

# "Towards A Mobile Public Health Training Program in Southern Africa"

---

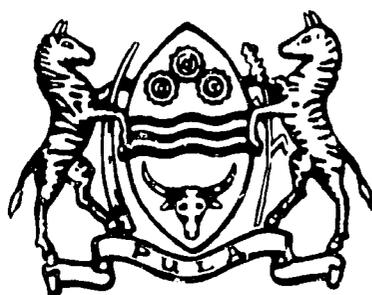
Edited by:

David B. Sebina, M.D., M.P.H.,  
James P. Carter, M.D., Dr.P.H. and  
Nacmi Baumslag, M.D., M.P.H.

Proceedings of

---

A Workshop to Review the Tulane  
University Feasibility Study Report  
February 19,20,21 1985



**HOSTED BY THE MINISTRY OF HEALTH**

**Gaborone Botswana**

PJ-AAT-924

TOWARDS A REGIONAL PUBLIC HEALTH TRAINING PROGRAM  
IN SOUTHERN AFRICA

Produced by  
Tulane University School of Public Health and Tropical Medicine  
1985

Published by Rodale Press, Inc.

004752

002265

002606  
S

936-5543

DAN-5543-G 1-2108-00

This is the official report of the February 1985 workshop on the implementation of a Regional Public Health Training Program in Southern Africa in Gaborone, Botswana. It is edited by Dr. David Sebina (Permanent Secretary, Botswana Ministry of Health). Copies are available from: Botswana Ministry of Health, Gaborone, Botswana, and Nutrition Department, School of Public Health and Tropical Medicine, Tulane University, 1430 Tulane Avenue, New Orleans, Louisiana, 70112 USA. (Ph. 504 588-5174). Technical assistance in the preparation of the report was provided by Drs. James Carter and Naomi Baumslag, Mrs. Ndiki Ngcongco, and Dan Matthews. Editorial assistance: Marcy Meffert.

TOWARDS A REGIONAL PUBLIC HEALTH TRAINING PROGRAM  
IN SOUTHERN AFRICA

Produced by  
Tulane University School of Public Health and Tropical Medicine  
1985

Published by Rodale Press, Inc.

"I have a dream..." -- Martin Luther King Jr.

"Human Resource Development is the most important factor for African National Development, International Co-operation, Peace, and indeed, Survival of All Peoples. More direct and cost-effective ways to foster this development in health and other sectors will have to be sought as human needs and the complexity of our problems increase."

James P. Carter, M.D., DR.P.H.

"Tulane School of Medicine was established because of the epidemic of Yellow Fever in the Mississippi Valley, since then, Tulane has always had a focus and interest in tropical disease, which has been broadened to international health. Therefore, it is logical and natural that Tulane would be supportive of an effort to train primary health care workers in international health, tropical medicine, and the delivery of preventive and curative health services in the most cost-effective and locally relevant way."

Dr. James Banta, Dean,  
School of Public Health  
and Tropical Medicine,  
Tulane University

11

TOWARDS A REGIONAL PUBLIC HEALTH TRAINING PROGRAM  
IN SOUTHERN AFRICA

"...it is our view that the proposed training programme will respond to (our) needs...Africa needs a Marshall Plan that will lead to self-reliance and self-sufficiency...There is an urgent need for well-informed and experienced persons, men and women of goodwill from all corners of the earth, to join their African brothers and sisters to implement the global policies, strategies and action plans developed in WHO. I do not believe a greater challenge than this exists in contemporary history."

Dr. G. Monekosso, WHO Regional  
Director for Africa. Opening  
remarks, Botswana Workshop,  
February, 1985.

"My government believes that human resource development is an invaluable investment. It's an investment that leads to national stability, self-reliance, and social development...Our human resources are ours to build, deploy, and treasure. They possess a unique characteristic which cannot be found in any other commodity, and this unique characteristic or quality is 'commitment'."

The Honourable M.P.K. Balopi,  
Minister of Health, Botswana.  
Opening remarks, February Workshop.

"We have made a start, and above all, we have been honest about our successes and our failures...Any Regional Public Health Training Program should complement and not duplicate what is already there in the region. It should strengthen career and academic advancement opportunities."

Dr. James P. Carter, Project  
Director; Chairman, Nutrition  
Department, Tulane School of  
Public Health and Tropical  
Medicine. Workshop banquet remarks.

