of these fifty-seven children had received basic immunization series against these three diseases at the time of the survey.<sup>36</sup>

There were forty women who had children under five years of age and there were no reported cases of nutritional disorders in the past three months among these children by the forty women. However, there were seven women that reported children in these ages who had gastrointestinal disorders in the same time period.<sup>37</sup>

Since some of the children over five years old were away from home attending school it is of interest to ascertain how many children of ages five to fifteen years were actually living at home. It is known from Table 31 that there are a total of 134 children in this age category, and one can determine from Table 38 that 106 of these children, 62.1 percent, were actually living at home.

Using the data contained in Table 39 concerning school attendance among the children in conjunction with Table 31, it is surprising to note that relatively more boys were attending school than girls. Fifty-two of the sixty-six boys

aged five to fifteen, 78.8 percent, were attending school at the time of the survey whereas only 55.9 percent of the sixty-eight girls were attending.

Young Basotho boys are frequently the shepherds for the family livestock, and those women who stated that they had boys in the ages of five to fifteen years were asked how many of their boys were shepherds. Exactly three-quarters of the women responded that at least one of their boys was a shepherd, and the total number of shepherds reported was forty-two of a possible sixty-six, or 63.6 percent.<sup>40</sup> It should be mentioned that the ten women who stated that none of their sons were shepherds may come from households that did not own livestock, but this is purely conjectural. All of the women who reported having sons as shepherds stated that these boys received two or more meals a day at home.<sup>41</sup>

### PART III: OLDER WOMEN SURVEY RESULTS

#### INTRODUCTION

Because of their known influence, particularly in decisions affecting maternal and child health, older women were interviewed from fifty-one of the households. This represents 100 percent of the women over fifty listed as residing in Ha Phechela. The questions were aimed at learning about their actual practices concerning childbirth and their opinions about certain conditions which influence maternal and child health.

#### PROFILE OF SELECTED CHARACTERISTICS

The median age of the 51 older women (i.e., 50 years of age and older) was 59.8 years and the age distribution is given in Appendix C.<sup>1</sup> More than three-quarters of the women, 75.5 percent, had completed at least lower primary but few of the women (5 women, 9.8 percent) had completed higher primary.<sup>2</sup> Not surprisingly for a rural population, it was found that 48 of the 51 women interviewed, 98.1 percent, had lived in Ha Phechela for more than fifteen years.<sup>3</sup> The older women were asked what handicraft skills they had and 41 women reported that they could work clay for pots, etc. Thirty-two of the 51 women could also weave grass for hats, baskets, and/or mats. Working clay was a skill possessed by most, 80.4 percent, of the older women and weaving grass for baskets, mats, etc., was also a widely held skill, 62.7 percent.<sup>4</sup> Only two of the older women stated that they had no handicraft skills. Clinic attendance among the Ha Phechela older women was moderately high, since it was found that 25 of the 51 women, 49.0 percent, had attended the clinic at Ts'akholo in the last six months.<sup>5</sup>

#### RESULTS

The 51 women interviewed reported a total of 64 delivery attendance experiences in the past year. These 64 experiences were distributed among 26 of the women, and among these women the average number of deliveries attended was 2.6.<sup>6</sup> Twenty-five reported assisting no deliveries in the last year. Of the 26 women reporting that they assisted deliveries in the last year, eighteen, 66.6 percent, stated that a sharp reed taken from the roof of the hut was used to sever the umbilical cord. This is consistent with other reported traditional practices.<sup>7</sup>

As shown in Table 8, 30 of the 51 women, 58.8 percent, indicated that eggs should be restricted as food for young girls. A majority stated that this is for reasons handed down traditionally (custom). Of those who gave specific reasons, eggs were most commonly restricted so that snow doesn't fall on the woman's wedding day and to later assure an easy labor. Four women stated that eggs are restricted until girls are fully grown and married, at which time they are given to her as a special food by her husband's mother. Of the 21 older women who expressed no restriction, 4 specifically indicated that eggs help the young girl to grow up to be strong.

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1. All numbered references refer to like numbered Tables in Appendix C.

When asked to list two important foods to promote growth (body building) of a child, 44 women, or 86.3 percent, listed milk as one of the important foods.<sup>9</sup> Forty-eight older women, 94.1 percent, listed porridge. Of the 48 listing porridge, 14 specifically described this porridge as mabele or leshele-shele (sorghum porridge), and one as oats. Two women listed eggs as important for growth. One woman responded soup, and one responded water. There were no other foods recommended for body building by the older women.

The older women were asked how many children they thought a young newly-married Basotho couple would want, how many of each sex, and how many children they thought the parents of the young couple would want them to have. In all cases, as can be seen in Tables 10 - 11, the predominant responses were either "Don't know" or "It's up to God." The noteworthy finding was that 14 of the older women, 27.4 percent, thought a young couple would want five or fewer children, whereas only 5 of the older women, 9.8 percent, believed that the parents of a young couple would want them to have 5 or fewer children. The number included in the subset of older women stating an ideal number of children is small (23 in the former case and 24 in the latter), and one must be cautious in drawing inferences from these findings.

## DISCUSSION OF THE RESULTS

The village of Ha Phechela was described in further detail by the collective responses of heads, or acting heads, of households. Comprised almost entirely of traditional mud and thatch dwellings, Ha Phechela has the advantage of a year-round, protected piped water supply which 95.7 percent of the villagers use all year round as their source of drinking water. However, 86.1 percent of the households have no latrine to use and 34.8 percent have the safety hazard of open-pit traditional fireplaces in their sleeping quarters.

Kitchen gardens, which are commonly used for raising produce for household consumption, although planted, are seldom used for growing peas and beans, considered to be high in nutritional value for the family.

The residents own large numbers of fields; however, poor agricultural practices were evident, compounded by the problem of at least some farmers having received training in modern applications but not putting the knowledge acquired into actual practice. Independent observation confirms this fact and it is known in some cases that knowledge, when applied in Ha Phechela, can lead to the community ostracizing the individual. This observation was made in Ha Phechela but the dynamics are probably not unique to Lesotho.

Similar responses were elicited in this survey to the overall responses of village leaders in 1972 to the question "Do girls and young women in this household eat eggs?" The household heads reported that in 41.7 percent of their households the girls and young women do not eat eggs. This was confirmed by the women 15-49 years and by the older women. One conclusion that can be made about egg restriction in Ha Phechela is that eggs are not restricted due to availability since layers were a common asset in the households.

In the three months prior to the survey, 41.7 percent of the households indicated that one or more of their family members had gone to Ts'akholo Health Centre for general care and 36.5 percent of the households had made at least one attendance for routine pre-school care. The attendance of household members from 18.3 percent of the households for routine antenatal care and the same attendance for immunizations suggests an acceptable level of use by the villagers of Ts'akholo for routine preventive health services.

Seventy-six, 81.7 percent, of the women aged 15-49 years old indicated they had experienced at least one pregnancy, and 60 women had accounted for a total of 93 pregnancies in the five years prior to the survey. Several tables have been presented concerning these "recent" (in the last five years) pregnancies. Birth interval baseline was determined on four age groups and this was found to be quite different among age groups. There was a closer interval, 28.4 months, in women 25-29 years old. Clinic staff noted that prior to menopause women are often anxious to make up for children who have died or to get a child of the sex they want. The data on live births versus children alive at the time of the survey for women 35-39 years old supports this conclusion with only 47 progeny still alive of the 57 children ever born alive to this age group. If infant and young child mortality continue to decrease in Lesotho, one would expect this motivation to change over time accordingly.

If the 76 ever-pregnant women, the most recent birth had taken place 63.2 percent of the time in a non-medical facility; that is, either in a village home or other non-medically supervised situation. It is estimated that approximately 80 percent of the deliveries in Ts'akholo's population catchment occur under like circumstances and Ha Phechela's greater use of a supervised setting is probably due to their close proximity to the clinic. Even so, 22.6 percent said they didn't like to deliver at the clinic because it was "too far to walk". The motivations for delivery in the traditional way and the unacceptability of modern facilities is an area needing further investigation.

In spite of the persistent practice of "overnight weaning" as the method of choice amongst the women, no malnutrition was manifest in the children in Ha Phechela and the median age or desired median age for weaning was not alarming. The knowledge level concerning good body building (protein) food and the high level of immunization of Ha Phechela's children is consistent with their 100 percent registration in the pre-school clinic. Less than adequate was their knowledge of whether the child had been protected against the diseases for which he had been immunized. Their knowledge concerning contraceptive methods, although low, is substantially higher than exists in a sample survey of Basotho in general. (e)

As expected, the older women, coming from a disadvantaged basic educational preparation, probably do not understand or perhaps are not invited to understand the educational program in the pre-school clinic, which is well attended by the women 15-49. For example, their knowledge of body building (protein) food was very limited and their responses were consistent with the known traditional practices of how to nourish a child. Also expected is the finding that older women continue to carry out an active role in matters pertaining to pregnancy, delivery and child care. This is a countrywide expectation.

The authors were not aware of any obvious explanation for the finding that school attendance by girls 5-15 years old was less common than for boys of the same age. This seems to be in contrast to what one would expect from countrywide statistics on school attendance.

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(e) Lesotho Family Planning Association, KAP of Men and Women in Lesotho, 1976, Report in Progress by Lesotho Distance Teaching Centre.

## CONCLUSIONS

As baseline data of a single village in rural Lesotho, the tables appended to the narrative of this report should serve as a guideline in specific target setting and monitoring of the model village development in the demonstration zone. It is important, however, to point out that the revised questionnaires cannot produce comparable data for those questions which have been revised. The Head of Household Questionnaire has not been revised due to the limitation of time and staff. Also, the Head of Household Questionnaire needs more instruction included for the interviewers. It was discovered that the method of binary coding employed for some questions led to statistically unmanageable results. For example, there is a possibility of 64 responses to question 40 of the Household Head Questionnaire. Revision of this type of question is necessary to allow for a more practical analysis.

The survey was not intended to include every aspect about the village that may potentially require amelioration. The report makes some assumptions about village practices. For example, if the villagers do not get their seed from a reliable source, the assumption is made that many agricultural practices are probably not up to date. This assumption can best be evaluated by qualified individuals in the village itself, and the question provides one simple target against which to check performance in the future.

The methodology involved in arriving at birth interval estimates is very prescribed and a repeat effort may require continued assistance. In this survey the raw data was used rather than the coded responses to avoid the introduction of coding errors. Coding errors, however, were minimal in the computer output, probably due to the hiring and supervision of an individual trained and experienced in this exercise.

RECOMMENDATIONS

1. A replication of this survey in the demonstration zone should be weighed against the availability of trained staff and facilities for its administration, as well as for the coding, computer processing, data analysis and reporting.
2. Future inferences made from a small sample of the inhabitants of Ha Phechela should be discouraged.
3. It is therefore recommended that an appropriate budget be obtained to assist in following through to completion the use of the baseline data herein presented.
4. Use of this questionnaire in other parts of the country can possibly provide instructive comparisons, although the Household Heads Questionnaire should reflect changes as described under Conclusions before administration in another village.
5. Finally, the process involved in gathering the findings presented in this report is equally as important as the results obtained. The process involved a total community endeavor, including motivation, understanding and cooperation on the part of village chiefs, rural fieldworkers, health centre staff, and the villagers themselves. The results herein described should not be viewed as an end in themselves, but as the beginning of a long-term commitment in the model village.

FIGURE 1: AGE-SEX PYRAMID WITH DEFACTO AND DEJURE POPULATION  
HA PHECHELA

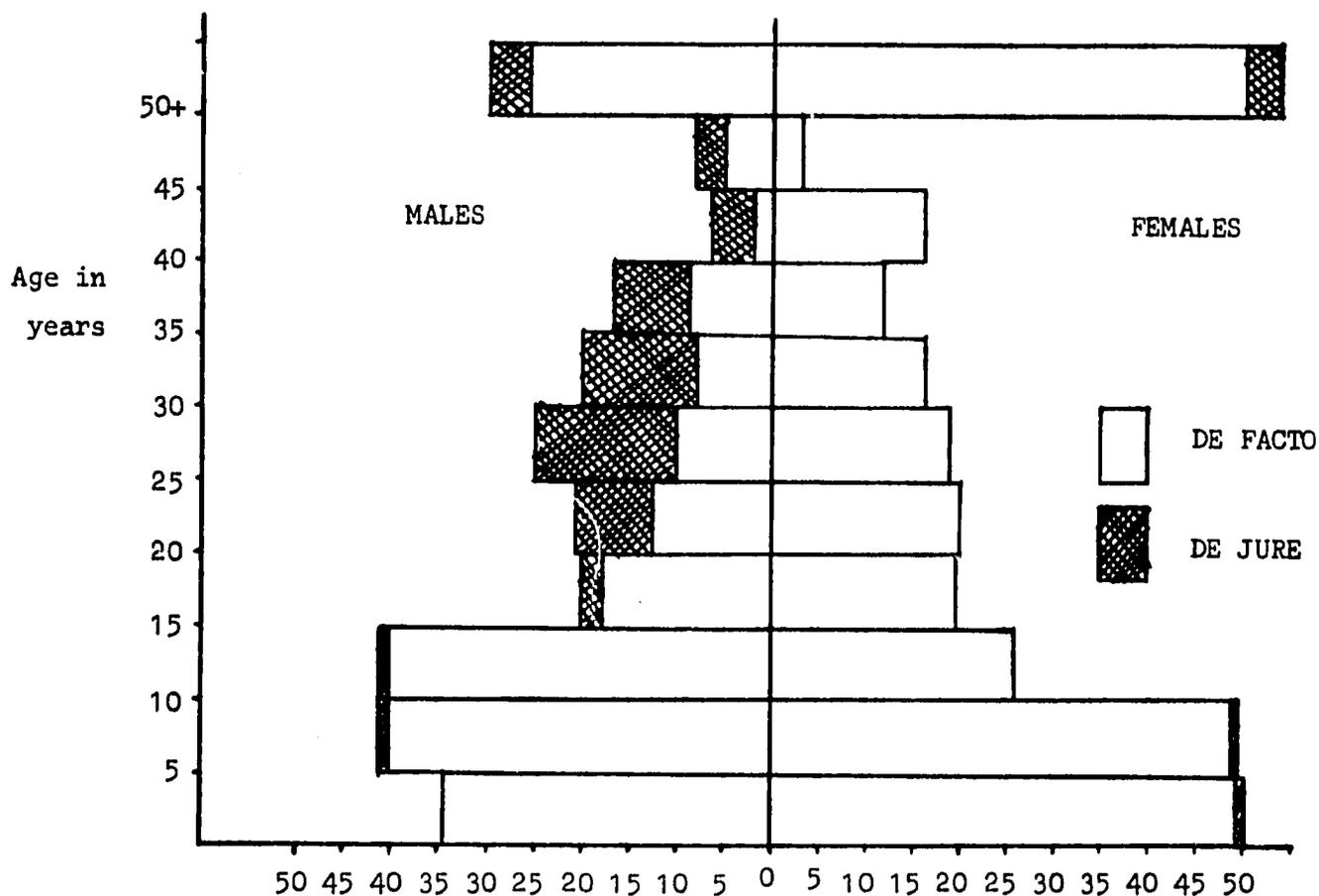


TABLE 1 - SUPPLEMENT TO FIGURE 1

AGE	M A L E S			F E M A L E S		
	ABSENT	PRESENT	TOTAL	ABSENT	PRESENT	TOTAL
0- 4	0	34	34	1	44	45
5- 9	1	40	41	1	43	44
10-14	1	40	41	1	25	26
15-19	2	18	20	0	19	19
20-24	8	13	21	0	20	20
25-29	15	10	25	0	18	18
30-34	12	8	20	0	16	16
35-39	8	9	17	0	12	12
40-44	4	3	7	0	16	16
45-49	3	5	8	0	3	3
50+	4	25	30	3	45	48
<b>TOTAL</b>	<b>58</b>	<b>206</b>	<b>264</b>	<b>6</b>	<b>261</b>	<b>267</b>