✓

| <u>TABLE OF CONTENTS</u>  | Page |
|---|------|
| Workshop Theme, Purpose, Objectives.....  | 1    |
| Workshop Program.....   | 2    |
| Introduction.....   | 4    |
| Overview of Health Problems in Southern Africa.....   | 6    |
| Feasibility Study.....  | 7    |
| Regional Commitment and Philosophy.....   | 9    |
| Educational Resources and Facilities.....   | 12   |
| Faculty.....  | 14   |
| Faculty/Workshop Participants.....  | 16   |
| Directory.....  | 18   |
| Available Portuguese-Speaking Faculty.....  | 20   |
| Potential Students.....   | 21   |
| NORAD Student Enrollment Survey.....  | 24   |
| Costs.....  | 34   |
| Official Minutes, Botswana Workshop.....  | 37   |
| Barriers To Regional Public Health Training<br>(Workshop Banquet Speech, Dr. J.P.Carter)..... | 42   |
| Address by Guest Speaker, Dr. G. Monekoso.....  | 44   |
| Opening Speech, Honourable M.P.K. Balopi, MOH.....  | 46   |
| Public Health Programs Reviewed at Botswana Workshop.....                                     | 48   |
| Dr. John Bennett, UNICEF.....   | 48   |
| Dr. Walter Comm, Loma Linda.....  | 50   |
| Dr. H.A.R. Elneil, WHO.....   | 51   |
| Dr. Herman Folmer, Royal Tropical Institute, Holland.....                                     | 52   |
| Dr. Vivian Johnson, SHDS.....   | 53   |
| Prof. Ian MacDonald, Manchester University, U.K.....  | 56   |
| Dr. John Martin, SIDA.....  | 59   |
| Dr. F.M. Mburu, UNICEF, Zambia.....   | 63   |

|  |     |
|--|-----|
| Dr. Lobe Monekosso, WHO, Brazzaville, Rep. of Congo.....   | 64  |
| Dr. David Morley, Great Ormond Street Hospital<br>Medical School, London, UK.....  | 66  |
| Mrs. Rose Pule, IDM.....   | 68  |
| Mr. H. Stange, NORAD.....  | 70  |
| Dr. Walter Sullivan, Morehouse College of Medicine,<br>Atlanta, GA, & Association for Minority Health<br>Professions Schools, USA..... | 71  |
| Dr. Hannelore Vanderschmidt, Boston University.....  | 73  |
| Dr. Ralph Yodaiken, OSHA, Wash.D.C.....  | 75  |
| Workshop Floor Discussions.....  | 76  |
| Dr. Naomi Baumslag, Tulane Univ., Georgetown Med.Sch.<br>(MPH Training from Concept to Feasibility).....                               | 78  |
| Dr. James P. Carter, Tulane Univ., MPHT Project Director<br>(MPH Training From Feasibility to Implementation).....                     | 94  |
| Summaries of Other Public Health Programs.....   | 96  |
| Prof. Sidney L. Kark & Emily Kark, COPC, Jerusalem.....  | 96  |
| Dr. David Morley, Mother and Child Health.....   | 96  |
| Wainwright, Peterson, Farrier, University of Washington<br>(Extended MPH Degree Program).....  | 97  |
| Jean Swinney, R.N., M.A. (Botswana/Meharry Project).....   | 97  |
| Dr. D.B. Sebina (Botswana Institute of Health).....  | 98  |
| Dr. Winston J. Craig, Loma Linda.....  | 98  |
| Prof. W.J. Makene, Muhimbili Med. Center, Dar Es Salaam..  | 98  |
| Dr. Claudio Schuftan<br>(Role of Public Health Worker in Famine Relief).....   | 99  |
| Model Curriculum.....  | 100 |
| Group Discussion Reports on Botswana Workshop Objectives &<br>Final Recommendations.....   | 103 |
| Reports of Workshop Groups.....  | 103 |
| Final Recommendations and Conclusions.....   | 109 |
| Specific Recommendations.....  | 109 |

Conference Follow-Up Recommendations.....110  
    Dan Matthews, Afritec, Inc., Wash.D.C.....110  
    Post-Workshop Endorsements.....112  
    AID Proposal To Organize an Africa-Wide Project.....113  
    (Prepared by Dr. James D. Shepperd, USAID)  
Estimated Budget.....124  
    Budget Justification.....127  
Photos From The Botswana Workshop.....129

WORKSHOP THEME:

Towards a Mobile Public Health Training Program in Southern Africa.

DATE: Feb. 19-21, 1985

VENUE: Gaborone, Botswana

HOSTED BY: Ministry of Health Botswana

DEVELOPMENT OBJECTIVE:

To develop a critical cadre of Public Health experts in the Southern African countries.

PURPOSE OF THE WORKSHOP:

To review Tulane's feasibility study and to draft recommendations and proposals for a final draft report.

WORKSHOP OBJECTIVES:

1. To examine input needed for development and implementation of a relevant PHC-oriented Mobile Public Health training program.
2. To determine if the feasibility study is relevant to other countries.
3. To draw on expertise, programs and experiences of other Southern African countries through exchange of information.
4. To explore methods of drawing national resources into technical cooperation for development of health manpower in Southern Africa.
5. To identify major themes essential to developing a relevant Mobile Public Health training program.
6. To provide an opportunity for development of sound progressive educational programs at all levels; and, academic programs to facilitate upward mobility of health workers without loss of time.
7. To reduce the number of years and resources put into training programs that do not ensure recognition.
8. To foster fruitful inter-institutional cooperation between ministries, university health training institutions, national, and overseas universities.
9. Foster research into health systems and HMD.

WORKSHOP PROGRAMMonday, February 18, 1985:

Participants arrive.

2:30-6:30 p.m. Registration  
 7:00-8:00 p.m. Dinner  
 8:00-10:00 p.m. Registration

Tuesday, February 19, 1985:

7:30-8:30 a.m. Breakfast  
 8:45 a.m. Opening Remarks, Chairperson Dr. D.B. Sebina  
 Permanent Secretary, Ministry of Health.  
 8:50-9:00 a.m. Welcome Address,  
 The Hon. Mr. P.K. Balopi, Minister of Health.  
 9:05-9:35 a.m. Official Opening of the Workshop,  
 Dr. G.L. Monekosco,  
 Regional Director WHO-AFRO.  
 9:40-10:00 a.m. Break.  
 10:00-10:30 a.m. "Contribution of Public Health Training  
 to Health Care," Dr. James Banta, Dean,  
 Tulane University SPHTM.  
 10:30-11:00 a.m. Break.  
 11:00-11:15 a.m. Comments, Observations, and Issues.  
 11:30-12:30 p.m. Historical Background of the Tulane  
 University Feasibility Study & Report  
 on the Findings and Proposals,  
 Dr. James Carter, Tulane University.  
 12:45-2:15 p.m. Lunch Break.  
 2:15-2:30 p.m. Presentation of Plan of Activities,  
 Dr. Naomi Baumslag, Tulane University.  
 2:30-3:30 p.m. Group Discussion.  
 3:30-4:30 p.m. Presentation and Discussion of Group Reports.  
 4:30-5:00 p.m. Break.  
 5:00-6:00 p.m. Rapporteurs compile reports on proceedings  
 of the day.  
 7:30-8:45 p.m. Social.

Wednesday, February 20, 1985:

7:30-8:30 a.m. Breakfast  
 8:45-8:55 a.m. Rapporteurs present reports.  
 9:00-9:20 a.m. Comments, Observations, etc.  
 9:30-10:15 a.m. Summary of discussions & Identification  
 of Key Issues.  
 10:30-11:00 a.m. Break.  
 11:00-12:30 p.m. Introduction of Panelists,  
 "A Mobile Public Health Training  
 Program in Southern Africa."  
 (The need, advantages and implications for  
 human resource development for health care.)  
 12:30-2:00 p.m. Lunch Break.  
 2:15-3:30 p.m. Discussion & Presentation of global experiences  
 in training for community health care -- case  
 studies of strategies and approaches used by  
 various countries and institutions.

3:30-4:30 p.m. Group Work & Reports Writing.  
4:30-5:00 p.m. Break.  
5:00-6:00 p.m. Rapporteurs compile reports on proceedings  
of the day.  
7:30-10:00 p.m. Dinner for Participants.

Thursday, February 21, 1985:

7:30-8:30 a.m. Breakfast  
8:45-9:30 a.m. Presentation of Workshop Draft Report  
9:30-10:30 a.m. Recommendations and Proposals for a  
Consensus draft report.  
10:30-10:45 a.m. Break.  
11:00 a.m. Closing of the Workshop.

## INTRODUCTION

Developing nations, dissatisfied with health care systems inherited from their colonial pasts, are seeking alternative methods in which their physicians, dentists, nurses, public health workers and educators can work as a team to provide continuously expanding and improving health care to the people of Southern Africa.

Although public health problems predominate in Southern Africa, the region has no School of Public Health and a shortage of trained personnel. And, while preventive care is the most cost-effective and humanitarian approach, current training focuses on curative medicine and tends to be by rote; it does not include problem-solving.

Only a few can afford to train overseas; it costs approximately \$3,400 per month for non-degree technical training and approximately \$1,600 per month for academic training, excluding air transportation. In-country training has been estimated to be only one-fourth the cost of U.S. training and is more likely to be community-oriented. Also, health professionals become frustrated when the new skills they learn abroad can't be applied in the home setting; many do not return to practice in their home communities.

In addition, continued dependency on overseas training stifles self-reliance and independence in developing countries instead of providing adequate numbers of in-country trained Public Health experts, who, in turn, train others in administration, practice, and education. (Give a man a fish and you feed him for a day; teach him to catch his own, and you feed him for a lifetime.)

USAID is among several bilateral and multilateral donor agencies, private voluntary agencies and foundations working to improve health conditions and alleviate the much publicized famine and suffering of people in Africa. The Office of the Science Advisor of USAID, which funds research on innovative projects, provided approximately \$250,000 to Tulane's School of Public Health and Tropical Medicine to serve as a catalyst in working to establish, in coordination with African health care institutions and agencies, a Regional Public Health Training Program for Southern Africa.