FIGURE 2 HOUSEHOLD HEADS. PERCEIVED IDEAL NUMBER OF CHILDREN DESIRED BY YOUNG COUPLE AND PARENTS OF THE YOUNG COUPLE

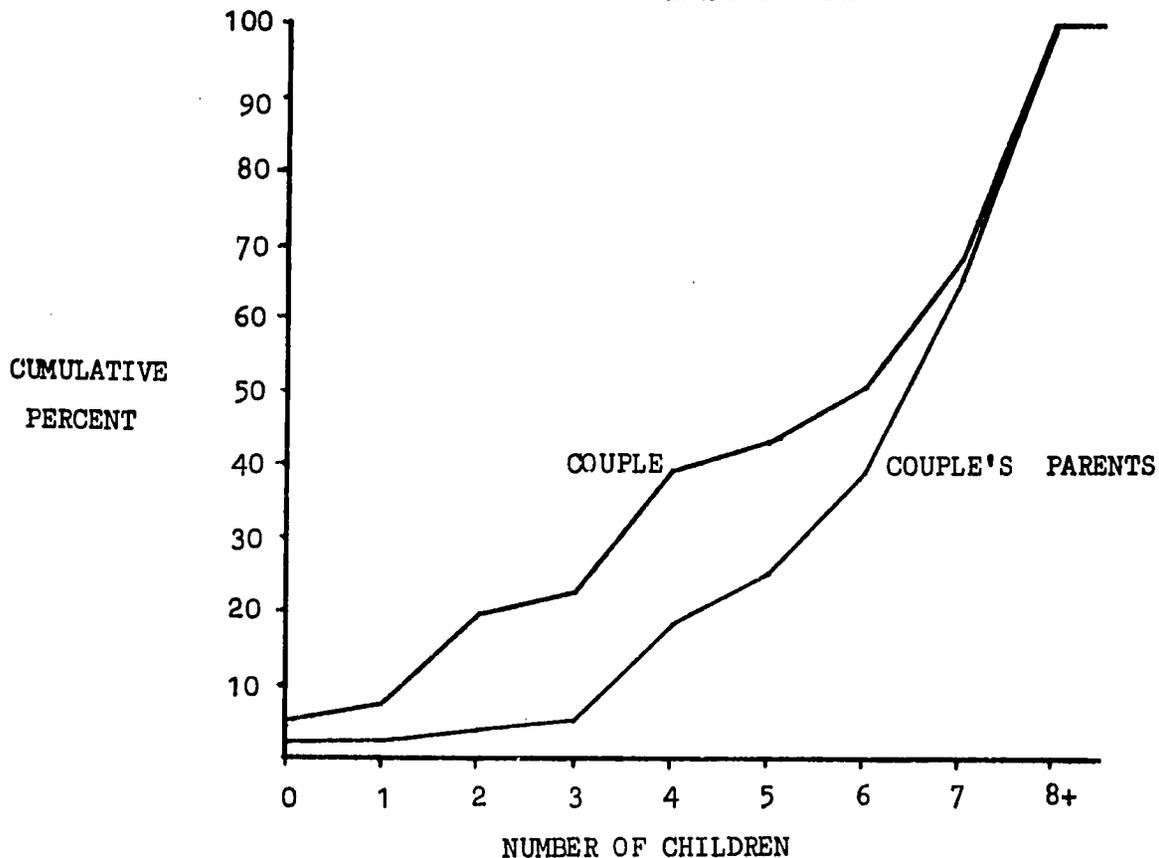
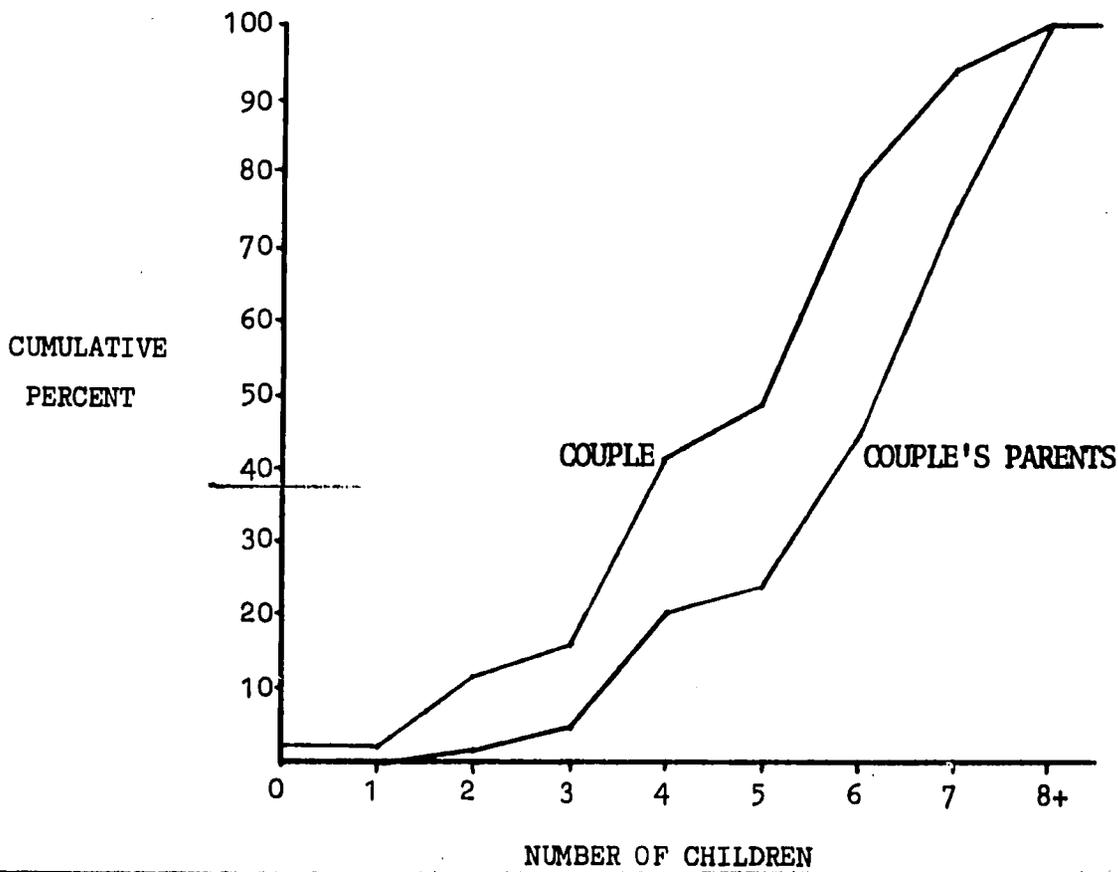


FIGURE 3 WOMEN (15-49 YEARS), PERCEIVED IDEAL NUMBER OF CHILDREN DESIRED BY YOUNG COUPLE AND PARENTS OF THE YOUNG COUPLE



## INDEX

### APPENDIX A

#### HEAD OF HOUSEHOLD RESULTS

	Pages
TABLE 1: PRESENCE OF HOUSEHOLD HEAD	A-1
TABLE 2: AGE OF PERSON INTERVIEWED	A-1
TABLE 3: SEX OF RESPONDENT	A-1
TABLE 4: MARITAL STATUS	A-2
TABLE 5: EDUCATIONAL STATUS	A-2
TABLE 6: REVENUE RECEIVED FOR SUPPORT OF THE HOUSEHOLD FROM THE HOUSEHOLD HEAD IN THE PAST SIX MONTHS	A-2
TABLE 7: HOUSEHOLD HEAD'S SAVINGS/CREDIT ACTIVITIES	A-3
TABLE 8: FREQUENCY AND PERCENT RESPONSES OF RESPONDENTS ASKED "WHAT TWO FOODS ARE MOST NUTRITIOUS FOR YOUR FAMILY?"	A-3
TABLE 9: DO GIRLS AND YOUNG WOMEN EAT EGGS IN THIS FAMILY?	A-3
TABLE 10: CUMULATIVE PERCENT DISTRIBUTIONS OF HOUSEHOLD HEADS IDEAL NUMBER OF CHILDREN BY SEX FOR YOUNG BASOTHO COUPLE AS PERCEIVED BY THE COUPLE AND THE COUPLE'S PARENTS	A-4
TABLE 11: PERCEIVED IDEAL NUMBER OF CHILDREN FOR A YOUNG BASOTHO COUPLE AND THE NUMBER THE YOUNG COUPLE'S PARENTS WOULD WANT THEM TO HAVE	A-4
TABLE 12: SIZE OF HOUSEHOLD	A-5
TABLE 13: HOUSEHOLD MEMBERS' TYPE OF EMPLOYMENT	A-5
TABLE 14: DOES THIS HOUSEHOLD HAVE: WORKING RADIOS?                      LATRINES?	A-6
TABLE 15: HOUSEHOLD MEMBERS' INVOLVEMENT IN ORGANIZATIONS	A-6
TABLE 16: HANDICRAFT SKILLS OF HOUSEHOLD MEMBERS	A-6
TABLE 17: HOUSEHOLDS HAVING SLEEPING QUARTERS WITH AN OPEN FIRE	A-7
TABLE 18: EVALUATION OF PROTECTED WATER SOURCE	A-7
TABLE 19: EVALUATION OF PIPED WATER SUPPLY	A-7
TABLE 20: NUMBER OF HOUSEHOLDS WITH (KITCHEN) VEGETABLE GARDENS	A-8
TABLE 21: DOES THIS HOUSEHOLD HAVE A SUITABLE SITE FOR A VEGETABLE GARDEN?	A-8
TABLE 22: WALKING TIME TO HOUSEHOLD GARDEN	A-8
TABLE 23: WALKING TIME TO SOURCE OF WATER FOR VEGETABLE GARDEN	A-9

Index -- Appendix A  
 Head of Household Results . . . continued

	Pages
TABLE 24: SOURCE OF HOUSEHOLD DRINKING WATER	A-9
TABLE 25: SELECTED VEGETABLES GROWN IN HOUSEHOLD GARDEN	A-9
TABLE 26: USE OF SQUASH GROWN IN KITCHEN GARDEN	A-10
TABLE 27: SOURCE OF SQUASH SEEDS FOR KITCHEN GARDEN	A-10
TABLE 28: DO YOU HAVE FRUIT TREES?	A-10
TABLE 29: NUMBER OF HOUSEHOLDS WITH LIVESTOCK	A-11
TABLE 30: POULTRY OWNED BY THE HOUSEHOLDS	A-11
TABLE 31: NUMBER OF CHICKENS SLAUGHTERED FOR CONSUMPTION OR SALE BY HOUSEHOLD IN LAST SIX MONTHS	A-11
TABLE 32: NUMBER OF HOUSEHOLDS WITH MILK COWS IN THE LAST YEAR	A-12
TABLE 33: MILK PRODUCTION IN BOTTLES PER DAY BY SEASON	A-12
TABLE 34: USE OF MILK PRODUCED	A-12
TABLE 35: AMOUNT OF MILK ACQUIRED BY HOUSEHOLD IN LAST SIX MONTHS THROUGH PURCHASE, EXCHANGE OR WORK IN BOTTLES PER DAY	A-13
TABLE 36: NUMBER OF FIELDS OWNED BY THE HOUSEHOLDS	A-13
TABLE 37: SOURCE OF SEEDS USED IN FIELDS	A-13
TABLE 38: USE OF SEEDS TREATED FOR CUTWORM OR OTHER PESTS	A-14
TABLE 39: KNOWLEDGE THAT SEED TREATED AGAINST CUTWORM AND OTHER PESTS IS POISONOUS	A-14
TABLE 40: KNOWLEDGE OF GOOD CASH CROPS	A-14
TABLE 41: ATTENDANCE OF AGRICULTURAL COURSES BY HOUSEHOLD MEMBERS	A-15
TABLE 42: HAVE YOU SOUGHT ADVICE FROM AGRICULTURAL DEPARTMENT ON SEED SELECTION IN THE LAST YEAR?	A-15
TABLE 43: HOUSEHOLD PARTICIPATION IN SOIL CONSERVATION EFFORTS	A-15
TABLE 44: NUMBER OF TREES PLANTED ON MARCH 21, 1975 FOR SOIL CONSERVATION	A-16
TABLE 45: HOUSEHOLD INCIDENCE OF VARIOUS HEALTH PROBLEMS IN PAST THREE MONTHS	A-16
TABLE 46: NUMBER OF CASES OF TUBERCULOSIS REPORTED BY EACH HOUSEHOLD	A-16
TABLE 47: TUBERCULOSIS CASES CURRENTLY BEING TREATED	A-17
TABLE 48: HOUSE SICKNESS IN LAST THREE MONTHS	A-17
TABLE 49: SOURCE OF CARE FOR RECENT ILLNESS IN HOUSEHOLD	A-17
TABLE 50: HOUSEHOLD HEAD'S REPORTING OF TS'AKHOLO CLINIC ATTENDANCE BY HOUSEHOLD MEMBERS IN LAST THREE MONTHS	A-18

TABLE 1  
PRESENCE OF HOUSEHOLD HEAD

LENGTH OF ABSENCE	FREQUENCY	PERCENT	CUMULATIVE PERCENT
LESS THAN 1 MONTH	15	13.0	13.4
1-6 MONTHS	10	8.7	8.9
6-12 MONTHS	7	6.1	6.3
12+ MONTHS	12	8.7	8.9
PRESENT	72	62.6	62.5
LENGTH OF ABSENCE UNKNOWN	1	.9	MISSING
TOTAL	115	100.0	100.0

TABLE 2  
AGE OF PERSON INTERVIEWED

AGE IN YEARS	FREQUENCY	PERCENT	CUMULATIVE PERCENT
20-29	20	17.4	17.4
30-39	22	19.1	36.5
40-49	19	16.5	53.0
50+	54	47.0	100.0
TOTAL	115	100.0	

TABLE 3  
SEX OF RESPONDENT

SEX	FREQUENCY	PERCENT
MALE	51	44.3
FEMALE	64	55.7
TOTAL	115	100.0

TABLE 4  
MARITAL STATUS

STATUS	FREQUENCY	PERCENT
NEVER MARRIED	4	3.5
MARRIED	82	71.3
DIVORCED/DESERTED/SEPARATED	1	0.9
WIDOWED	26	22.6
NO RESPONSE	2	1.8
TOTAL	115	100.0

TABLE 5  
EDUCATIONAL STATUS

EDUCATION COMPLETED	FREQUENCY	PERCENT	ADJUSTED PERCENT*	CUMULATIVE PERCENT
NONE	26	22.6	23.0	23.0
LOWER PRIMARY	59	51.3	52.2	75.2
HIGHER PRIMARY	21	18.3	18.6	93.8
JUNIOR CERTIFICATE	6	5.2	5.3	99.1
DON'T KNOW	3	2.6		100.0
TOTAL	115	100.0		

\*Excludes missing responses

TABLE 6  
REVENUE RECEIVED FOR SUPPORT OF THE HOUSEHOLD  
FROM THE HOUSEHOLD HEAD IN THE PAST SIX MONTHS

EARNINGS IN RANDS	FREQUENCY	PERCENT	ADJUSTED PERCENT*	CUMULATIVE PERCENT
LESS THAN R25	5	10.9	11.4	11.4
R26 - 50	3	6.5	6.8	18.2
R51 - 75	5	10.9	11.4	29.6
R76 - 100	6	13.0	13.6	43.2
R101 - 125	8	17.4	18.2	61.4
R126+	17	36.9	38.6	100.0
DON'T KNOW	2	4.4		
TOTAL	46	100.0		

\*Excludes no response

TABLE 7  
HOUSEHOLD HEAD'S SAVINGS/CREDIT ACTIVITIES

ACTIVITY	FREQUENCY	PERCENT*
NONE	69	60.0
CREDIT UNION	14	12.2
COOPERATIVES	16	13.9
CREDIT - TIME PAYMENT	10	8.7
BANK	19	16.5
TRADING STORE	3	2.6

n = 115

\*Percents will not sum to 100.0 since categories are not mutually exclusive

TABLE 8  
FREQUENCY AND PERCENT RESPONSES OF RESPONDENTS ASKED  
"WHAT TWO FOODS ARE MOST NUTRITIOUS FOR YOUR FAMILY?"

	FREQUENCY	PERCENT*
BEANS	45	39.1
PEAS	19	16.5
WHEAT, MAIZE, MABELE, RICE	46	40.0
OTHER	28	24.3
DON'T KNOW	3	2.6

\*Percents will not sum to 100.0

TABLE 9  
DO GIRLS AND YOUNG WOMEN EAT EGGS IN THIS FAMILY?

RESPONSE	FREQUENCY	PERCENT
NO	48	41.7
YES	67	58.3
TOTAL	115	100.0

TABLE 10

A-4

CUMULATIVE PERCENT DISTRIBUTIONS OF HOUSEHOLD HEADS  
IDEAL NUMBER OF CHILDREN BY SEX FOR YOUNG BASOTHO COUPLE  
AS PERCEIVED BY THE COUPLE AND THE COUPLE'S PARENTS

NUMBER OF CHILDREN	COUPLE		COUPLE'S PARENTS	
	BOYS	GIRLS	BOYS	GIRLS
0	8.8	12.7	2.8	2.8
1	19.6	22.5	4.7	2.8
2	40.2	44.1	18.9	24.5
3	49.0	54.9	37.7	39.6
4	54.9	57.8	43.4	50.0
5	65.7	67.6	61.3	67.0
6	66.7	67.6	66.0	67.0
7	67.6	67.6	67.9	67.9
AS MANY AS GOD GIVES	100.0	100.0	100.0	100.0
	n = 102		n = 106	
MEDIAN NUMBER	3.17	2.55	4.37	4.00

TABLE 11

PERCEIVED IDEAL NUMBER OF CHILDREN FOR A YOUNG BASOTHO COUPLE  
AND THE NUMBER THE YOUNG COUPLES' PARENTS WOULD WANT THEM TO HAVE

NUMBER	COUPLE			COUPLE'S PARENTS		
	FREQ.	PERCENT	CUMULATIVE PERCENT*	FREQ.	PERCENT	CUMULATIVE PERCENT*
0	9	7.8	8.7	3	2.6	2.8
1	3	2.6	11.5	0	0.0	2.8
2	8	7.0	19.2	1	.9	3.7
3	5	4.3	24.0	2	1.7	5.6
4	16	13.9	39.4	13	11.3	17.8
5	5	4.3	44.2	8	7.0	25.2
6	8	7.0	51.9	14	12.2	38.3
7	17	14.8	68.3	31	27.0	67.3
AS MANY AS GOD GIVES	33	28.7	100.0	35	30.4	100.0
DON'T KNOW	11	9.6		8	7.0	
n =	115	100.0		115	100.0	
MEDIAN			5.75			6.40

\*Excludes response of don't know

TABLE 12  
SIZE OF HOUSEHOLD

NUMBER IN HOUSEHOLD	FREQUENCY	PERCENT	CUMULATIVE PERCENT
1	5	4.3	4.3
2	18	15.7	20.0
3	12	10.4	30.4
4	21	18.3	48.7
5	21	18.3	67.0
6	11	9.6	76.6
7	9	7.8	84.4
8	10	8.7	93.1
9	4	3.5	96.6
10	0	0.0	96.6
11	2	1.7	98.3
12	2	1.7	100.0
TOTAL	115	100.0	