In addition to endorsement by USAID Washington and the Office of International Training, the idea of mobile regional training to reduce dependency of developing countries on overseas sources has been endorsed by the Africa Bureau health and nutrition staff, Southern African ministries of health personnel, Southern Africa Development Coordination Conference (SADCC), as well as faculty members of health science institutes and universities and numerous agencies concerned with health manpower training in Africa, such as World Health Organization (WHO), UNICEF, Swedish International Development Authority (SIDA), Institute of Development Management (IDM, a joint BLS program), and NORAD. The regional concept was affirmed by representatives of the previously listed organizations and representatives from Botswana, Lesotho, Malawi, Swaziland, Zambia, Zimbabwe, at the Workshop held in February, 1985, in Botswana.

The workshop participants decided to inform their respective governments of workshop findings; that the MOH of Botswana should notify its counterparts and the Manpower Development Coordinator of SADCC to inform them of the commitment to the regional plan and, to seek consultation, endorsement, formation of a high level steering committee and a Task Force of technical personnel. A time frame of two years was set to capitalize on the enthusiasm of countries, donors, academic and international agencies. The workshop specifically endorsed establishment of a Regional Public Health Training Program as soon as possible, and an Inter-Country Steering Committee to work with a Task Force. Participants also endorsed inviting other SADCC member states (Angola, Mozambique, Tanzania, and post-independent Namibia) to participate in the program, and they agreed to provide regular progress reports to those involved and donors.

A Mobile Certificate and Master of Public Health degree program in the Southern Africa region (Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, Swaziland, Tanzania, Zambia and Zimbabwe), developed from discussions with public health professionals in the region, regional studies, numerous Maternal/Child Health and Primary Care workshops, evaluation of other programs in other parts of the world, and review of literature. Present cooperative programs and their possible expansion received special attention. Tulane University School of Public Health and Tropical Medicine also played a catalytic role in the development of this program and in the unfolding of these events.

An intensive three-year program involving cooperation between Tulane and regional institutions, universities, and hospitals aims to:

1. Quadruple the number of public health experts in the region for the same cost of overseas training;
2. Improve the relevance of training;
3. Increase educational resources and improve curricula and teaching methods;
4. Increase operational research and capability of the area in public health problem-solving.
5. Make maximum use of regional expertise and resources so that the program is uniquely African and therefore, responsive to the region's special needs.

Conservative estimates say one-third of all courses students take abroad are irrelevant to the problems of their countries. Input from public health officials in the field and all studies of the region reveal a "brain drain" of students who, after life abroad, refuse to return to their home countries or rural areas where they previously lived or served. The investment of approximately \$45-60,000 or more per student for three years of training abroad doesn't provide return in resource development and Nation-Building; instead it's an "educational waste".

Investing the money within the region, as proposed in the Mobile Public Health Training Program, could meet the five goals listed above, as well as alleviate the suffering of the African peoples.

## OVERVIEW OF HEALTH PROBLEMS IN SOUTHERN AFRICA

Maternal/Infant Mortality: Public health statistics show high infant mortality ranging from 106-203 per 1,000 live births. Maternal mortality is also high due to inadequate maternity services, prenatal care, poor nutrition; many mothers die during delivery from anemia.

Malnutrition: Malnutrition is a major health problem. It includes severe protein energy malnutrition (PEM) in Zimbabwe and Malawi and mild to moderate PEM in other countries, and other dietary deficiencies (such as deficiencies in riboflavin, folate, zinc, and iron) especially where populations are "hooked" on refined maize. Alcoholism is another major nutritional problem, especially in Zambia. Maternal malnutrition (and resulting low birth weight infants) is believed to be high, although hard data is not readily available because birth registration is often not required or carried out.

Endemic Diseases: These include malaria (except for Lesotho), typhoid, cholera, and diarrhea in infancy and childhood. Public Health interventions could reduce the high infant mortality rate from diarrhea with potable water, sanitary reforms and hygiene education. Infant/child health could be improved by modifying infant feeding practices of early weaning and bottle-feeding and by immunizations against the highly prevalent childhood diseases, such as measles. Poor nutrition may contribute to the severity of measles, which has a 100 percent mortality rate in infants under 2 with third degree malnutrition.

Epidemiologically monitored programs are needed to deal with tuberculosis and venereal diseases -- often spread to families by migrant workers. Miners bring the diseases to their families when they return home; cattlemen in Botswana spread them as they migrate to and from cattle posts. Leprosy is found in Malawi and Zimbabwe.

In addition, occupational hazards need investigation. Cottage industries seldom provide health protection or safety devices; for example, weavers are exposed to aniline dyes which may cause bladder cancer.

Students need exposure to the public health aspects of these diseases, if they are to meet the challenge of successful intervention. The feasibility study and input from international resources suggested curriculae, including academic classroom work supplemented by on-site training to meet this need.

## FEASIBILITY STUDY

Because Tulane University School of Medicine emphasizes local, national and international promotion and maintenance of community health, it has become an international resource in tropical medicine. The School of Public Health and Tropical Medicine's Department of Nutrition has helped evolve tropical medicine, nutrition and other efforts into a school-wide priority of improving developing world health conditions. The close relationship between the School of Public Health and the Tulane Medical Center -- the School of Medicine -- has allowed the school to build programs by cross-school and cross-departmental cooperation. In this vein, the Chancellor's Office and Medical Center Relations have enthusiastically aided the Regional Public Health Training project.

Past cooperative school-wide efforts include such projects as a National Institute of Health (NIH), an International Center for Medical Research (ICMR) founded at Cali, Colombia, now called the International Collaborative Infectious Diseases Research Program, where research has concentrated on tropical and parasitic diseases. The SPHTM has conducted a two-year, USAID-funded family planning project under the auspices of the Eglise du Christ au Zaire; has started a Schistosomiasis project in the Cameroon; and, was principal consultant to the PRIMOPS health care delivery project in Cali, Colombia, which developed health services in a low-income area of the city.

One third of the Tulane student body is from foreign and developing nations; many are physicians and ancillary health professionals from nations who've come specifically to train in diagnosis, treatment and control of the tropical environment and its associated diseases. Tulane-trained American students have taken positions in Zaire, Nigeria, Tanzania, Belize, and other nations. Faculty from medical schools and research institutes in Africa, South and Central America, Europe and the Orient have been involved in special studies in residence at Tulane.

The need for a low cost/cost-effective appropriate public health training program in Africa led to a feasibility study, conducted in a cooperative consolidating effort between Tulane School of Public Health and African regional institutions, universities, and hospitals. The study assessed practical aspects of implementing a Mobile Certificate and Master of Public Health degree program in the Southern Africa region, which includes Zimbabwe, Botswana, Lesotho, Swaziland and Malawi. Among the unknown factors were: Regional commitment and philosophy; educational resources and facilities; potential faculty and students, and costs.

The inter-country Southern Africa Development Coordination Conference (SADCC) designated Zimbabwe as the possible regional resource for health manpower training, presumably because of its medical school. Organizational planning was coordinated with SADCC. The principal investigators from Tulane SPHTM were Dr. James P. Carter, Professor of Nutrition and Pediatrics, Chairman of the Department of Nutrition, and Dr. Naomi Baumslag, adjunct Associate Professor of Nutrition, who were aided by eight faculty members.

The Tulane University SPHTM faculty members who aided the principal investigators, Dr. Carter and Dr. Baumslag, include:

Dr. Elizabeth A. Bennett, Asst. Dean & Assoc. Prof., TUSPHTM;

Dr. Jane Bertrand, Asst. Prof., Health Education & Communications;

Dr. William E. Bertrand, Assoc. Prof., Biostatistics & Epidemiology;

Dr. Flora F. Cherry, Assoc. Prof., Maternal & Child Health;

Dr. Robert R. Franklin, Asst. Prof., Epidemiology;

Dr. Claudio Schuftan, Asst. Prof., Nutrition;

Dr. Jack Vaughn, Chairman & Prof., Applied Health Sciences;

Also:

Ms. Jean Swinney, Instructor, Louisiana State University, School of Nursing.

## REGIONAL COMMITMENT AND PHILOSOPHY

Originally, the public health training program was to be developed in at least five countries, but lack of support from two USAID mission directors restricted the program to Botswana, Lesotho and Swaziland. Support from colleagues in those countries has enabled Tulane to develop a program, however, that includes four countries and could possibly include all nine independent countries in the region.

Support and fund-raising assistance was requested from Southern Africa Development Coordination Conference (SADCC) and contacts were made with foreign aid donors to public health training in Southern Africa, such as the Swedish International Development Agency (SIDA), Norwegian Agency for International Development (NORAD), and the Dutch Technical Assistance Program to Developing Countries. Contacts at the U.N. and with Ford and Rockefeller foundations in the U.S. were made by Tulane development and foundation relations personnel. USAID and World Health Organization are also among those organizations invited to participate.

Among the positive responses to invitations to the February, 1985, workshop in Gaborone, Botswana, was this comment by Dr. F.J. Bennett, Regional Adviser in Community Health, UNICEF, Eastern Africa Regional Office:

Mobile Public Health Training sounds like a very good idea because there is a great need for District Medical Officers of Health/PHC Coordinators.

Dr. D.B. Sebina, Permanent Secretary of the Ministry of Health, Gaborone, Botswana offered to coordinate and host the February, 1985, workshop in his January, 1984 letter in which he also commented that courses suggested in the feasibility study seemed fairly comprehensive...that development of a relevant and sound curriculum would involve national and regional expertise in curriculum design and that such expertise was available in Botswana.

Letters supporting the idea of a mobile health training project were also received from governmental and/or university officials of Swaziland, Malawi, Lesotho, Zimbabwe, and various U.S. and European agencies active in the region.