Median Household Size 4.05

TABLE 13  
HOUSEHOLD MEMBERS' TYPE OF EMPLOYMENT

TYPE	FREQUENCY	PERCENT
UNDERGROUND MINES	53	80.3
SURFACE MINES	4	6.1
GOV'T OF LESOTHO	0	0.0
OTHER	9	13.6
TOTAL	66	100.0

TABLE 14  
DOES THIS HOUSEHOLD HAVE:

	WORKING RADIOS?		LATRINES?	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT
NO	84	73.0	98	85.2
YES	30	26.1	16	13.9
DON'T KNOW	1	9	1	.9

TABLE 15  
HOUSEHOLD MEMBERS' INVOLVEMENT IN ORGANIZATIONS

TYPE ORGANIZATION	FREQUENCY	PERCENT*
NONE	5	4.3
CHURCH	106	92.2
POLITICS	47	40.9
VILLAGE WATER SUPPLY COMMITTEE	17	14.8
VILLAGE DEVELOPMENT COMMITTEE	13	11.3
YOUNG PEOPLE'S ORGANIZATIONS	19	16.5

n = 115

\*Percents will not sum to 100.0 since categories are not mutually exclusive

TABLE 16  
HANDICRAFT SKILLS OF HOUSEHOLD MEMBERS

SKILL	FREQUENCY	PERCENT*
NONE	4	3.5
SEWING	46	40.0
KNITTING/CROCHETING	65	56.5
WORK WITH CLAY	103	89.6
BEAD WORK	19	16.5
BASKETRY	57	49.6

n = 115

\*Percents will not sum to 100.0 since categories are not mutually exclusive

TABLE 17  
HOUSEHOLDS HAVING SLEEPING QUARTERS  
WITH AN OPEN FIRE

RESPONSE	FREQUENCY	PERCENT
NO	75	65.2
YES	40	34.8
TOTAL	115	100.0

TABLE 18  
EVALUATION OF PROTECTED WATER SOURCE

QUALITY OF PROTECTED SOURCE COMPARED TO PREVIOUS SOURCE	FREQUENCY	PERCENT
HIGHER	103	89.6
SAME	7	6.1
LOWER	1	.9
DON'T KNOW	4	3.4
	115	100.0

TABLE 19  
EVALUATION OF PIPED WATER SUPPLY

RELIABILITY OF PIPED WATER SUPPLY COMPARED TO PREVIOUS SOURCE	FREQUENCY	PERCENT
MORE RELIABLE	68	59.1
SAME	41	35.7
LESS RELIABLE	5	4.3
DON'T KNOW	1	.9
	115	100.0

TABLE 20  
NUMBER OF HOUSEHOLDS WITH (KITCHEN) VEGETABLE GARDENS

STATUS	FREQUENCY	PERCENT
WITH GARDENS	84	73.0
WITHOUT GARDEN	31	27.0
TOTAL	115	100.0

TABLE 21  
DOES THIS HOUSEHOLD HAVE A SUITABLE SITE  
 FOR A VEGETABLE GARDEN?

RESPONSE	FREQUENCY	PERCENT
NO	7	22.6
YES	24	77.6
TOTAL	31	100.0

TABLE 22  
WALKING TIME TO HOUSEHOLD GARDEN

TIME IN MINUTES	FREQUENCY	PERCENT	CUMULATIVE PERCENT
LESS THAN 1	60	71.4	71.4
1 - 5	23	27.4	98.8
5 +	1	1.2	100.00
TOTAL	84	100.0	

TABLE 23  
WALKING TIME TO SOURCE OF WATER  
FOR VEGETABLE GARDEN

<u>WALKING TIME</u> <u>IN MINUTES</u>	<u>FREQUENCY</u>	<u>PERCENT</u>	<u>CUMULATIVE</u> <u>PERCENT</u>
LESS THAN 5	44	52.4	52.4
5 - 15	30	35.7	88.1
16 - 30	10	11.9	100.0
<b>TOTAL</b>	<b>84</b>	<b>100.0</b>	

TABLE 24  
SOURCE OF HOUSEHOLD DRINKING WATER

<u>SOURCE</u>	<u>FREQUENCY</u>	<u>PERCENT</u>
SAME AS GARDEN WATER SOURCE	23	27.4
SEPARATE DRINKING WATER SOURCE	61	72.6
<b>TOTAL</b>	<b>84</b>	<b>100.0</b>

TABLE 25  
SELECTED VEGETABLES GROWN IN HOUSEHOLD GARDEN

	<u>FREQUENCY</u>	<u>PERCENT</u>
NONE	40	47.6
SQUASH	29	34.5
BEANS	7	8.3
PEAS, SQUASH	3	3.6
BEANS, SQUASH	5	6.0
<b>TOTAL</b>	<b>84</b>	<b>100.0</b>

TABLE 26  
USE OF SQUASH GROWN IN KITCHEN GARDEN

USE	FREQUENCY	PERCENT
CONSUMED BY HOUSEHOLD	26	76.6
TRADED FOR PRODUCE/LABOR	1	0.0
SOLD	2	5.9
CONSUMED/SOLD	3	8.8
DON't KNOW	6	17.7
TOTAL	37	100.0

TABLE 27  
SOURCE OF SQUASH SEEDS FOR KITCHEN GARDEN

SOURCE	FREQUENCY	PERCENT
CO-OP LESOTHO	4	10.8
LOCAL TRADER	3	8.1
SAVED FROM LAST YEAR	24	64.9
DON'T KNOW	6	16.2
TOTAL	37	100.0

TABLE 28  
DO YOU HAVE FRUIT TREES?

	FREQUENCY	PERCENT
YES	73	63.5
NO	42	36.5
TOTAL	115	100.0

TABLE 29  
NUMBER OF HOUSEHOLDS WITH LIVESTOCK

	FREQUENCY	PERCENT
WITHOUT	27	23.5
WITH	88	76.5
TOTAL	115	100.0

TABLE 30  
POULTRY OWNED BY THE HOUSEHOLDS

NUMBER OF CHICKENS OWNED BY HOUSEHOLD	FREQUENCY	PERCENT
0	59	51.3
1 - 10	39	33.9
11 - 20	6	5.2
21 +	11	9.6
TOTAL	115	100.0

TABLE 31  
NUMBER OF CHICKENS SLAUGHTERED FOR CONSUMPTION OR SALE  
 BY HOUSEHOLD IN LAST SIX MONTHS

NUMBER	CONSUMPTION		SALE	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT
0	98	85.3	110	95.7
1	15	13.0	2	1.7
2	2	1.7	2	1.7
3	0	0.0	1	.9
	115	100.0	115	100.0

TABLE 32  
NUMBER OF HOUSEHOLDS WITH MILK COWS IN THE LAST YEAR

	FREQUENCY	PERCENT
WITH	34	29.6
WITHOUT	81	70.4
TOTAL	115	100.0

TABLE 33  
MILK PRODUCTION IN BOTTLES PER DAY\* BY SEASON

BOTTLE PER DAY	JAN - FEB - MAR		APR - MAY - JUN		JUL - AUG - SEP		OCT - NOV - DEC	
	FREQ.	PERCENT	FREQ.	PERCENT	FREQ.	PERCENT	FREQ.	PERCENT
0	14	41.2	17	50.0	6	17.6	12	35.3
1 - 4	8	23.5	8	23.5	10	29.4	3	8.8
5 - 9	7	20.6	5	14.7	9	26.5	9	26.5
10 +	2	5.9	1	2.9	7	20.6	7	20.6
DON'T KNOW	3	8.8	1	2.9	2	5.9	3	8.8
TOTAL	34	100.0	34	100.0	34	100.0	34	100.0

\*26 ounce bottles

TABLE 34  
USE OF MILK PRODUCED

	FREQUENCY	PERCENT
CONSUMED BY HOUSEHOLD	26	76.5
CONSUMED AND SOLD	8	23.5
TOTAL	34	100.0

TABLE 35

AMOUNT OF MILK ACQUIRED BY HOUSEHOLD IN LAST SIX MONTHS THROUGH  
PURCHASE, EXCHANGE OR WORK IN BOTTLES PER DAY\*

BOTTLES PER DAY	FREQUENCY	PERCENT
0	38	33.0
1 - 4	29	25.2
5 - 9	10	8.7
10 +	28	24.3
DON'T KNOW	10	8.7
TOTAL	115	100.0

\*26 ounce bottles

TABLE 36

NUMBER OF FIELDS OWNED BY THE HOUSEHOLDS

NUMBER	FREQUENCY	PERCENT	CUMULATIVE PERCENT
0	6	5.2	5.2
1	19	16.5	21.7
2	37	32.2	53.9
3	50	43.5	97.4
4	3	2.6	100.0
TOTAL	115	100.0	

TABLE 37

SOURCE OF SEEDS USED IN FIELDS

	FREQUENCY	PERCENT	ADJUSTED PERCENT
PREVIOUS CROP	88	80.7	88.0
CO-OP	1	.9	1.0
TRADER	8	7.4	8.0
TRADER/PREVIOUS CROP	2	1.8	2.0
TRADER/CO-OP/PREVIOUS CROP	1	.9	1.0
DON'T KNOW	9	8.3	
TOTAL	109	100.0	100.0

TABLE 38  
USE OF SEEDS TREATED FOR CUTWORM OR OTHER PESTS

SEEDS	FREQUENCY	PERCENT	ADJUSTED PERCENT
UNTREATED	97	89.0	95.1
TREATED	5	4.6	4.9
DON'T KNOW	7	6.4	-
TOTAL	109	100.0	100.0

TABLE 39  
KNOWLEDGE THAT SEED TREATED AGAINST CUTWORM  
 AND OTHER PESTS IS POISONOUS

	FREQUENCY	PERCENT
NO	68	59.1
YES	46	40.0
DON'T KNOW	1	0.9
TOTAL	115	100.0

TABLE 40  
KNOWLEDGE OF GOOD CASH CROPS

CHOICE	FREQUENCY	PERCENT*
PEAS OR BEANS	109	94.8
CABBAGE	51	44.3
WHEAT, MAIZE, MABELE	30	26.1

n = 115

\*Percents will not sum to 100.0 since  
 multiple responses were possible

TABLE 41  
ATTENDANCE OF AGRICULTURAL COURSES BY HOUSEHOLD MEMBERS

	FREQUENCY	PERCENT	ADJUSTED PERCENT
NO	93	80.9	88.6
YES	12	10.4	11.4
DON'T KNOW	10	8.7	
TOTAL	115	100.0	100.0

TABLE 42  
HAVE YOU SOUGHT ADVICE FROM AGRICULTURAL DEPARTMENT  
ON SEED SELECTION IN THE LAST YEAR?

	FREQUENCY	PERCENT
NO	106	92.2
YES	6	5.2
DON'T KNOW	3	2.6
TOTAL	115	100.0

TABLE 43  
HOUSEHOLD PARTICIPATION IN SOIL CONSERVATION EFFORTS

	FREQUENCY	PERCENT
NO	84	73.0
YES	30	26.1
DON'T KNOW	1	0.9
TOTAL	115	100.0

TABLE 44  
NUMBER OF TREES PLANTED ON MARCH 21, 1975 FOR SOIL CONSERVATION

NUMBER OF TREES	FREQUENCY	PERCENT	ADJUSTED PERCENT
0	36	31.3	34.3
1 - 9	56	48.7	53.3
10 - 49	12	10.4	11.4
50 +	1	.9	1.0
DON'T KNOW	10	8.7	
TOTAL	115	100.0	100.0

TABLE 45  
HOUSEHOLD INCIDENCE OF VARIOUS HEALTH PROBLEMS IN PAST THREE MONTHS

TYPE PROBLEM	FREQUENCY	PERCENT*
FEVER	10	8.7
VOMITING	25	21.7
DIARRHEA	26	22.6
COUGH	72	62.6
SKIN SORES	28	24.3
PELLAGRA	12	10.4

n = 115

\*Percents will not sum to 100.0 since multiple responses were possible

TABLE 46  
NUMBER OF CASES OF TUBERCULOSIS REPORTED BY EACH HOUSEHOLD

NUMBER	FREQUENCY	PERCENT
0	106	92.2
1	9	7.8
TOTAL	115	100.0

TABLE 47  
TUBERCULOSIS CASES CURRENTLY BEING TREATED

STATUS	FREQUENCY	PERCENT
CURRENTLY NOT ON TREATMENT	7	77.8
CURRENTLY ON TREATMENT	2	22.2
TOTAL	9	100.0

TABLE 48  
HOUSE SICKNESS IN LAST THREE MONTHS

NUMBER OF SICKNESSES	FREQUENCY	PERCENT.
NONE	39	33.9
ONE OR MORE	76	66.1
TOTAL	115	100.0

TABLE 49  
SOURCE OF CARE FOR RECENT ILLNESS IN HOUSEHOLD

SOURCE	FREQUENCY	PERCENT
MODERN ONLY (DOCTOR, HOSPITAL, NURSE, CLINIC)	61	80.3
TRADITIONAL HEALER ONLY	3	3.9
COMBINATION OF ABOVE	7	9.2
NONE	5	6.6
TOTAL	76	100.0

TABLE 50  
HOUSEHOLD HEAD'S REPORTING OF TS'AKHOLO CLINIC  
ATTENDANCE BY HOUSEHOLD MEMBERS IN LAST THREE MONTHS

TYPE OF CARE SOUGHT	FREQUENCY	PERCENT*
ANTENATAL	21	18.3
POSTNATAL	6	5.2
PRE-SCHOOL	42	36.5
IMMUNIZATIONS	21	18.3
GENERAL CARE	48	41.7
CHILD SPACING	3	2.6
OTHER	4	3.5

n = 115

\*Percents will not sum to 100.0 since multiple responses were possible

# INDEX

## APPENDIX B

### WOMEN IN FERTILE YEARS (15 - 49)

	Pages
TABLE 1: FREQUENCY, PERCENT AND CUMULATIVE PERCENT AGE DISTRIBUTIONS OF WOMEN 15-49	B-1
TABLE 2: WOMAN'S RELATION TO HOUSEHOLD HEAD	B-1
TABLE 3: MARITAL STATUS	B-1
TABLE 4: EDUCATIONAL STATUS	B-2
TABLE 5: HANDICRAFT SKILLS REPORTED BY THE WOMEN	B-2
TABLE 6: EVER PREGNANT	B-2
TABLE 7: NUMBER OF PREGNANCIES TERMINATED IN LAST FIVE YEARS	B-3
TABLE 8: NUMBER OF PREGNANCIES ENDING IN ABORTION OR STILLBIRTHS IN THE LAST FIVE YEARS	B-3
TABLE 9: AVERAGE BIRTH INTERVAL AND ACCUMULATED PREGNANCIES OF FOUR AGE GROUPS REPORTING RECENT DELIVERIES	B-4
TABLE 10: AVERAGE BIRTH INTERVAL IN RECENT DELIVERIES OF WOMEN NOW 35-39 COMPARED TO SAME WOMAN TEN YEARS PRIOR AND WOMEN NOW 25-29	B-4
TABLE 11: TOTAL PREGNANCIES OF ALL EVER-PREGNANT WOMEN 15-45 IN HA PHECHELA	B-5
TABLE 12: OUTCOME OF PREGNANCIES ACCUMULATED BY GROUPS OF WOMEN 15-45 YEARS OLD	B-5
TABLE 13: LOCATION OF DELIVERY OF MOST RECENT BIRTH	B-6
TABLE 14: WHO DELIVERED YOUR LAST CHILD?	B-6
TABLE 15: REPORTED REASONS FOR SOME WOMEN PREFERRING TO DELIVER AT HOME RATHER THAN AT CLINIC OR HEALTH CENTRE	B-7
TABLE 16: DELIVERY EXPERIENCE IN PREVIOUS YEAR	B-7
TABLE 17: INSTRUMENT USED IN DELIVERY TO CUT THE CORD	B-8
TABLE 18: DRESSING APPLIED TO STUMP OF CORD	B-8
TABLE 19: FREQUENCY AND PERCENT OF CHILDREN AGED 1-5 STILL BREASTFEEDING BY ONE YEAR AGE GROUPS	B-8
TABLE 20: DESIRED WEANING AGE OF CHILD UNDER ONE YEAR, CURRENTLY BREASTFEEDING	B-9