Naomi Baumslag, M.D., M.P.H., associate director and consultant for this project; Elaine Boston, R.D., M.P.H., program coordinator; Dr. Jack Vaughn, Chairman & Professor, Applied Health Sciences, and Dr. Elizabeth Bennett, Dean & Assoc. Professor, TSPHTM, visited the Southern Africa countries in February, 1983, as scheduled in the feasibility study.

Positive feedback from the site visits included:

1. Endorsement of the concept from all persons with whom it was discussed;

2. Endorsement of a regional institute that could ultimately coordinate all health training in the area and eliminate the "piece-meal" approach to health training;

3. Endorsement of a regional institute that could provide steps on the career ladder for health care personnel and make health careers

more attractive to prospective students.

In setting up the Institute, the site visit report concluded, it is imperative that it be linked to, or part of, one of the universities in the area to ensure the upward mobility desired by health personnel, and to upgrade the status and opportunities in public health, so that it will attract new people. The institute could be based at one university, with guarantees from other universities that they would accept its credits toward degrees. The ultimate answer is to offer a four-year program leading to a baccalaureate degree in public health.

Some recommendations of the Tulane site visit team are similar to those suggested by the SADCC commissioned NORAD Consultancy Survey of Health Training Facilities conducted from October 19 to December 21, 1982.

The NORAD survey team, headed by Dr. Egil Snilsberg, suggested cooperation among the SADCC countries in training and exchanging teachers, sharing medical equipment, maintenance, administration/management, personnel, and establishment of a regional resource center and regional specialty training programs, when separate national training programs are not economical.

Training institution recommendations included:

1. Expansion of existing institutions, and possible addition of new ones;
2. Relationship between the institution's size and medical cadres trained,
3. Use of qualified teachers from outside the region until local tutors are trained;
4. Use of a "four party agreement/quota system" in which host countries take responsibilities for running their institutions, and for training a quota of students from other SADCC countries, which in turn, need to guarantee a certain number of students annually; all to be accomplished with financial and manpower support from the cooperating agency/training institutions;
5. Agreement to a staff development program of national teachers;
6. Courses with practical training could be given in students' home countries, so that they practice in the context in which they will work.

The NORAD team emphasized that SADCC countries, not NORAD, should make decisions on priorities in the following categories:

1. Use of existing facilities with expansion capabilities, where only an agreement between institutions is needed to provide scholarships, supplemental staff, libraries, etc.
2. Projects already planned in detail, but which have been postponed due to lack of funding or manpower.
3. Projects needing further planning.

NORAD recommended cooperation on health manpower development between SADCC countries because:

1. There are similarities in demographic factors, educational systems, and health problems, policies, medical care systems, and manpower structures.

2. It is more economical to train students in the region than abroad.

3. Training within the region could be more relevant than elsewhere.

4. There has been small scale cooperation between the countries on health manpower development for many years.

5. Some countries have experienced "brain drain" when students are trained outside of Africa.

Existing cooperation among the countries was noted by the NORAD study. Although the training institutions' capacities limit the numbers of students in cooperative training, SADCC countries have worked together. For example:

Students from Zambia are admitted to the University of Dar es Salaam pharmacy degree program;

Foreign students are accepted into the five medical schools of the SADCC countries;

Institute of Development Management in Botswana, Lesotho and Swaziland admits students from other countries;

Nurses from Lesotho have specialized in anaesthesia in Mozambique.

Students from all seven English-speaking SADCC countries enter the maintenance technicians training program in Swaziland through cooperation between the Commonwealth Health Region and the Government of Swaziland.

Botswana, Lesotho and Swaziland have a common Nursing Education Board.

WHO and the Government of Angola run a Higher Training Nursing Program for participants from several countries.

Some problems with cooperation are: different health worker registration requirements in the countries; foreign currency and language problems; the countries' economic situations, the destabilization policy of South Africa.

Some solutions to these problems could be: establishment of a "Training Council" comprised of each country's medical council, nursing council, or MOH, to work on health manpower development problems; manpower input from cooperating agencies to ease the shortage of training personnel, until enough nationals are trained to staff programs; need for aid from cooperating agencies to enable foreign students to matriculate. Language and currency problems can be solved, but some officials are concerned about South Africa's destabilization policy, and its effect on health training institutions.

EDUCATIONAL RESOURCES AND FACILITIESSouthern Africa Universities, Institutions, Nursing Schools

## 1. MALAWI

Medical Training School in Lilongwe  
Medical Auxillary Training School Lilongwe  
Zomba School of Nursing  
Bunda College of Agriculture  
Queen Elizabeth Hospital Nursing Blantyre  
Enrolled School of Nursing at Zomba

## 2. SWAZILAND

Institute of Health Science  
Swaziland University  
Nursing School and School of Allied Health, Mbabane

## 3. BOTSWANA

National Health Institute  
Institute of Development Management  
School of Nursing  
University of Botswana

## 4. LESOTHO

School of Nursing  
University of Lesotho  
Health Science Faculty at University of Lesotho in Roma