Index -- Appendix B  
 Women in Fertile Years (15-49) . . . continued

	Pages
TABLE 21: AGE OF LAST BABY WHEN FULLY WEANED	B-9
TABLE 22: MANNER OF WEANING LAST BABY	B-9
TABLE 23: CUMULATIVE PERCENT DISTRIBUTIONS FOR PERCEIVED IDEAL NUMBER OF CHILDREN BY SEX FOR A YOUNG BASOTHO COUPLE AND THE NUMBER THE COUPLE'S PARENTS WOULD WANT THEM TO HAVE	B-10
TABLE 24: PERCEIVED IDEAL NUMBER OF CHILDREN FOR A YOUNG BASOTHO COUPLE AND THE NUMBER THE YOUNG COUPLE'S PARENTS WOULD WANT THEM TO HAVE	B-10
TABLE 25: KNOWLEDGE OF CONTRACEPTIVE METHODS	B-11
TABLE 26: KNOWLEDGE OF PROTEIN FOODS FOR CHILDREN	B-11
TABLE 27: DO YOUR FEMALE TEENAGERS EAT EGGS?	B-11
TABLE 28: NUMBER OF WOMEN RECEIVING FOOD FROM PRE-SCHOOL CLINIC FOR THEIR CHILDREN	B-12
TABLE 29: USE OF OIL RECEIVED FROM PRE-SCHOOL CLINIC	B-12
TABLE 30: NUMBER OF OTHER PEOPLE IN THE FAMILY USING FOOD FROM THE PRE-SCHOOL CLINIC	B-12
TABLE 31: NUMBER OF LIVING CHILDREN AGED 5 TO 15 YEARS BY SEX OF EVER-PREGNANT WOMEN	B-13
TABLE 32: WOMEN WITH CHILDREN AGED 0-5 BY ONE YEAR AGED GROUPS	B-13
TABLE 33: CHILDREN REGISTERED IN PRE-SCHOOL CLINIC	B-14
TABLE 34: IMMUNIZATION AGAINST SMALLPOX, TUBERCULOSIS AND RUBEOLA (MEASLES) OF CHILDREN UNDER ONE YEAR	B-14
TABLE 35: HIGHEST LEVEL OF IMMUNIZATION FOR POLIO AND DWT RECEIVED TO DATE BY CHILDREN	B-14
TABLE 36: RECEIPT OF BASIC IMMUNIZATION FOR POLIO, DWT, TUBERCULOSIS FOR CHILDREN AGED 1-5	B-15
TABLE 37: NUMBER OF EIPISODES OF GASTROINTESTINAL AND NUTRITIONAL DISORDERS AMONG CHILDREN UNDER FIVE YEARS OF AGE	B-15
TABLE 38: CHILDREN AGED 5-15 YEARS LIVING AT HOME PER WOMAN	B-15
TABLE 39: NUMBER OF CHILDREN AGED 5-15 BY SEX ATTENDING SCHOOL PER WOMAN	B-16
TABLE 40: NUMBER OF SHEPHERDS PER MOTHER WITH BOYS AGED 5-15 YEARS	B-16
TABLE 41: NUMBER OF MEALS PER DAY TAKEN AT HOME	B-16

TABLE 1  
FREQUENCY, PERCENT AND CUMULATIVE PERCENT AGE DISTRIBUTIONS OF WOMEN 15 - 49

AGE	FREQUENCY	PERCENT	CUMULATIVE PERCENT
15 - 19	13	14.0	14.0
20 - 24	15	16.1	30.1
25 - 29	16	17.2	47.3
30 - 34	13	14.0	61.3
35 - 39	15	16.1	77.4
40 - 44	17	18.3	95.7
45 - 49	4	4.3	100.0
TOTAL	93	100.0	

Median = 30.12 years

TABLE 2  
WOMAN'S RELATION TO HOUSEHOLD HEAD

	FREQUENCY	PERCENT
HOUSEHOLD HEAD	3	3.2
SPOUSE OF HEAD	56	60.2
CHILD OF HEAD/SPOUSE	14	15.1
SPOUSE OF CHILD OF HEAD/SPOUSE	15	16.1
GRANDCHILD OF HEAD/SPOUSE	3	3.2
CHILD OF SISTER OF HOUSEHOLD HEAD	1	1.1
HIRED WORKER	1	1.1
TOTAL	93	100.0

TABLE 3  
MARITAL STATUS

	FREQUENCY	PERCENT
MARRIED	78	83.9
NEVER MARRIED	7	7.5
DESERTED/DIVORCED/SEPARATED	7	7.5
WIDOWED	1	1.1
TOTAL	93	100.0

TABLE 4  
EDUCATIONAL STATUS

EDUCATION COMPLETED	FREQUENCY	PERCENT	CUMULATIVE PERCENT
NONE	1	1.1	1.1
LOWER PRIMARY	53	57.0	58.1
HIGHER PRIMARY	35	37.6	95.7
JUNIOR CERTIFICATE	4	4.3	100.0
TOTAL	93	100.0	

TABLE 5  
HANDICRAFT SKILLS REPORTED BY THE WOMEN

SKILL	FREQUENCY	PERCENT*
SEWING	39	41.9
CROCHETING/KNITTING	52	55.9
WORK CLAY	89	95.7
BEADWORKING	19	20.4
BASKETRY	23	24.7
NONE	0	0.0

n = 93

\*Percents will not sum to 100.0 since categories are not mutually exclusive

TABLE 6  
EVER PREGNANT

	FREQUENCY	PERCENT
NO	17	18.3
YES	76	81.7
TOTAL	93	100.0

TABLE 7  
NUMBER OF PREGNANCIES TERMINATED IN LAST FIVE YEARS

<u>NUMBER OF PREGNANCIES</u>	<u>FREQUENCY</u>	<u>CUMULATIVE FREQUENCY</u>	<u>PERCENT</u>
0	16	0	17.2
1	30	30	32.3
2	27	54	29.0
3	3	9	3.2
NOT APPLICABLE	17		18.3
<b>TOTAL</b>		<b>93</b>	<b>100.0</b>

TABLE 8  
NUMBER OF PREGNANCIES  
ENDING IN ABORTION OR STILLBIRTHS  
IN THE LAST FIVE YEARS

<u>NUMBER AB/SB</u>	<u>FREQUENCY</u>	<u>CUMULATIVE FREQUENCY</u>	<u>PERCENT</u>
0	53	0	88.3
1	6	6	10.0
2	1	2	1.7
<b>TOTAL</b>		<b>8</b>	<b>100.0</b>

TABLE 9  
AVERAGE BIRTH INTERVAL AND ACCUMULATED PREGNANCIES  
OF FOUR AGE GROUPS REPORTING RECENT DELIVERIES

AGE GROUP	FREQUENCY	AVERAGE BIRTH INTERVAL IN MONTHS (MOST RECENT DELIVERY)	PREGNANCIES EXPERIENCED BY THIS AGE
25 - 29	10	38.5	25
30 - 34	10	32.9	45
35 - 39	9	28.4	48
40 - 44	12	45.7*	92

\*Skewed by two women with 70 and 74 months between most recent deliveries. Otherwise the average birth interval for recent deliveries in this group was 40.5.

TABLE 10  
AVERAGE BIRTH INTERVAL IN RECENT DELIVERIES  
OF WOMEN NOW 35-39  
COMPARED TO SAME WOMAN TEN YEARS PRIOR AND WOMEN NOW 25-29

AVERAGE INTERVAL WOMEN NOW 35-39	AVERAGE INTERVAL SAME WOMEN 35-39 TEN YEARS PRIOR	AVERAGE INTERVAL WOMEN NOW 25-29
28.4 Mo.	33.8 Mo.	38.5 Mo.

TABLE 11  
TOTAL PREGNANCIES OF ALL  
EVER-PREGNANT WOMEN 15-45 IN HA PHECHELA

AGE GROUP	TOTAL WOMEN EVER-PREGNANT	TOTAL PREGNANCIES* THAT AGE GROUP
15 - 19	1	2
20 - 24	10	15 (1 twins)
25 - 29	13	29
30 - 34	12	52
35 - 39	13	60
40 - 44	17	111 (1 twins)
<b>TOTAL</b>	<b>66</b>	<b>269</b>

\*Excludes 6 women pregnant at time of survey

TABLE 12  
OUTCOME OF PREGNANCIES ACCUMULATED  
BY GROUPS OF WOMEN 15-45 YEARS OLD

AGE	TOTAL* PREGNANCIES	TOTAL ABORTIONS/ STILLBIRTHS	TOTAL PROGENY BORN ALIVE	TOTAL PROGENY STILL ALIVE
15 - 19	2	0/0	2	1
20 - 24	15 (1 twins)	0/0	16	15
25 - 29	29	3/1	25	23
30 - 34	52	4/0	48	46
35 - 39	60	1/2	57	47
40 - 44	111 (1 twins)	7/1	104	79
<b>TOTAL</b>	<b>269</b>	<b>15/4</b>	<b>256</b>	<b>211</b>

\*Excludes 6 women pregnant at time of survey

TABLE 13  
LOCATION OF DELIVERY OF MOST RECENT BIRTH

LOCATION	FREQUENCY	PERCENT
MY HOME, IN THIS VILLAGE	34	44.8
HOUSE OUTSIDE THIS VILLAGE	7	9.2
TRADITIONAL HEALER'S HOUSE	2	2.6
CLINIC/HEALTH CENTRE	15	19.7
HOSPITAL	13	17.1
OTHER	5	6.6
TOTAL	76	100.0

TABLE 14  
WHO DELIVERED YOUR LAST CHILD?

PERSON	FREQUENCY	PERCENT
A RELATIVE	37	48.7
TRADITIONAL HEALER	2	2.6
TRAINED MIDWIFE	28	36.8
OTHER	4	5.3
DON'T KNOW	5	6.6
TOTAL	76	100.0

TABLE 15  
REPORTED REASONS FOR SOME WOMEN PREFERRING TO DELIVER  
AT HOME RATHER THAN AT CLINIC OR HEALTH CENTRE

	FREQUENCY	PERCENT*
TRADITIONAL BELIEFS/CUSTOMS	1	1.1
PREFER CONFINEMENT WITH WOMEN THEY KNOW	3	3.2
LONG DISTANCE TO CLINIC	21	22.6
MAY NOT LIKE THE CLINIC	17	18.3
IGNORANCE	15	16.1
DON'T KNOW	31	33.3

n = 93

\*Percents will not sum to 100.0 since  
multiple responses were possible for this question

TABLE 16  
DELIVERY EXPERIENCE IN PREVIOUS YEAR

NUMBER OF DELIVERIES ASSISTED	FREQUENCY	PERCENT
0	83	89.1
1	4	4.3
2	2	2.2
5	2	2.2
8	2	2.2
TOTAL	93	100.0

TABLE 17  
INSTRUMENT USED IN DELIVERY TO CUT THE CORD

INSTRUMENT	FREQUENCY	PERCENT
KNIFE/RAZOR BLADE	1	10.0
SCISSORS	1	10.0
SHARP REED	8	80.0
TOTAL	10	100.0

TABLE 18  
DRESSING APPLIED TO STUMP OF CORD

DRESSING	FREQUENCY	PERCENT
TRADITIONAL POULTICE	1	10.0
MODERN DRESSING OR BINDER	6	60.0
NOTHING	3	30.0
TOTAL	10	100.0

TABLE 19  
FREQUENCY AND PERCENT OF CHILDREN AGED 1-5 STILL  
BREASTFEEDING BY ONE YEAR AGE GROUPS

AGE GROUP	NUMBER OF CHILDREN IN VILLAGE	NUMBER STILL BREASTFEEDING	PERCENT STILL BREASTFEEDING
0 - 1	18	18	100.0
1 - 2	16	14	87.5
2 - 3	21	3	14.3
3 - 4	15	2	13.3
4 - 5	7	0	0.0
TOTAL	77	37	

TABLE 20  
DESIRED WEANING AGE OF CHILD UNDER ONE YEAR, CURRENTLY BREASTFEEDING

AGE IN MONTHS	FREQUENCY	PERCENT
0 - 2	1	5.5
3 - 6	1	5.5
7 - 12	1	5.5
13 - 24	2	11.1
25 +	12	66.7
DON'T KNOW	1	5.5
TOTAL	18	99.8

TABLE 21  
AGE OF LAST BABY WHEN FULLY WEANED

AGE IN MONTHS	FREQUENCY	PERCENT	CUMULATIVE PERCENT
0 - 2	2	5.1	5.1
3 - 6	1	2.6	7.7
7 - 12	2	5.1	12.8
13 - 18	9	23.1	35.9
19 - 24 (median 22)	11	28.2	64.1
25 +	14	35.9	100.0
TOTAL	39	100.0	

TABLE 22  
MANNER OF WEANING LAST BABY

METHOD	FREQUENCY	PERCENT
GRADUALLY (OVER A PERIOD OF ONE OR MORE MONTHS)	7	18.4
ABRUPTLY (IN LESS THAN ONE MONTH)	4	10.5
SENT AWAY (OVERNIGHT WEANING)	27	71.1
TOTAL	38	100.0

## WOMEN 15-49

CUMULATIVE PERCENT DISTRIBUTIONS FOR PERCEIVED IDEAL NUMBER  
OF CHILDREN BY SEX FOR A YOUNG BASOTHO COUPLE AND THE NUMBER  
THE COUPLE'S PARENTS WOULD WANT THEM TO HAVE

NUMBER OF CHILDREN	COUPLE		COUPLE'S PARENTS	
	BOYS	GIRLS	BOYS	GIRLS
0	3.1	1.6	0.0	0.0
1	13.8	14.1	4.0	4.0
2	41.5	48.4	22.7	24.0
3	73.8	76.6	45.3	48.0
4	78.5	81.3	52.0	56.0
5	87.7	89.1	72.0	72.0
6	89.2	89.1	72.0	76.0
7	90.8	92.2	76.0	100.0
AS MANY AS GOD GIVES	100.0	100.0	100.0	100.0
	n = 65		n = 75	
MEDIAN NUMBER	2.26	2.06	3.70	3.25

TABLE 24

PERCEIVED IDEAL NUMBER OF CHILDREN FOR A YOUNG BASOTHO COUPLE  
AND THE NUMBER THE YOUNG COUPLES' PARENTS WOULD WANT THEM TO HAVE

NUMBER	COUPLE			COUPLE'S PARENTS		
	FREQ.	PERCENT	CUMULATIVE PERCENT*	FREQ.	PERCENT	CUMULATIVE PERCENT*
0	2	2.2	3.2	0	0.0	0.0
1	0	0.0	3.2	0	0.0	0.0
2	6	6.5	12.7	2	2.2	2.7
3	2	2.2	15.9	2	2.2	5.3
4	17	18.3	42.9	11	11.8	20.0
5	4	4.3	49.2	3	3.2	24.0
6	19	20.4	79.4	16	17.2	45.3
7	9	9.7	93.7	22	23.7	74.7
AS MANY AS GOD GIVES	4	4.3	100.0	19	20.4	100.0
DON'T KNOW	30	32.3		18	19.4	
n =	93	100.0		93	100.0	
MEDIAN			5.02			6.16

TABLE 25  
KNOWLEDGE OF CONTRACEPTIVE METHODS

	METHOD STATED FIRST		METHOD STATED SECOND	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT
NONE	45	48.4	57	61.3
PILL	27	29.0	7	7.5
IUCD	5	5.4	14	15.1
DEPO	4	4.3	14	15.1
OTHER MODERN METHOD*	4	4.3	1	1.1
OTHER TRADITIONAL METHOD	8	8.6	0	0.0
TOTAL	93	100.0	93	100.0

\*e.g., condom, diaphragm, etc.

TABLE 26  
KNOWLEDGE OF PROTEIN FOODS FOR CHILDREN

FOOD	FIRST CHOICE		SECOND CHOICE	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT
NONE	2	2.2	2	2.2
MEAT, POULTRY, FISH, MILK, EGGS	85	91.3	39	41.8
BEANS, PEAS, LEGUMES	2	2.2	9	9.7
OTHER VEGETABLES	2	2.2	10	10.8
BREADS, MEALIES, CAKES, PORRIDGE	1	1.1	31	33.3
OTHER	1	1.1	2	2.2
TOTAL	93	100.0	93	100.0

TABLE 27  
DO YOUR FEMALE TEENAGERS EAT EGGS?

RESPONSE	FREQUENCY	PERCENT
NO	38	40.9
YES	52	55.9
DON'T KNOW	3	3.2
TOTAL	93	100.0

TABLE 28  
NUMBER OF WOMEN RECEIVING FOOD  
FROM PRE-SCHOOL CLINIC FOR THEIR CHILDREN

RESPONSE	FREQUENCY	ADJUSTED PERCENT
YES	48	92.3
NO	4	7.7
NOT APPLICABLE	41	-
TOTAL	93	100.0

TABLE 29  
USE OF OIL RECEIVED FROM PRE-SCHOOL CLINIC

USE	FREQUENCY	PERCENT
FOOD PREPARATION FOR CHILDREN	10	20.8
FOOD PREPARATION FOR FAMILY	38	79.2
	48	100.0

TABLE 30  
NUMBER OF OTHER PEOPLE IN THE FAMILY USING  
FOOD FROM THE PRE-SCHOOL CLINIC

NUMBER	FREQUENCY	PERCENT
0	10	20.8
1	2	4.2
2	3	6.3
3	5	10.4
4	11	22.9
5	9	18.7
6	3	6.3
7	5	10.4
TOTAL	48	100.0

TABLE 31  
NUMBER OF LIVING CHILDREN AGED 5 TO 15 YEARS BY SEX  
OF EVER-PREGNANT WOMEN

NUMBER	GIRLS			BOYS		
	FREQUENCY	PERCENT	CUMULATIVE PERCENT	FREQUENCY	PERCENT	CUMULATIVE PERCENT
0	38	50.0	50.0	36	47.4	47.4
1	19	25.0	75.0	20	26.3	73.7
2	14	18.5	93.5	14	18.4	92.1
3	2	2.6	96.1	6	7.9	100.0
4	1	1.3	97.4	0	0.0	
5	1	1.3	98.7	0	0.0	
6	1	1.3	100.0	0	0.0	
<b>TOTAL</b>	<b>76</b>	<b>100.0</b>		<b>76</b>	<b>100.0</b>	

TABLE 32  
WOMEN WITH CHILDREN AGED 0-5 BY ONE YEAR AGED GROUPS

AGE OF CHILD	NUMBER OF CHILDREN	FREQUENCY
0 - 1	1	18
	2	0
1 - 2	1	14
	2	1
2 - 3	1	19
	2	0
3 - 4	1	13
	2	1
4 - 5	1	7
	2	0

TABLE 33  
CHILDREN REGISTERED IN PRE-SCHOOL CLINIC

AGE	NUMBER OF CHILDREN	NUMBER REGISTERED	PERCENT REGISTERED
0-1	18	16	88.9
1-5	57	57	100.0

TABLE 34  
IMMUNIZATION AGAINST SMALLPOX, TUBERCULOSIS AND  
 RUBEOLA (MEASLES) OF CHILDREN UNDER ONE YEAR

DISEASE RECEIVED IMMUNIZATION	SMALLPOX		TUBERCULOSIS		RUBEOLA	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT	FREQUENCY	PERCENT
NO	6	33.3	3	16.7	6	33.3
YES	6	33.3	10	55.5	9	50.0
DON'T KNOW	6	33.3	5	27.8	3	16.7
TOTAL	18	99.9	18	100.0	18	100.0

TABLE 35  
HIGHEST LEVEL OF IMMUNIZATION FOR POLIO  
 AND DWT RECEIVED TO DATE BY CHILDREN

DISEASE	ONE YEAR			
	POLIO		DWT	
NUMBER OF DOSES	FREQUENCY	PERCENT	FREQUENCY	PERCENT
0	3	16.7	1	5.6
1	2	11.1	3	16.7
2	3	16.7	2	11.1
3	3	16.7	7	38.8
DON'T KNOW	7	38.8	5	27.8
TOTAL	18	100.0	18	100.0

TABLE 36

RECEIPT OF BASIC IMMUNIZATION FOR POLIO,  
DWT, TUBERCULOSIS FOR CHILDREN AGED 1-5

IMMUNIZATION STATUS	POLIO		DWT		TUBERCULOSIS	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT	FREQUENCY	PERCENT
BASIC SERIES RECEIVED	55	96.5	53	93.0	56	98.2
NOT RECEIVED	2	3.5	4	7.0	1	1.8
TOTAL	57	100.0	57	100.0	57	100.0

TABLE 37

NUMBER OF EPISODES OF GASTROINTESTINAL AND NUTRITIONAL DISORDERS  
AMONG CHILDREN UNDER FIVE YEARS OF AGE

DISORDER	GASTROINTESTINAL			NUTRITIONAL		
	NUMBER	FREQUENCY	CUMULATIVE FREQUENCY	PERCENT	FREQUENCY	CUMULATIVE FREQUENCY
0	33	0	82.5	40	0	100.0
1	5	5	12.5	0	0	0.0
2	2	4	5.0	0	0	0.0
TOTAL		9	100.0		0	100.0

TABLE 38

CHILDREN AGED 5-15 YEARS LIVING AT HOME PER WOMAN

NUMBER OF CHILDREN	FREQUENCY	PERCENT	CUMULATIVE PERCENT
1	14	29.2	29.2
2	19	39.5	68.7
3	8	16.7	85.4
4	5	10.4	95.8
5	2	4.2	100.0
TOTAL	48	100.0	

TABLE 39  
NUMBER OF CHILDREN AGED 5-15 BY SEX ATTENDING SCHOOL PER WOMAN\*

NUMBER OF CHILDREN	GIRLS		BOYS	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT
0	11	29.0	5	12.5
1	17	44.7	21	52.5
2	9	23.7	11	27.5
3	1	2.6	3	7.5
TOTAL	38	100.0	40	100.0

\*With boys or girls aged 5-15 years

TABLE 40  
NUMBER OF SHEPHERDS PER MOTHER WITH BOYS AGED 5-15 YEARS

NUMBER	FREQUENCY	PERCENT
0	8	20.0
1	19	47.5
2	10	25.0
3	1	2.5
DON'T KNOW	2	5.0
TOTAL	40	100.0

TABLE 41  
NUMBER OF MEALS PER DAY TAKEN AT HOME

NUMBER OF MEALS PER DAY	FREQUENCY	PERCENT
0	0	0.0
1	0	0.0
2	13	43.3
3	17	56.7
TOTAL	30	100.0

# INDEX

## APPENDIX C

### OLDER WOMEN RESULTS

	Pages
TABLE 1: FREQUENCY AND PERCENT AGE DISTRIBUTION	C-1
TABLE 2: EDUCATIONAL STATUS	C-1
TABLE 3: RESIDENCE IN HA PHECHELA	C-1
TABLE 4: HANDICRAFT SKILLS	C-2
TABLE 5: TS'AKHOLO CLINIC ATTENANCE IN PAST THREE MONTHS	C-2
TABLE 6: HOW MANY DELIVERIES HAVE YOU ASSISTED IN DURING THE PAST ONE YEAR?	C-3
TABLE 7: OBJECT USED TO CUT UMBILICAL CORD	C-3
TABLE 8: SHOULD YOUNG WOMEN EAT EGGS?	C-4
TABLE 9: KNOWLEDGE OF PROTEIN FOODS TO PROMOTE GROWTH	C-4
TABLE 10: IDEAL NUMBER OF CHILDREN FOR A YOUNG BASOTHO COUPLE BY SEX	C-5
TABLE 11: IDEAL NUMBER OF CHILDREN FOR A YOUNG BASOTHO COUPLE AND THE NUMBER THEIR PARENTS WOULD WANT THEM TO HAVE	C-5

TABLE 1  
FREQUENCY AND PERCENT AGE DISTRIBUTION

AGE	FREQUENCY	PERCENT
50 - 54	13	25.5
55 - 59	13	25.5
60 - 64	4	7.8
65 - 69	10	19.6
70 +	11	21.6
TOTAL	51	100.0

TABLE 2  
EDUCATIONAL STATUS

COMPLETED EDUCATION	FREQUENCY	PERCENT
NONE	12	23.5
LOWER PRIMARY	34	66.7
HIGHER PRIMARY	5	9.8
JUNIOR CERTIFICATE	0	0.0
MATRICULATION	0	0.0
TOTAL	51	100.0

TABLE 3  
RESIDENCE IN HA PHECHELA

RESIDENCE IN YEARS	FREQUENCY	PERCENT
LESS THAN 5	0	0.0
FIVE TO FIFTEEN	3	5.9
MORE THAN 15	48	94.1
TOTAL	51	100.0

TABLE 4  
HANDICRAFT SKILLS

SKILL	FREQUENCY	PERCENT*
SEW	13	25.5
KNIT/CROCHET	12	23.5
CLAY WORKING	41	80.4
BEAD WORK	10	19.6
BASKETRY	32	62.7
NONE	2	3.9

\*Percents will not sum to 100.0 since categories are not mutually exclusive

TABLE 5  
TS'AKHOLO CLINIC ATTENDANCE  
IN PAST THREE MONTHS

RESPONSE	FREQUENCY	PERCENT
YES	25	49.0
NO	26	51.0
TOTAL	51	100.0

TABLE 6  
HOW MANY DELIVERIES HAVE YOU ASSISTED IN  
DURING THE PAST ONE YEAR?

NUMBER OF DELIVERIES	FREQUENCY	PERCENT
0	25	49.0
1	9	17.7
2	8	15.7
3	2	3.9
4	2	3.9
5	2	3.9
6	0	0.0
7 +	2	3.9
DON'T KNOW	1	2.0
TOTAL	51	100.0

TABLE 7  
OBJECT USED TO CUT UMBILICAL CORD

INSTRUMENT	FREQUENCY	PERCENT
NONE	1	2.0
KNIFE/RAZOR BLADE	6	22.2
SCISSORS	1	2.0
SHARP REED	18	66.6
DON'T KNOW	1	2.0
TOTAL	27	100.0

TABLE 8  
SHOULD YOUNG WOMEN EAT EGGS?

RESPONSE	FREQUENCY	PERCENT
YES	21	41.2
NO	30	58.8
TOTAL	51	100.0

TABLE 9  
KNOWLEDGE OF PROTEIN FOODS TO PROMOTE GROWTH

	FREQUENCY	PERCENT**
MEAT, POULTRY, FISH, MILK, EGGS	46*	90.2
BEANS, PEAS, LEGUMES	0	0.0
OTHER VEGETABLES	0	0.0
BREADS, MEALIES, CAKES, PORRIDGE	48*	94.1
OTHER	2*	3.9

\*Actual Responses: Milk . . 44  
 Eggs . . 2  
 Porridge 48  
 Soup . . 1  
 Water . 1

\*\*Percents will not sum to 100.0 since  
 categories are not mutually exclusive

TABLE 10  
IDEAL NUMBER OF CHILDREN FOR A YOUNG BASOTHO COUPLE BY SEX

NUMBER	BOYS		GIRLS	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT
1	5	9.8	5	9.8
2	7	13.7	8	15.7
3	5	9.8	5	9.8
4	1	2.0	1	2.0
5	6	11.8	5	9.8
6	0	0.0	0	0.0
7 +	0	0.0	0	0.0
UP TO GOD	13	25.5	13	25.5
DON'T KNOW	14	27.4	14	27.4
TOTAL	51	100.0	51	100.0

TABLE 11  
IDEAL NUMBER OF CHILDREN FOR A YOUNG BASOTHO COUPLE AND  
THE NUMBER THEIR PARENTS WOULD WANT THEM TO HAVE

NUMBER	COUPLE		COUPLE'S PARENTS	
	FREQUENCY	PERCENT	FREQUENCY	PERCENT
0 - 1	0	0.0	0	0.0
2	5	9.8	0	0.0
3	1	2.0	2	3.9
4	7	13.7	2	3.9
5	1	2.0	1	2.0
6	4	7.8	6	11.8
7 +	5	9.8	13	25.5
UP TO GOD	12	23.5	12	23.5
DON'T KNOW	16	31.4	15	29.4
TOTAL	51	100.0	51	100.0

HEAD OF HOUSEHOLD

INTRODUCTION

[Empty box for introduction]

1. NAME OF INTERVIEWER \_\_\_\_\_ [1] [2] [3] [4] [5] [6]

2. DATE OF INTERVIEW \_\_\_\_\_

3. TIME INTERVIEW STARTED \_\_\_\_\_

4. LEBITSO LA HLOOHO EA LELAPA: \_\_\_\_\_  
FIRST NAME SURNAME

5. HOUSEHOLD NUMBER [ ] [ ] [ ]

6. VILLAGE NAME \_\_\_\_\_

7. NA MONG'A LELAPA LEE O TENG HONA JOALE?

YES [ ] \_\_\_\_\_ Go to Question 10

NO [ ] \_\_\_\_\_ Go to Question 8

8. KE NAKO E KAE A LE SIEO?

LESS THAN ONE MONTH [ 1 ]

ONE MONTH TO SIX MONTHS [ 2 ]

SIX MONTHS TO ONE YEAR [ 3 ]

MORE THAN ONE YEAR [ 4 ]

9. HAEBA A LE SIEO, LEBITSO LA MOTHO EA KA ARABANG LIPOTSO  
TSEE SEBAKENG SA HAE KE MANG?

SURNAME \_\_\_\_\_ FIRST NAME \_\_\_\_\_



Relationship to head	3 Age	4 Education	5 Sex	6 Marital	7 Residential Status
1 Household head	1 Under 1 year	1 None	1 Male	1 Never married	1 Present, working
2 Spouse of head	2 One-4 years	2 Lower Primary	2 Female	2 Married	2 Present, not working
3 Child of head/spouse (including child of elder brother)	3 Five-9 years 4 Ten- 14 years	3 Higher Primary 4 Jr Cert		3 Deserted/divorced/ separated 4 Widowed	3 Absent, in Lesotho working 4 Absent, in Lesotho not working
4 Spouse of child of head or spouse	5 Fifteen-19yrs 6 Twenty-29 yrs	5 Sr Cert 6 Above Sr Cert			5 Absent, Outside Lesotho working in mines 6 Absent, Outside Lesotho working elsewhere 7 Absent, outside Lesotho not working
5 Grandchild of head/ spouse (including child of younger brother)	7 Thirty-39 yrs 8 Forty-49 yrs 9 45- 49 yrs				
6 Brother/Sister of head (younger)	10 Fifty-59 yrs 11 Sixty-64 yrs				
7 Child of sister of household head	12 Sixty-five yrs				
8 Parents					
9 Grandparents					
10 Other relatives					
11 Hired worker					
12 Other (not related)					

11. NA HLOHO EA LELAPA LEE O NA LE MOSEBETSI MOO A LEFHOANGHONA JOALE? YES  NO
12. O ILE A TLISA, KAPA A ROMELA CHELETE E KAE LIKHOELING TSE TSELETSENG TSE TSOA FETA?

3

- UNDER R 25 in 6 months  1
- R 26 - 50  2
- R 51 - 75  3
- R 76 - 100  4
- R101 - 125  5
- Over 126  6

13. AK'U FANE KA MLBITSO A LITHO TSA LELAPA LENA, TSE SEBELETSA CHELETE, KAPA TSE ILENG TSA E SEBELETSA SELEMONG SENA SE FETILENG:

1 NUMBER OF PERSON FROM HOUSEHOLD LIST	2	TYPE OF WORK	3	FULL AND PART-TIME

- CODE
- 2 Type of work
- 1 Mines underground
  - 2 Mines surface
  - 3 Govt. of Lesotho
  - 4 Teacher
  - 5 Driver
  - 6 Chief's Secretary
  - 7 Handicraft/Repair
  - 8 Farm worker (hired)
  - 9 Food Aid
  - 10 Factory worker
  - 11 Other (specify)
- 3 Full and Part-time (past 1 year)
- 1 Fulltime
  - 2 Part-time, 40 hr/month or more
  - 3 Part-time, less than 40 hr/month

4

15. MATLO A TENG LAPENG MOO A NAKAE?  
(State the number of each type)

	1	2	3
	Number	Type	No. of Rooms
1 Rondavels/Huts			
2 House (Mud, Poles, Soil, Stone)			
3 House (Brick, Concrete Block)			

CODE: OBSERVATIONS

1 - Number - State the Number

2 - Type (Total of Types in that Category)

01 No glass window, no tin roof, no concrete floor

02 Glass window only

04 Glass window + tin roof

08 Glass window + concrete floor

16 Glass window, concrete floor, tin roof

32 Other (specify): \_\_\_\_\_

3 - - Number of Rooms - State the Total Number of Rooms in that Category.

16. NA HO NA LE BATHO BA ROBALANG KA NTLONG E NANG LE LEIPO LA SESOTHO MOO HO BESOANG?

YES  1

NO  0

17. NA LELAPA LEE LE NA LE SERAPA SA MERCHO?

YES  1 → Go to Question 18

No  0 → Go to Question 17

18. HO NA LE SEBAKA MOO SERAPA SE KA ETSOANG?

YES  1

NO  0 → Go to Question 24

19. NA SERAPA SEE SE KAMPETSOE KA MAHLAKORENG OHLE?

YES  1

NO  0

20. U TSAMAEA NAKO E KAE HO FIHLA SERAPENG SEE?

CODE: Less than one minute	<input type="text" value="1"/>
One minute to 5 minutes	<input type="text" value="2"/>
More than 5 minutes	<input type="text" value="3"/>

21. U TSAMAEA NAKO E KAE HO TLOHA MOO HO EA MOO METSI A NOESETSANG A ATISANG HO KHUOA TENG? (State Walking Time) \_\_\_\_\_

CODE: <input type="text" value="1"/>	Less than 5 minutes
<input type="text" value="2"/>	Five minutes to 15 minutes
<input type="text" value="3"/>	16 Minutes to 30 minutes

22. NA METSI A NOESETSANG LE A NOOANG A KHUOA SEBAKENG SE LE SENG?

YES	<input type="text" value="1"/>	NO	<input type="text" value="0"/>
-----	--------------------------------	----	--------------------------------

23. 1. LE ILE LA LEMA MERCHO EFE SERAPENG SA MERCHO SELEMONG SEE SE FETILENG?
2. PEO E ILE EA FUM/NOA KLE?
3. MERCHO EE E ILE EA SEHELISOA JOANG?

Interviewer: Start with Col. 1, then ask for each vegetable the questions in col. 2 and col. 3 and record the answer.

	COL. 1	COL. 2	COL. 3
	Grown	Source of Seed	How used
1. CABBAGE	1		
2. PEAS	2		
3. SQUASH	4		
4. CARROTS	8		
5. BEANS	16		
6. OTHER (Specify)	32		

NOT APPLY

XX

XX

X

TOTAL

--	--

--	--

--

CODING: To be done later

Col. 1 - Write in YES if vegetable was grown or NO if it was'nt.