The SADCC commissioned NORAD study recommended:

1. Expand existing institutions; possibly establish new ones.
2. Decide upon institutions' sizes according to cadres to be trained; consider that for most cadres, three or four medium-sized institutions may be preferable to one large one. Also, training centers should continue to be national institutions, leaving responsibilities for them to the host countries.
3. To establish new institutions or expand existing ones, long-term financial support from cooperating agencies on a bilateral or multilateral basis is necessary. Until there are enough local tutors, qualified teachers from outside the region will be needed, and it might be an advantage to be assisted by one cooperating agency responsible for each institution, with assistance given either directly by that agency, or through an associated university or college.
4. The three party agreement/quota system is recommended. Agreements need be made for the host country to take responsibility for running the institution and training a quota of students from other SADCC countries, which in turn, need to guarantee a certain number of students annually. The cooperating agency/training institution must guarantee specific financial and manpower support.
5. Agree to a staff development program of national teachers.
6. Courses with blocks of practical training could be given in the students' home countries, so that they can practice skills in the context in which they'll work.

Preferential Areas of Cooperation:

Training of teachers, shared medical equipment, maintenance, administration/management, personnel, and establishment of a regional resource center and regional specialty training programs, when separate national training programs would not be economical.

Establishment of Regional Resource Centers:

The team recommended priority be given to establishing regional resource centers in the most fundamental health disciplines, and if possible, in connection with existing professional health training institutions, which already have the manpower needed for a resource center. Additional staff will be needed to meet expansion of existing libraries.

- Resource centers should emphasize production of regionally relevant textbooks and teaching aids, and offer advice on curricula development and educational programs. Facilities for hiring professionals from other institutions for short-term projects should exist.
- Library services, in addition to current reference materials, need translation facilities from English to Portuguese and vice versa.
- Expatriate services need to be calculated in running the centers.

## FACULTY

In addition to the consultants and resource people and the universities, institutes and cooperating agencies they represent, Tulane medical personnel directing the project include: Dr. James P. Carter, Chairman of the Department of Nutrition and Project Director; Naomi Baumslag, M.D., M.P.H., Associate Director and Consultant; Elaine Boston, R.D., M.P.H., Program Coordinator, and Dr. Claudio Schuftan, Nutrition Planner. Dr. James Banta is the Dean of the School of Public Health and Tropical Medicine.

Dr. James Banta received his M.D. from Marquette University, and his MPH from Johns Hopkins University. He is the Dean of the School of Public Health and Tropical Medicine and a Professor of Epidemiology in the Department of Health Measurement Sciences. His international activities include service to a number of agencies, among which are: Deputy Director of the Office of Health, Technical Assistance Bureau, AID, Medical Officer in the WHO Region of the Americas; Medical Director and Technical Resource Staff Member (Office of International Health) in the U.S. Public Health Service; Member of the International Research Staff of the NIH; consultant in Public Health to the Peace Corps; member of the Directing Council of PAHO; Chairman of the International Health Committee of the Advisory Council on International Relations of the University of Hawaii; and participant in naval research activities in the United States, Egypt and Japan.

Dr. James P. Carter received his M.D. from Northwestern University, a master's degree in parasitology (tropical medicine) from Columbia University, and his Dr. P.H. in nutrition from Columbia University. He then joined the faculty of Vanderbilt University in Nashville, Tennessee, where he taught pediatrics, nutrition and tropical medicine. While at Vanderbilt, he was awarded one of the distinguished Milbank Faculty Fellowships for five years. (A total of 48 of these fellowships were awarded to outstanding teachers of social and preventive medicine in the entire Western Hemisphere.)

He spent his last five years at Vanderbilt, on loan to Meharry Medical College, as the Project Director of the Meharry Maternal and Child Health, Family Planning, and Nutrition Training and Research Center, in Nashville, Tennessee, from 1970 to 1975.

He has also been Project Director of the Meharry-Botswana contract to provide In-Service Training for nurses to train them to become Nurse Practitioners. This contract lasted from 1972-1977. Dr. Carter served as Director from 1972-1977 with Ms. Jean Swinney as Nurse Coordinator in the field.

Dr. Carter was Chairman of the Health Sector Working Group at the Colloquium on Development in Southern Africa which was organized by USAID-U.S. Department of State and held in Washington, D.C., January 8-10, 1979. He is also a personal friend and professional colleague of Dr. Mike Dlamini, former Director of Medical Services of the Ministry of Health in Lesotho; and Dr. David Sebina, Permanent Secretary of the Ministry of Health of Botswana.

He is currently Chairman of the Department of Nutrition at Tulane School of Public Health and Professor of Pediatrics at Tulane Medical School.