Col. 2 - Seed Source:

Co-op Lesotho	1	Col. 3 How used: Consumed in Household	1
Local trader	2	Traded for produce/labor	2
Saved from last year	4	Sold	4
Other (Specify)	8	Other (Specify)	8
-----		-----	
-----		-----	
Not apply	X	Not apply	X

24. NA U ILE UA LEMA LIPATE TSA LITHOLOANA KA SERAPENG SA MEROHO?

YES  1 NO  0

25. NA HO NA LE MOTHO LELAPENG LEE EA KILENG A EA THUPELONG EA TEMO  
MELEMONG SEE SE FELANG?

YES  1 → Go to Question 25

NO  0 → Go to Question 27

26 THUPELO EE E NE E TSOEROE KA KHOELI EFE?

Jan 75

Dec 75 \_\_\_\_\_ 1

1 2 3 4 5 6 7 8 9 10 11 12

27. NA HO NA LE LIPHETCHO TSE BONAHALANG LI ETSOA KAMOR'A HORE MOTHO  
EO A KHUTLE THUPELONG?

YES \_\_\_\_\_ WHAT: FERTILIZING  1  
SEED SOURCE  2  
CULTIVATING  4  
OTHER(Specify)  8

NO  0 Go to Question 28 TOTAL

28. KANTLE HO SERAPA SEO RE BUILENG KA SONA, NA U BOETSE U NA LE MASIMO?

YES  1 Go to Question 29

NO  0 → Go to Question 40

28. HA RE BUE JOALE KA MASIMO A HAU LE LIJALO TSEO U ILENG UA LI  
LEMA LEHLABULENG LA 1975.

Interviewer: Answer all questions with regard to each  
field if more than one field

	1	2	3	4
LELAPA LEE LE NA LE MASIMO A MAKAE? CODE: 1 if yes X if not apply	FIELD	FIELD	FIELD	FIELD
TSIMO KA 'NGOE E NA LE LIAKERE TSE KAE TSA SESOTHO?  Interviewer: Code the number of Sesotho acres for each field. Code XX if not apply	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3. NA TSIMO EE E LENNGOE HONA JOALE? (SUMMER 1975)  CODE: 1 - Yes, entire field 2 - Yes, part of field 3 - No, entire field left fallow  X - Not apply	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4. KE LIJALO LIFE TSA LEHLABULA TSE LENNGOENG MASIMONG AA KA 1975? CODE:				
Maize	01	01	01	01
Wheat	02	02	02	02
Mabele	04	04	04	04
Beans	08	08	08	08
Peas	16	16	16	16
Other	32	32	32	32
Specify				
Not apply	XX	XX	XX	XX
TOTAL	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
5. KOTULO E ILE EA E-BA JOANG TSIMONG KA 'NGOE LEHLABULENG LA 1974/75?	Bags Tins	Bags Tins	Bags Tins	Bags Tins
How many bags Maize				
(Specify size of bag) Wheat				
How many tins Mabele				
(Specify size of tins) Peas				

30. NA U NA LE MASIMO A ILENG A LENGOA SEAHLOLO SELEMONG SEE SE FETILENG?

- CODE:  1 Yes, all of the field(s)  
 2 Yes, part of the field(s)  
 0 No, none of the field(s)

31. MASIMO A HAU A ILE A LENGOA A BA A JALOA KA NAKO EFE SELEMONG SE FETILENG?

- CODE:  01 - First half October  
 02 - Second half October  
 04 - First half November  
 08 - Second half November  
 16 - Other (specify) \_\_\_\_\_  
 XX - Not apply

TOTAL

32. LE ILE LA SEBELISA MOKHOA OPE EA HO LEMA SELEMONG SE FETILENG?

- 1 Tractor  01  
 2 Oxen/Bulls  02  
 3 Cows  04  
 4 Horses, Mules   
     Donkeys  08  
 Not apply  XX

TOTAL

33. LE ILE LA SEBELISA MOKHOA EFE EA HO JALA SELEMONG SE FETILENG?

- 1 Rows -- by Planter  
 2 Rows -- by Hand  
 4 Broadcasting  
 X Not apply

TOTAL

34. PEO E SEBELISITSOENG LEHLABULENG LA 1975 E NE E FUMANOE KAE?

- 01 Previous crop, sharecrop field, bought from other farmer.
- 02 Bought from Co-op in Lesotho.
- 04 Bought from Trader
- 08 Other(specify) \_\_\_\_\_
- Not apply

TOTAL

35. PEONG EO, NA HO NA LE E ILENG EA SIRELETSOA SEBAKING SA SESELI LE LITSIE?

- YES  1
- NO  0
- Not apply  X

SEBOLAI

36. HO ILE HA SEBELISOA SA LITSIE LE SESELI LIJALONG TSE LENNGOENG SELEMONG SE FETILENG?

- YES  1
- NO  0
- Not apply  X

37. NA HO ILE HA TSELOA NONONTSA MASIMONG HA HO LENGOA SELEMONG SE FETILENG?

- YES  1
- NO  0
- Not apply  X

38. NA U ILE UA TSOAKA PEO LE NONONTSA HA U JALA SELEMONG SE FETILENG?

- CODE: YES  1
- NO  0
- Not apply  X



40. KE LIFE HAR'A LIJALO TSE LATELANG TSE KA TLISETSANG LELAPA CHELETE?

Peas	01
Borns	02
Wheat	04
Maize	06
Mabele	16
Cabbage	32
Not apply	XX
TOTAL	<input type="text"/>

41. SELEMONG SE FETILENG NA U ILE UA BATLA KELETSO EA BOLEMI SEBAKENG SA HO KHETHA PEO?

YES	<input type="text" value="1"/>
NO	<input type="text" value="0"/>

42. UA TSEBA HORE PEO E SIRELELITSOENG BAKENG SA SESELI LE LITSIE E KOTSI HA E JEOA KE BATHO?

YES	<input type="text" value="1..."/>
NO	<input type="text" value="0"/>

43. SELEMONG SE FETILENG NA UENA KAPA E MONG OA LELAPA O ILE A KENYA LETSOHO THIBELONG EA KHOLELHO EA MORU E KANG HO LOKISA MMEELING JOALO-JOALO?

YES	<input type="text" value="1"/>
NO	<input type="text" value="0"/>

44. NA HO NA LE LITSITISO TSEO UENA KAPA E MONG OA LELAPA A ILENG A KOPANA LE TSONA HA A LEKA HO PHETHA MOSEKETSI OA HO THIBELA KHOLELHO EA MORU?

YES	<input type="text" value="1"/>
NO.	<input type="text" value="0"/>

45. BATHO BA LELAPA LEE BA ILE BA LEMA LIFATE TSE KAE HO THIBELA  
 KHOKHOLENG KE NOBU LETSATSING LA TEMO EA LIFATE? (LA 21 HLAKUBELE 1975)

CODE Actual number

46. NA HO NA LE SE-EA-LE-NOEA SE NTSENG SE SEBELISOA LELAPENG LEE?

YES   
 NO

47. NA HO NA LE NTLOANA NOC LELAPA LE ITHUSETSANG TENG?

YES   
 NO

48. LELAPA LEE LE NE LE ATISA HO KIA METSI HO KAE KA KHOELI LE KHOELI  
 SELEMONG SE FETILENG?

	WINTER	SPRING	SUMMER	AUTUMN	
1. Protected Spring	1	2	4	8	<input type="text"/>
2. Unprotected spring	1	2	4	8	<input type="text"/>
3. Sealed well, Tank or Tap					<input type="text"/>
4. Dams	1	2	4	8	<input type="text"/>
5. Handdug water holes	1	2	4	8	<input type="text"/>
6. Other (Specify)	1	2	4	8	<input type="text"/>

49. U HOPOLA HORE METSI A LIPOMPO A HLOKILE HO PETA A NTNG A SEBELISOA  
 PELE, AA TSOANA, KAPA HAA HLOEKA JOALEKA A PELE?

Better Quality   
 About the same   
 Poorer Quality   
 Not Apply

50. U FUMANA METSI A TLING KA LIPOMPO A FUMANELA KAHEHLA HO FETA MOO LE NENG LE A KHA PELE, KAPA A FUMANELA KA HO TSOANA?

MORE RELIABLE	1
ABOUT THE SAME	2
LESS RELIABLE	3
NOT APPLY	X

51. NA U ILE UA KENYA LETSOHO NTHONG TSE LATELANG SELEMONG SE FETILENG?

01	Mokhatlo oa kalimano ea licheleto
02	Mokhatlo oa poloko le kalimano ea licheleto
04	Chale-tobeleliso
03	Banka
16	Lobankolong
1	TOTAL

52. HO NA LE NOKHATIO KAPA KOPANO EO UENA KAPA E MONG OA LELAPA E LENG SETHO SA ONA?

01	Kereke
02	Mokhatlo oa lipolotiki
04	Komiti ea seliba
08	Komiti ea ntlafatso ea motse
16	Mokhatlo oa Basali kapa oa balimi ba bacha
32	Tso ling (Hlalosa)
1	TOTAL

53. HO NA LE MOTHO LEHAPENG LEE EA KA ETSANG MESEBETSI E LATELANG?

01	Ho roka liparo
02	Ho loha ka mamao kapa ka koroche
04	Ho bopa ka letsopa, ho lila, ho seha litema
08	Ho loha ka sefaha
16	Ho loha ka joang, ho etsa seotleana, ho aha matlo
00	None of the above
32	Other (Specify)

1	TOTAL
---	-------

54. NA HO NA LE MOTHO EA ILENG A KULA LELAPENG LEE LIKHOELING TSE THARO TSE FETILENG?

YES  1 → Go to Question 54  
 NO  0 → Go to Question 55

55. THUSO E ILE EA BATLOR HO LIFE TSA LIBAKA TSE LATELANG?

01	Hospital
02	Clinic or Health Centre
04	Traditional Healer or Faith Healer
08	Private Doctor
00	None of these
16	Other (specify) .....
<input type="checkbox"/> 1	TOTAL

56. HO NA LE MOTHO LELAPENG LEE EA ILENG A FUMANA THUSO CLINIKING EA *Milena - 100* LIBAKA LEEPE KAPA LEPE KHOELING TSE THARO TSE FETILENG?

YES	Antenatal	<input type="checkbox"/> 1
	Post-natal	<input type="checkbox"/> 2
	Pro-School clinic	<input type="checkbox"/> 4
	Immunizations	<input type="checkbox"/> 8
	General care	<input type="checkbox"/> 16
	Child spacing	<input type="checkbox"/> 32
	Other reason (specify)	<input type="checkbox"/> 68
NO	Not used clinic	<input type="checkbox"/> 00
	TOTAL	<input type="checkbox"/>

57. NA HO NA LE MOTHO EA TSOEROENG KE LEFUBA LELAPENG LEE?

- Don't know  X → If don't know go to Question 58
- Yes  1 → If yes, go to Question 57
- No  0 → If no, go to Question 58

58. BA BAKAE? NA O (BA) NTSE BA ENOA LIPILISI TSA LEFUBA?

COL. 1		COL. 2	
Name 1	<input type="checkbox"/>	Yes <input type="checkbox"/> 1	No <input type="checkbox"/> 0
2	<input type="checkbox"/>	Yes <input type="checkbox"/> 1	No <input type="checkbox"/> 0
3	<input type="checkbox"/>	Yes <input type="checkbox"/> 1	No <input type="checkbox"/> 0
TOTAL			
Not apply <input type="checkbox"/> X		Not apply <input type="checkbox"/> X	

59. HO NA LE BATHO BA ILENG BA TSOENYHA KA MEKHOA E LATELANG  
LAPENG LEE LIKHOELING TSE THARO TSE FETILENG

Fever	01
Vomiting	02
Diarrhoea	04
Cough	08
Skin Sores	16
Lefu la Poone	32

TOTAL  1

60. TSEBONG EA HAU, MAFU A LATLELANG A BAKOA KE ENG?

1. FEBERU (MOCHESO) \_\_\_\_\_
2. LEHLATSO \_\_\_\_\_
3. LETSOLLO \_\_\_\_\_
4. HO HOHLOLA \_\_\_\_\_
5. LISO TSA LETPLALO \_\_\_\_\_
6. LEFU LA POONE \_\_\_\_\_

CODING FOR REASONS GIVEN (Can be done later)

	Fever 1.	Vomiting 2.	Diarrhea 3.	Cough 4.	Skin Sores 5.	Lefu la Poone 6.
Food, diet, nutrition, eating habits	01	01	01	01	01	01
Water, bad water, dirt, lack of personal or cooking cleanliness	02	02	02	02	02	02
Weather, too hot, too cold	04	04	04	04	04	04
Insects or germs	08	08	08	08	08	08
Balimo or Boloi	16	16	16	16	16	16
Other Reasons	32	32	32	32	32	32
Don't Know	00	00	00	00	00	00
TOTAL						

61. SELEMONG SA 1975 KE BASALI BA BAKAE BA ILENG BA FETA KE PELEHI  
LELAPENG LEE?

0	1	2	3
---	---	---	---

62. BOLELA MEFUTA E 'MELI EA LIJO TSE MATLAFATSANG BATHO BA LELAPA.

PEAS	1	MAIZE	8
BEANS	2	MABELE	16
WHEAT	4	RICE	32
		OTHER _____	64 Specify

TOTAL

63. LITHO TSA LELAPA LEE LI ILE TSA JA MAHE A MAKAE KHOELING E  
FETILENG? BOLELA LE A NENG A KA JEQA LE HOJANE A SAKA A FELA  
A JEQA.

CODE Actual number

64. NA BAROETSANA LE BASALI BA BACHA RA JA MAHE LELAPENG ILE?

YES

NO

65. HAEBE HO NE HO ENA LE BATHO BA BACHA BAO U BA TSEBANG, 'ME BE  
NYALANA, U HOPOLA HORE BA NE BA TLA RATA 'MO BA LE BANA BA  
BAKAE?

CODE Actual number

0 = 0

9+ = 9

As many as God gives X

BASHANYANA BA BAKAE?

BANANA BA BAKAE?

66. U HOPOLA HORE BATSOALI BA BONA BA NE BA TLA LAKATSA HORE BA BE  
LE BANA BA BAKAE?

CODE Actual number

0 = 0

9+ = 9

As many as God gives X

HOW MANY BOYS?

HOW MANY GIRLS?

67. HA RE BUE JOALE KA LIPHOOFOLO TSA HAU.

NA LELAPA LEE LE RUILE LIPHOOFOLO?

Yes

\_\_\_\_\_

Go to Question 68

No

\_\_\_\_\_

Go to Question 75

NUMBER OF LIVESTOCK MANAGED BY THIS HOUSEHOLD

	NUMBER Code actual number	NUMBER TREATED AT VET CLINIC IN PAST 6 MONTHS Not apply = X None = 0	NUMBER SLAUGHTERED IN PAST 6 MONTHS Not apply = X None = 0
			FEET / HH ECK SAI
CATTLE	Lithole		
	Manamane		
	Lipoho		
	Lipholo		
SHEEP	Liramo		
	Lilchatala		
	Likonyana		
GOATS	Liphooko		
	Lipoli		
	Lipotsanyane		
ALL AGES EQUINE	Lipere		
	Limmoulo		
	Litonki		
ALL AGES POULTRY	Likhofo		
	Likalakunu		
	Matata lo		
	Likhantŕi		
SWINE	Lifariki (SOW)		
	(BOARS)		
OTHER (Specify)	Malinyane (PIGLETS)		

68. SELEMONG SENA SE FELANG, KE MANG EA NENG A LISA LIKHOMO TSA HAU?

Son or Nephew	1
Other male relative	2
Wife	4
Other female relative	8
Hired herdboy	16
Other (specify) _____	32
Not apply	XX
Total	<input type="text" value="1"/>

69. HA MOLISANA A LE SIEO, KE MANG EA HLOKOMELANG LIPHOOFOLO?

Wife	1
Brother	2
Son	4
Other relative	8
Village chief	16
Other (specify) _____	32
Not apply	XX
TOTAL	<input type="text" value="1"/>

70. LELAPA LEE LE NA LE LIKHOMO TSE ILENG TSA HANGOA SELEMONG SEE SE FELANG?

Yes  \_\_\_\_\_ Go to Question 71

No  \_\_\_\_\_ Go to Question 74

71. KHOMO TSEO LI NE LI HANGOA KA LIKHOELI LIFE SELEMONG SE FETILENG?

Jan '75												Dec '75
1	2	3	4	5	6	7	8	9	10	11	12	

72. HA HO HANGOA LE EE LE FUMANE LEBESE LE LEKAE KA LETSATSIT?

Winter	Spring	Summer	Autumn
<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>

Bottles/average yield per day (26 oz. size)(75ml)

73. LEBESE LEE LE EE LE SEBELISOE JOANG?

Consumed by household	1
Sold	2
Other .....	4
TOTAL	

74. LIKHOELING TSE TSELETSENG TSE FETILENG LELAPA LEE LE ILE LA REKA LEBESE KAPA LA LE FUMANA KA HO NEIELANA KA MOFUTA O MONG OA LIJO, KAPA HO LE SEBELETSA?

Yes  → Go to Question 75

No  → Go to Question 76

75. KE LEBESE LE LEKAE LEO LELAPA LE ILENG LA LE FUMANA KA LITSELA TSEE KHOELING E FETILENG?

CODE ACTUAL AMOUNT   Bottles (26oz size)  
750ml

76. MOTSENG OO NA LEBESE LE REKOA KAPA LE FAPANYETSOA KA BODEBE?

Jan '75

Dec '75

1 2 3 4 5 6 7 8 9 10 11 12

Yes 1 → Ka khoeli efe?

77. KAITLE HO LIKHOMO, NA HO NA LE LIPHOOFOLLO TSE LING TSE HANGOANG LELAPENG LEE?

YES → KE LIFE? Goat   
Sheep

NO

TIME INTERVIEW ENDED:

CONCLUDING COMMENTS



**MISSING PAGE**  
**NO. 32**

12 During the past 3 mo. were you employed for money besides working in the field?  
 LIKH. ELI TSE THLEO TSE METILENG NA U KILE JA HIRWA (SEBELE TSA CHELETE?)

KAPILE LE H. SEBETSA MASINONG?

No   0

YES   1 FULL TIME

2 PART-TIME (LESS THAN 40 HR/M)

3 PART-TIME (40 HR/M OR MORE)

13. Were you ever pregnant?  
 U SE U KILE U. BA MOKHACHANE? (U ARABE ESITA LE KA LIMPA TSE) EWANG LI ILE TSA SENYEHA)

No  0  Go to Question 51

YES  1  Go to Question 14.



Q. 14 C DING INSTRUCTIONS

PREGNANCIES HISTORY.

Interviewer: From the pregnancy history answer and code the following questions. This should be done at leisure after you finish the entire questionnaire:-

- |   | CODE              | TOTAL                |
|---|-------------------|----------------------|
| (1) Total no. all pregnancies 1971-75   |                   | <input type="text"/> |
| (2) " " live births (LT,LP)   |                   | <input type="text"/> |
| (3) " " Ab, SB 1971-75  |                   | <input type="text"/> |
| (4) Born alive, now dead '71-'75  |                   | <input type="text"/> |
| (5) Total no. preg. resulting in multiple births '71-'75  |                   | <input type="text"/> |
| (6) Total infant deaths '71-'75 (dead before 1st birthdate)   |                   | <input type="text"/> |
| (7) Total 1 yr to 5th birthdate deaths  |                   | <input type="text"/> |
| (8) " females born '71-'75  |                   | <input type="text"/> |
| (9) Spacing of 2 most recent pregnancies '71-'75 (time between end of second to last pg. & last pg. each woman) code in total months. |                   | <input type="text"/> |
| (10) Is this woman aged 45-49 yr?   | Yes = 1<br>No = 0 | <input type="text"/> |

(11) ONLY FOR WOMEN 45-49 YR

Interviewer: If Q. (10) is yes, code the following:

(a) Is this 45-49 y.o. woman pregnant now? (See Q. 17) Yes = 1 No = 0	<input type="text"/>
(b) Total No. all terminated pregnancies	<input type="text"/>
(c) " Live births (LT,LP)	<input type="text"/>
(d) " living boys	<input type="text"/>
" girls	<input type="text"/>
(e) " born alive now dead	<input type="text"/>
(f) " Ab, SB	<input type="text"/>

(12) RECENT CHILD SPACING

Interviewer: This is to be done on all women giving birth in the past year (365 days) whether to a live born a premie, a stillbirth, miscarriage or abortion.

(a) Has this woman given birth this past year?

NO  
YES, →

0	Live, term
1	Live, premie
2	Abor, miscarriage
3	Stillbirth
4	

(b) Spacing in months between termination of this past year's pregnancy and termination of the pregnancy before this one. CODE TOTAL MONTHS

15. Where did you deliver your last baby?  
 U ILE OA PEPELA NGWANA JA HAU : A IK. QETELA HLKAE?

Tick (✓) only one response.

- |                |   |   |
|----------------|---|---|
| Specify Where: | 1 | AT HOME IN THIS VILLAGE                         |
|                | 2 | AT SOME OTHER RELATIVE'S HOUSE IN THIS VILLAGE  |
|                | 3 | AT SOMEONE'S HOUSE OUTSIDE THIS VILLAGE         |
|                | 4 | AT A TRADITIONAL HEALER'S ( MEDICINE MAN, ETC.) |
|                | 5 | AT CLINIC/HEALTH CENTRE                         |
|                | 6 | AT HOSPITAL OR MISSION                          |
|                | 7 | OTHER PLACE                                     |
|                | 8 | N.T APPLY                                       |

16. Who delivered you?  
 KE MANG EA ILENG A U PEPISA?

Tick (✓) only one response

- |                  |   |                      |
|------------------|---|----------------------|
| Specify Category | 1 | A RELATIVE           |
|                  | 2 | A TRADITIONAL HEALER |
|                  | 3 | A TRAINED MIDWIFE    |
|                  | 4 | A DOCTOR             |
|                  | 5 | OTHER                |
|                  | 8 | NOT APPLY            |

17 Are you pregnant now?  
 N. U MOKHACHANE I NA J. ALE? 7

NO  0 → GO TO Q. 24

YES  1 GO TO Q. 18

18 Do you know the month you conceived this pregnancy?  
 U KA KHOPOLI KHAELE BO U NKILENC MPA KA EONA?  
 Interviewer: Tick or circle only one number

NO  00

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
YES	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 05	<input type="checkbox"/> 06	<input type="checkbox"/> 07	<input type="checkbox"/> 08	<input type="checkbox"/> 09	<input type="checkbox"/> 10	<input type="checkbox"/> 11	<input type="checkbox"/> 12

DON'T KNOW  99

Interviewer: Questions 19-23 should only be asked to women who state they are pregnant right now.

19 U TSAMAEA CLINIC EA BOKHACHANE?

NO  0 GO TO QUESTION 21

YES  1 GO TO QUESTION 20

20 U NE U LE MOKHACHANE EA KHAELE TSE KAE HA U QALÁ H. TSAMAEA CLINIC?  
 Circle how many months

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8	<input type="checkbox"/> 9
----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------

months

21. KE MANG EA TLA KERA HONE NA U TLA PEPELA NG'ANA EO KAE?

Self	<input type="checkbox"/> 01	Other Person	<input type="checkbox"/> 66
Mother/Mother in law	<input type="checkbox"/> 02	Don't know	<input type="checkbox"/> 99
Mother/Mother in law	<input type="checkbox"/> 02	Undecided	
Husband/Other Relative	<input type="checkbox"/> 04		
Clinic Nurse/Doctor	<input type="checkbox"/> 08		
Total	<input type="checkbox"/>		

22 HA U LE MOKHACHANE TSEE, NA HO NA LE LIJO TSEE U LOKELANG HO LI ILA?

NO  0 → GO TO QUESTION 24

YES  1 → GO TO QUESTION 23

23 KE LIFE?

Interviewer: Ask about each food on the list and tick (✓) any that are restricted.

<input type="checkbox"/> 1	EGGS
<input type="checkbox"/> 2	INTERNAL ORGANS
<input type="checkbox"/> 4	FISH
<input type="checkbox"/> 9	ANY OTHERS? Specify _____
<input type="checkbox"/> 8	NOT ALLY

24. HA RE BUE JUMLE KA BAN. PA HAU D. NIELANG:  
U NA LE LESA LE A-SONG H. QETE SELEMA, LA HAU KA TSOAL?

NO  0 GO TO QUESTION 33

YES  1 GO TO QUESTION 25

25. NA KE LEPAHLA?

NO  0

YES  1

Interviewer: The following questions, 26 through 31, apply only to infants, now alive, who are under 1 yr. old. This infant should be included on the pregnancy history, page 3. Refer to that page now and be sure this infant is listed accurately. Tick (✓) "not apply,"  8, for Q. 26 → 31 if there is no infant alive who is under 1 yr. old in this household.

26. Is this infant who is under 1 yr. old registered in the preschool clinic?  
NA LESA LEE LE E-SONG H. QETE SELEMA LE NGOLISITSE CLINIKING EA BAN?

NO  0

YES  1

NOT APPLY  8

27. What vaccinations or immunizations has this infant received?  
NGOANA EO U SE . PUMANE LIENTE LIFE TSE THIBELANG MAFU?  
HABBA U NA LE MINGBE A CLINIKING, AK'U TLE LE NA.

Interviewer: Do not explain what the injections are for. This is to test the women's knowledge or record of injections her infant has received. Tick (✓) only **what** she may have recorded on the infant's record, or that she thinks were received.

	None at All	1st Dose	2nd Dose	3rd Dose	Don't Know	Not Apply
(1) D.P.T.	0	1	2	3	9	8
(2) Polio	0	1	2	3	9	8
(3) Measles	0	1			9	8
(4) B.C.G.	0	1			9	8
(5) Smallpox	0	1			9	8

28. Is this infant protected against any of the following conditions?  
 NA LE FUMANE TS'IBELETS: HAFUNG A LA TELANG?

Interviewer: This is to test the woman's knowledge concerning what the injections are for. Do not tell her the answer.

	NO	YES	DON'T KNOW	NOT APPLY
(1) 'Metso o mosoau	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="9"/>	<input type="text" value="8"/>
(2) Mokhothothoane	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="9"/>	<input type="text" value="8"/>
(3) Komello ea litho	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="9"/>	<input type="text" value="8"/>
(4) Lefuba	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="9"/>	<input type="text" value="8"/>

29. Are you breastfeeding this baby right now?  
 U NTSE U NYANTS'A LESEA LEE HCNA JOALE?

NO  GO TO Q. 30

YES  GO TO Q. 31

NOT APPLY

If "No" to Q. 29, answer Q.30

30. What is the reason for stopping breastfeeding of this infant?  
 KE'NG HA NGOANA EA A SA NYANTS'OE?

State reason(s) given: \_\_\_\_\_  
 Tick (←) as many as apply:

- 01 ILLNESS OF MYSELF
- 02 ILLNESS OF MY INFANT
- 04 INSUFFICIENT MILK SUPPLY
- 08 THE MILK WAS "SPOILED"
- 16 I WAS TOLD TO STOP BY RELATIVE
- RETAL OF THE ABOVE
- 66 OTHER REASON, Specify: \_\_\_\_\_
- 88 NOT APPLY

Interviewer: If Q. 30 is answered, go to Q. 32 and skip Q. 31

Interviewer : If answer to Q.29 was YES answer Q.31, If woman has already stopped breastfeeding, skip to Q.32.

31. At what age are you hoping to completely remove this child from the breast?

U HURUTSE KI TILISA NGOANA EO LETSA ELENG HA A LE NAKO E KAE?

Interviewer. State age in months: \_\_\_\_\_

- |                          |   |                                 |
|--------------------------|---|---------------------------------|
| <input type="checkbox"/> | 1 | AT LESS THAN 3 MO. OLD          |
| <input type="checkbox"/> | 2 | 3 MONTHS THROUGH 6 MONTHS OLD   |
| <input type="checkbox"/> | 3 | 7 MONTHS THROUGH 12 MONTHS OLD  |
| <input type="checkbox"/> | 4 | 13 MONTHS THROUGH 24 MONTHS OLD |
| <input type="checkbox"/> | 5 | 25 MONTHS OR OLDER              |

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34. HO U KELE HAKO E KAE HO NI ESA NGONA. O KA HA KA HO NI  
Who long has it taken you to wean your child from  
the breast ?

- 1 GRADUALLY (OVER A PERIOD OF ONE OR MORE MONTHS)
- 2 ABRUPTLY (IN LESS THAN ONE MONTH THE CHILD WAS
- 3 SENT AWAY (OVERHEGET WEANING)
- 4 OTHER (Specify) \_\_\_\_\_
- 8 NOT APPLY

35. NGOANA EO O NE A ETILE LIKHOELI TSE KAE HA J HA NGONA  
How old was this child when you completely stopped breast  
feeding her/him ?

- 1 LESS THAN THREE MONTHS
- 2 THREE MONTHS THROUGH 6 MONTHS
- 3 SEVEN MONTHS THROUGH 12 MONTHS
- 4 THIRTEEN MONTHS THROUGH 18 MONTHS
- 5 NINETEEN MONTHS THROUGH 24 MONTHS
- 6 TWENTY-FIVE MONTHS OR MORE
- 8 NOT APPLY

36. NA U KILE UA LALELA BANA BA HAU LIJO SELEMONG SE  
SELEMONG SE METILENG ?  
Have you ever gone to get food from the preschool  
for your child last year ?

- NO  0 → Go to question 42
- YES  1 → Go to question 37
- NOT APPLY  8

37. NA LIJO TSEE LI SEBELISOA LE KE LANA BANA BANA  
Is this food used by other children in this preschool ?

- NO  0
- YES  1
- NOT APPLY  8

38. NA LIJO TSEE LI SEBELISOA KE LITHO TSA JLAPA KAOFELA ?  
Is this food used by all family members ?

NO

 0

YES



KE BATHO BA BAKAE BA EENG EA SEBELISE LIJO TSE ?

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7
----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------

NOT  
APPLY 8

39. SELEMONG SE FETILENG, OLI E FUMANOEENG E ILLE EA SEBELISOA  
KA LITSELA LIFE ?  
Last year in what ways did you use oil from the clinic ?

Interviewer: Mark as many as apply, specify "other".

 01

TO PREPARE FOOD FOR THE CHILD(REN)

 02

TO PREPARE FOOD FOR THE FAMILY

 04

TO PREPARE FOOD FOR SELLING, SUCH AS MAROES...

 08

SOLD SOME (OR ALL) OF THE OIL TO BUY OTHER THINGS

TOTAL OF THE ABOVE

 66

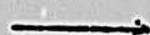
OTHER SPECIFY \_\_\_\_\_

 99

NOT APPLY

40. U KILE UA REKISA OLI EE KAOFELA KAPA KAROLO EA EONA  
LIKHOELING TSE THARO TSE FETILENG ?  
Did you ever sell part or all of this oil in the past 3 months ?

NO

 0

Go to Question 42

YES

 1

Go to Question 41

NOT  
APPLY 8

41. KAMOR'A FORE U KEMISE OLI EO, U NE U ATISA HO REKA EMU .  
 CHELETE EO U E PULALENG ?  
 After selling this oil, what did you frequently buy with  
 the money you got ?

Interviewer: Mark as many as apply

- 1 FOOD
- 2 CLOTHING
- 4 HOUSEHOLD UTENSILS
- TOTAL OF THE ABOVE
- 6 OTHER (Specify) \_\_\_\_\_
- 8 NOT APPLY
- 9 DON'T KNOW/ NO RESPONSE

42. HO BANA BA HAU BA LILEMONG TSE KA TLASE HO HLANO HA HO  
 LE BA KILENG BA TSOAROA KE LETSOLLO LE TSAMAEANG LE  
 PHUOANA LE HO KHONLELA HA MAHLO ?  
 Have any of your children under five been ill in the past  
 year from diarrhea with depressed fontanel and sunken eyes?

- NO  → Go to Q. 44  
 YES  → Go to Q. 43

43. HO PHEKOLA LEFU LEE U ILE UA 'ALA HO MO ISA; KAE PELLE .  
 Where was this child first taken for treatment with this  
 condition ?

Interviewer: Tick (✓) only one response

- 1 HOSPITAL, DOCTOR
- 2 CLINIC, HEALTH CENTER, COURSE VILLAGE HEALTH
- 3 TRADITIONAL HEALER, HERBALIST, FAITH HEALER
- 4 RELATIVE, FRIEND
- 5 OTHER, Specify \_\_\_\_\_
- 6 NOT TAKEN ANY WHERE (NOT TREATED)
- 8 NOT APPLY

44. U HOPOLA HORE LETSOLLO LE TSAMAEANG LE HO OELA HA PHUOANA LE HO KHOHLELA HA MAHLO HA NGOANA, LE BAKOA...  
 What do you think causes diarrhea with depressed fontanelles and sunken eyes in children ?

Interviewer: Write out the reason(s). Do not read the code list to the woman. Code as shown below. Probe to see if she has more than 1 reason.

	1. _____
	2. _____
	3. _____
	TOTAL OF 1, 2, 3
66	OTHER REASON(S)
99	DON'T KNOW

**CODE LIST:**

01	Phuoana
02	Food, diet, nutrition, eating habits
04	Water, bad water, dirt, lack of cleanliness lerole
08	Weather too hot, too cold, serame

Interviewer: Now explain that you want to talk about children who are aged 5 to 14 yrs. 11 months. Check pregnancy history to see if there are any live children in this age group.

45. NA U NA LE BANA BA LILEMO LI HLANO HO ISA HO TSE LESALE LE METSO E MEHLANO ?  
 Have you got children who are 5yr. through 14yr. 11 months?

NO 0 → Go to Q. 51

YES → BA BAKAE ?  
 How many ?

Circle the number

NOT APPLY

1	2	3	4	5	6
---	---	---	---	---	---

8
---

46. HAR'A BANA BA HAU BA LILEMO LI HLANO HOISA HO TSE I5, KE BA BAKAE BA PHILLANG LAFENG MOO ? ( U SIEE BANA P' PHILLANG MIKOLONG KA THOKO )  
 Of the children 5 through 14yrs. II months, how many of these are living here with you (excluding those who living away at school.)

Interviewer: Mark the number given

NONE

1	2	3	4	5	6+
---	---	---	---	---	----

NOT APPLY

47. HAR'A BANA BA HAU BA LILEMO LI 5 HOISA HO TSE I5, KE BASHANYANA LE BANANA BA BAKAE BA NTSENG BA KENA SEKOLA.  
 Of the children 5- 14yr. II months, how many boys and girls are attending school now ?

1. BASHANYANA BA 5 - 14yr. II MONTHS, BA KENANG

0	1	2	3	4+
---	---	---	---	----

2. BANANA BA 5 - 14 & II MONTHS BA KENANG SEKOLA

0	1	2	3	4+
---	---	---	---	----

NOT APPLY

If the answer is "0" Go to C. 49

48. HA LIKOLA LI KENE, BANA BA SEKOLA BA EE BA JE MAKHLELE MAKAE LELAPIENG LEE ?  
 When the schools are open, how often do the children who attend school have their meals here ?

0	NO MEALS
1	ONE MEAL PER DAY PER SCHOOLCHILD
2	TWO MEALS PER DAY PER SCHOOLCHILD
3+	THREE OR MORE MEALS PER DAY PER SCHOOLCHILD
8	NOT APPLY

49. HAR'A BANA BA HAU BA LILEMO LI HLANO HOISA HO TSE I5, HONA LE BA LISANG ?  
 Amongst children 5 -14yrs. & II months, do you have any who are shepherds ?

NO  → Go to C. 51

YES → How many ? 

1	2	3+
---	---	----

 → Go to q. 52

NOT APPLY

50. BAL...  
 How often did the shepherds have their meal here yesterday ?

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- 0 NO MEALS TAKEN BY SHEPHERDS YESRDAY
- 1 ONE MEAL PER DAY PER SHEPHERD
- 2 TWO MEALS PER DAY PER SHEPHERD
- 3+ THREE OR MORE MEALS PER DAY PER SHEPHERD
- 8 NOT APPLY

51. VA MARGETSAMA LE BASALI EA BACHA EA LELAPA LEE BA JA MAHE?  
 Do girls and young women in this household eat eggs ?

YES  1 → Go to C. 52

NO → HOBANENG ?  
 Why ?

Interviewer: Write down the reason(s) given. If the woman replies "Custom", probe to see if she will describe the reason for the custom. Tick (//) 9 if she does not know any reason.

REASONS FOR EGG RESTRICTION:

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- TOTAL OF 1 and 2
- 9 DON'T KNOW WHY

Code list :  2 Any reason having to do with traditional belief, superstition or custom  
 4 Any other reason

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52. U HOPOIA HORE LEFUBA LE BAKOA KENG?  
What do you think causes pulmonary tuberculosis?

Interviewer: Write out the reason(s). Do not read the code list to the woman. Code after it is answered as shown below.  
Probe to see if she knows more than 1 reason.

	1. _____
	2. _____
	3. _____
	TOTAL OF 1., 2., and 3.
66	OTHER REASON
99	DON'T KNOW

Code list:

01	Sejeso
02	Food, diet, nutrition, eating habits
04	Water, bad water, dirt (lerole), lack of cleanliness, germs, insects
08	Serame, weather too hot, too cold

53. BOJELA MEJUTA E MELI EA LIJO TSE HAHANG 'MELE SEBAKENG SA NGOANA EA LILEMO LI PELI?

Please tell me what you think are the two most important body building foods for growth of a two year old child?

	1. _____
	2. _____
	TOTAL OF 1 & 2
66	OTHER FOOD
99	DON'T KNOW

Interviewer: Write in the answer, given then code from the list below. Do not read this list to the woman. Tick (✓) 99 if the woman does n't know any food.

CODE LIST:	01	Any meat, poultry, fish, milk, eggs
	02	Beans, peas, legumes
	04	Any vegetable besides beans, peas, legumes
	08	Mealies, breads, mabele, cakes, porridge

54. U TSEBA LEMHOA EFE E 'MELI EE KA THIBELANG KEMARO?  
(BOLELA EA SEHCOA KAPA EA SESOTHO)  
Please tell me of two methods which can be used to keep from getting pregnant (any method, even traditional sesotho methods.)

	1. _____
	2. _____
	TOTAL OF 1 & 2
99	DON'T KNOW ANY METHOD

Interviewer: Write in the answer given, then code from the list below. Do not read this list to the woman.

- Code list:
- |    |   |
|----|---|
| 01 | Pill, IUCD (IIPES loop, coil), Injections (Depo Provera)                            |
| 02 | Other modern methods, condom, foams & cream spermicides, foaming tablets, diaphragm |
| 04 | Abstinence, rhythm, coitus interruptus  |
| 08 | Sesotho traditional methods   |

55. U KA E TSA EFE EA MESEBETSI E LATELANG?  
Are you skilled in any of the following?

Tick ( / ) as many as apply:

- |    |   |
|----|---|
| 01 | HO ROKA LIAPARO<br>Make clothes   |
| 02 | HO LOHA KA MAMAO LE HO LOHA KA KOROCHE<br>Knitting, crocheting  |
| 04 | HO LILA, HO SEHA LITEMA LE HO BOPA KA LETSOPA<br>To use mud or clay for designs or pots                   |
| 08 | HO LOHA KA SEFAHA<br>To put beads together  |
| 16 | HO LOHA KA JOANG, HO E TSA LIOTLOANA<br>To weave with grass, to make a shelter, a grass hat, a grass bowl |
|    | TOTAL OF THE ABOVE  |
| 00 | NONE OF THE ABOVE   |
| 99 | DON'T KNOW/NC RESPONSE  |

56. <sup>BEST AVAILABLE COPY</sup> HA HO NE HO E-NA LE BATHO BA BACHA BAO U BA TSEBANG, UME BA NYALANA, U HOPOLA HORE BA NE BA KA LAKATSA HO BA LE BANA BA KAE?  
If there were a young couple you know getting married how many children do you think they would like to have?

Interviewer: People often answer "I don't know". Do not stop there. Ask the question in a slightly different way and ask them to think of a young newly married couple and just try to imagine if they were there, how many children do they think they would want. "Don't know" is not an acceptable response to this question.

- (1)  CODE ACTUAL NUMBER 0 TO 7  
7=Seven or more  
8=As many as God gives  
9=Refused to guess or "none of my business"
- (2)  BASHANYANA BA BAKAE?  
CODE AS IN (1) ABOVE
- (3)  BANANA BA BAKAE  
CODE AS IN (1) ABOVE

57. U HOPOLA HORE BATSALI BA BONA BA NE KA LAKATSA HORE BA BE LE BANA BA BAKAE?  
How many children do you think the parents of the young couple would wish them to have?

- (1)  CODE AS IN Q. 56, TOTAL 0-7
- (2)  BASHANYANA BA BAKAE?
- (3)  BANANA A BAKAE?

58. U HOPOLA HORE KE HOBANE'NG HA BASALI BA BANG BA : IKHETHELA HO PEPELA MALAPENG ESENG KI UNIKING KAPA SEPETLELE?  
Why do you think some women prefer to deliver their babies at home rather than at the clinic or hospital?

Interviewer: State the reason(s) as given by the woman and tick ( / ) the boxes that apply to her answer?

Specify reason(s) \_\_\_\_\_

- |    |   |
|----|---|
| 01 | TRADITIONAL BELIEFS OR CUSTOMS            |
| 02 | PREFER CONFINEMENT WITH WOMEN THEY KNOW   |
| 04 | LONG DISTANCE TO CLINIC                   |
| 08 | MAY NOT LIKE THE CLINIC (PEOPLE OR PLACE) |
| 16 | FINANCIAL REASONS (COST TOO MUCH)         |
|    | TOTAL OF THE ABOVE REASONS                |
| 56 | OTHER REASONS                             |
| 99 | DON'T KNOW/NO RESPONSE                    |

59. NA U KILE UA THUSA HO PEPISA MCTHO?  
Have you ever assisted in a childbirth?

NO, NEVER EVER ASSISTED IN A DELIVERY  0 → Go to Concluding Comments.

YES, LAST YEAR → KA MAKHETLO A MAKAE SELEMONG SE PETILENG?  
How many times last year?

- 1. 1-4x last year
- 2. 5-9x last year
- 3. 10-14x last year
- 4. 15+x last year

YES, BUT NCNE LAST YEAR → 5. → Go to concluding and comments, mark not apply 88 to Q. 60 and Q. 61.

60. U TLEUA SEBELISANG HO POMA MCKHUBU?  
If you assisted in a delivery this past year what was usually used to cut the umbilical cord?

Interviewer: This should be answered only by those who assisted in a delivery last year. Otherwise go to Concluding Comments and mark not apply  88 to Q. 60 and Q. 61.

Tick (✓) as many as apply:

- |                             |                      |
|-----------------------------|----------------------|
| <input type="checkbox"/> 01 | KNIFE OR RAZOR BLADE |
| <input type="checkbox"/> 02 | SCISSORS             |
| <input type="checkbox"/> 04 | SHARP REED           |
| <input type="checkbox"/> 08 | OTHER, Specify _____ |
| <input type="checkbox"/>    | TOTAL OF THE ABOVE   |
| <input type="checkbox"/> 88 | NCT APPLY            |
| <input type="checkbox"/> 99 | DCN'T KNOW           |

S.P.

61. HOBA U KHACLE MCKUJOANA SEO U SE ETSANG KA MOKHUJOANA OA NGCANA KE SEFE?  
After tying and cutting the cord what did you do to the stump of the cord on the infant?

Tick (✓) as many as apply.

- 01 APPLIED TRADITIONAL POULTICES OR BINDERS  
Specify what it was made of: \_\_\_\_\_
- 02 USED MODERN DRESSING OF BINDER
- 04 NOTHING
- 08 OTHER SPECIFY \_\_\_\_\_
- TOTAL OF THE ABOVE
- 88 NOT APPLY
- 99 DON'T KNOW

CONCLUDING COMMENTS:

MODEL VILLAGE  
PART III.

OLDER WOMEN'S PAGE I  
*Revised Apr 1976*

OLDER WOMEN'S QUESTIONNAIRE- CODE 3  
INTRODUCTION

Interviewer: This questionnaire should be administered to all women from the household list who are 50 years old or older.

1. NAME OF INTERVIEWER \_\_\_\_\_ 

I	2	3	4	5	6
---	---	---	---	---	---
2. DATE OF INTERVIEW MO: \_\_\_\_\_ YR: \_\_\_\_\_ 

--	--
3. HLOOHO EA LELAPA LEE KE MANG ?  
Name of head of household ?  
FIRST NAME \_\_\_\_\_ SURNAME \_\_\_\_\_
4. HOUSEHOLD NUMBER 

--	--	--

 HH LIST NO. THIS WOMEN 

--	--
5. VILLAGE NAME \_\_\_\_\_ 

I	2	3	4	5	6
---	---	---	---	---	---
- SIZE OF VILLAGE POPULATION \_\_\_\_\_ DISTRICT \_\_\_\_\_
6. LEBITSO LA HAU U MANG ?  
What is your name: \_\_\_\_\_  
FIRST NAME \_\_\_\_\_ SURNAME \_\_\_\_\_
7. AK'U MPOLELE SELEMO LE KHOELI EO U HLAHILENG KA EONA ?  
In what month and year were you born ?  
\_\_\_\_\_ MONTH \_\_\_\_\_ YEAR
8. LILEMO TSA HAU LI KAE ?  
What is your age ? \_\_\_\_\_

CODE:	I	50-54 yr.
	2	55-59 yr.
	3	60-64 yr.
	4	65-69 yr.
	5	70 +
	6	Don't Know / No Response.

9. LITHUTONG TSA HAU TSA SEKOLO U ILE UA FIHLELA SEHLOPHA SEFE?  
What is the highest grade you passed at school?

Interviewer: Tick (✓) only the highest grade.

1	NONE
2	LOWER PRIMARY (STD. 1 - 4)
3	HIGHER PRIMARY (STD. 5 - 6)
4	JUNIOR CERTIFICATE
5	SENIOR CERTIFICATE OR HIGHER
9	DON'T KNOW/NO RESPONSE

10. U PHETSE NAKO E KAE MOTSENG OO?  
How long have you lived in this village?

1	LESS THAN 5 YEARS
2	5-15 YEARS
3	MORE THAN 15 YEARS
9	DON'T KNOW/NO RESPONSE

11. NA U KILE UA KOPA THUSO KLINIKING EA \_\_\_\_\_ KHOELING TSE TSELETSENG  
TSE FETILENG?  
Did you consult the local clinic for any medical assistance in the last six months?

Interviewer: Insert the name of a specific clinic.

1 YES  
0 NO

12. U HOPOLA HORE KE HOBANENG HA BASALI BA BANG BA IKHETHELA HO PEPELA  
MALAPENG ESENG KLINIKING KAPA SEPETLELE?  
Why do you think some women prefer to deliver their babies at home rather than at the clinic or hospital?

Specify Reason(s) \_\_\_\_\_

Interviewer: State the reason as given by the women and tick (✓) the boxes that apply to her answer.

01	TRADITIONAL BELIEFS OR CUSTOMS
02	PREFER CONFINEMENT WITH WOMEN THEY KNOW
04	LONG DISTANCE TO CLINIC
08	MAY NOT LIKE THE CLINIC (PEOPLE OR PLACE)
15	FINANCIAL REASONS (COSTS TOO MUCH)
	TOTAL OF THE ABOVE REASONS
66	OTHER REASON
99	DON'T KNOW/NO RESPONSE

13. NA U KILE THUSA HO PEPISA MOTHO?  
Have you ever assisted in a child birth?

Yes, Last Year \_\_\_\_\_ KA MAKHETLO A MAKAE 1 - 4 times last year  1  
 SELEMONG SE FETILENG?  
 How many times last year? 5 - 9 times last year  2  
 10-14 times last year  3  
 15 times last year  9  
 Yes, but none last year  5 \_\_\_\_\_ Go to q. 16 and mark Not Apply  
 88 to q. 14 and q. 15.  
 No, never assisted in a delivery  0 \_\_\_\_\_ Go to q. 16

14. U ILE UA SEBELISA ENG HO POMA MOKHUBU?  
Last year, what did you use to cut the umbilical cord?

Interviewer: This should be answered only by those who assisted  
 in a delivery last year. Otherwise go to q. 16 and mark not apply 88  
 to this question and to question 15.

Tick as many as apply (✓):

01 KNIFE OR RAZOR BLADE  
 02 SCISSORS  
 04 SHARP REED  
 08 OTHER (Specify What) \_\_\_\_\_  
 TOTAL OF THE ABOVE  
 88 NOT APPLY  
 99 DON'T KNOW

15. HOBA U KHAOLE MOKHUJOANA SEO U SE ENTSENG KA MOKHUJOANA OA NGOANA KE SEFE?  
After tying and cutting the cord what did you do to the stump of the cord  
 on the infant?

Tick (✓) as many as apply

01 APPLIED TRADITIONAL POULTICES OR BINDERS  
 Specify what it was made of \_\_\_\_\_  
 02 USED MODERN DRESSING OR BINDERS  
 04 NOTHING  
 08 OTHER (Specify what) \_\_\_\_\_  
 TOTAL OF THE ABOVE  
 88 NOT APPLY  
 99 DON'T KNOW

16. U KA ETSA EPE EA MESEBETSI E LATLANG ?  
Are you skilled in any of the following:

Tick (✓) as many as apply:

- |    |   |
|----|---|
| 01 | HO ROKA LIAPARO                                       |
| 02 | HO LOHA KA MAMA O KAPA/LE KOROCHÉ                     |
| 04 | HO BOFA KA LETSOFA, HO LILA KAPA/LE HO SEHA<br>LITEMA |
| 08 | HO LOHA KA JOANG, HO ETSA LIOTLOANA                   |
| 16 | HO LOHA KA SEFAHA                                     |
|    | TOTAL OF THE ABOVE                                    |
| 00 | NONE OF THE ABOVE                                     |
| 99 | DON'T KNOW / NO RESPONSE                              |

17. BOLELA MEFUTA E 'MELI EA LIJO TS' HAHANG 'MELESEBAKENG SA  
NGOANA EA LILEMO LI PELI ?

Please tell me what you think are the two most important  
body building foods for growth of a two-year old.

- |    |                 |
|----|-----------------|
|    | 1. _____        |
|    | 2. _____        |
|    | TOTAL OF 1&2    |
| 66 | OTHER REASON(S) |
| 99 | DON'T KNOW      |

Interviewer: Write in the answer given, then code from  
the list below. Do not read this list to the women.

Tick: (✓) 99 if the woman doesn't know

- CODE LIST:
- |    |   |
|----|---|
| 01 | Any meat, poultry, fish, milk, eggs           |
| 02 | Beans, peas, legumes                          |
| 04 | Any vegetable besides beans, peas,<br>legumes |
| 08 | Mealies, breads, mabele, cakes,<br>porridge   |

18. NA BANANA LE BASALI BA BACHA BAJA MAHE LAPENG LEE ?  
Do girls and young women in this household eat eggs ?

YES  I | \_\_\_\_\_ Go to I9

NO \_\_\_\_\_ HOBANENG ?

Interviewer: Write down the reason(s) given. If the women replies "customs", probe to see if she will describe the reason for the custom. Tick (✓) 9 if she does not know.

REASONS FOR EGG RESTRICTION:

<input type="checkbox"/>	I. _____
<input type="checkbox"/>	2. _____
<input type="checkbox"/>	TOTAL OF I & 2
<input type="checkbox"/>	DON'T KNOW

CODE LIST:

- 2 | Any reason having to do with traditional belief, superstition or customs
- 4 | Any other reason

19. HA HO NE HO E-NA LE BATHO BA BACHA BAO U BA TSEBANG; 'ME BA NYALANA, U HOPOLA HORE BA NE BA KA LAKATSA HO BA LE BANA LA BAKAE ?

If there were a young couple you know getting married, how many children do you think they would like to have ?

Interviewer: People often answer " I don't know." Do not stop there. Ask the question in a slightly different way and ask them to think of a young newly-married couple they know, and just try to imagine if they were them, how many children do you think they would want. "Don't know" is not an acceptable response to this question.

- (1)  CODE ACTUAL NUMBER 0 to 7  
7- Seven or more  
8- As many as God gives  
9- Refused to guess, or "None of my business"

(2)  BASHANYANA BA BAKAE ?  
CODE AS IN (1) ABOVE

(3)  BANANA BA BAKAE ?  
CODE AS IN (1) ABOVE

20. U HOPOLA HORE BATSOALI BA BONA BA NE BA KA LAKATSA HORE  
BA BE LE BANA BA BAKAE ?

How many children do you think their parents would wish  
them to have ?

(1)  CODE as in q. 19 TOTAL NUMBER 1-7

(2)  BASHANYANA BA BAKAE ?

(3)  BANANA BA BAKAE ?

21. U HOP. OLA HORE LETSOLLO LE TSAMAEANG LE HO OELA HA  
PHUOANA, LE HO KHOHLELA HA MAHLO HA NGOANA, LE BAKOA  
KENG ?

What do you think causes diarrhoea with depresso  
fontanella and sunken eyes in children ?

Interviewer: Write the reason(s). Do not read the list  
to the women. Code as shown below. Probe to see if she  
knows more than 1 reason.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

TOTAL OF 1, 2, 3

66 OTHER REASON

99 DON'T KNOW

CODE LIST:

01 Phuoana

02 Food, diet, nutrition eating habits

04 Water, bad water, dirt, lack of personal or  
cooking cleanliness, Lerole

08 Weather, too hot, too cold, Serame

22. U HOPOLA MORE LEFUBA LE BARCA KLEBU ?  
What do you think causes P.T.D. ?

Interviewer: Write out the reason(s). Do not read the list to the women. Code as shown below. Probe to see if she knows more than I reason.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

TOTAL OF 1, 2, 3.

OTHER REASON

DON'T KNOW

CODE LIST:

SEJESO

Food, diet, nutrition, eating habits.

Water, bad water, dirt, lack of personal or cooking cleanliness.

Serame, weather, too hot, too cold.