Dr. Naomi Baumslag received her M.D. from the University of Witwatersrand Medical School and her MPH from Johns Hopkins School of

Public Health and Hygiene. She is a Professor of Community Health at Emory Medical School and an adjunct associate Professor of Nutrition at Tuane School of Public Health. She worked in the urban ghetto of Johannesburg, South Africa. She led a WHO funded research unit on Nutritional Anemias. She moved to the U.S. in 1964 because of her opposition to apartheid. She has had considerable experience with urban and rural poor health problems in Appalachia, and the state of Georgia, especially with regard to the area of maternal and child health nutrition. She started a Family Care Clinic in Cincinnati, which formed the basis of the present Family Medicare Training Program. In Atlanta, Georgia, she started Nutrition and Community Health courses at the Medical and Nursing Schools, and was a founder of the present Master's in Community Health Program which provides training in public health.

Dr. Baumslag is still on the faculty of that program started in 1974. In many ways, the program is similar to what is being proposed here.

As Director of the Nutrition Division in the Office of International Health, Department of Health and Human Services, she was able to focus on health and nutrition, mainly in Southern Africa. She has also participated in many programs for foreign students in the U.S., as well as in training workshops, and evaluations of MCH and nutrition programs. She has worked for USAID, Ford Foundation, and as a consultant to WHO. She has numerous public health publications and several books. She is doing a revised edition of MCH: Delivering the Services in Developing Countries, by Williams, C., Jelliffe, D., and Baumslag, N.

She, too, has personal and professional contacts with Dr. Mike Dlamini, the former Director of Medical Services of the Ministry of Health in Swaziland, with Dr. Pascal Ngakane, also formerly with the Ministry of Health of Lesotho, and Dr. Lungu, of the Ministry of Health in Malawi.

Maximum use of African personnel expertise -- members of regional institutions such as universities, hospitals, and ministries of health -- is expected to ensure development of a program uniquely African and responsive to specific area needs. Qualified teachers from outside the region are to be used until there is an adequate local staff. There is a need for bi-lingual instruction, for example, instruction in Portuguese as well as in English.

Potential faculty for the program are listed on the following pages. The list includes consultants, resource people, other participants in the Botswana Workshop, and teaching personnel they have recommended.

PARTICIPANTS, FEBRUARY, 1985, BOTSWANA WORKSHOPFACILITATORS, RESOURCE PERSONS AND SPEAKERS:

Dr. G.N. Monekosso, Regional Director WHO AFRC, Brazzaville  
 Dr. J.P. Carter, Tulane University, SPHTM, USA  
 Dr. W. Comm, Loma Linda University, USA  
 Dr. J. Banta, Dean, Tulane University, SPHTM, USA  
 Dr. N. Baumslag, Tulane University, USA  
 Dr. R. E. Yodaiken, USA Department of Labor  
 Dr. V. Johnson, Boston University, USA  
 Dr. L. Vanderschmidt, Boston University, USA  
 Prof. H. Folmer, Royal Tropical Institute, Netherlands  
 Prof. D. Morley, Institute of Child Health, London, UK  
 Dr. R. Poland, Kapnek Foundation  
 Dr. G. Rosenthal, Kapnek Foundation  
 Dr. F. Mburu, UNICEF (Advisor), Zambia  
 Dr. H. Elneil, WHO Harare, Zimbabwe  
 Dr. J. Martin, Nordic School of Public Health  
 Prof. I. MacDonald, Manchester University, UK  
 Dr. J. Bennett, WHO/UNICEF, Nairobi, Kenya  
 Dr. W. Sullivan, Morehouse University, Atlanta, USA

BOTSWANA PARTICIPANTS:

Dr. E. Maganu, Assistant Director Primary Health Care, MOH  
 Mr. V.N. Ngcongco, Under Sec. Health Manpower Development, MOH  
 Miss G. Moalosi, Health Planner, MOH  
 Miss K. Gasennelwe, Principal National Health Institute, MOH  
 Mrs. W. Manyeneng, Head Family Health Div., MOH  
 Mrs. D.S. Mosieman, Senior Tutor, Post Basic Community Health, MOH  
 Dr. H. Gongoro, Senior Regional Medical Officer, MOH

University of Botswana:

Dr. M. Edmondson, Head, Department of Nursing  
 Dr. A. J. Maleche, Senior Lecturer, Faculty of Education

Institute of Development Management (BLS):

Mrs. R. Pule, Health Programmes Co-ordinator, Gaborone, Botswana

LESOTHO PARTICIPANTS:

Mr. M. J. Molapo, Deputy Principal Secretary, MOH  
 Mr. N.T. Borotho, Health Planner, MOH

MALAWI PARTICIPANTS:

Dr. W. Chiomba, MOH  
 Mr. P.S.P. Tembo

SWAZILAND PARTICIPANTS:

Mr. T.M. Zwane, Principal Secretary, MOH  
 Dr. R. Tshabalala, Director of Health Services  
 Miss N. Dlamini, Principal Institute of Health Sciences

OBSERVERS

Dr. D. Tembo, WHO WPC, Maseru  
 Dr. P. Rojas, WHO Team Leader, Botswana  
 Ms. Eva-Mae Caulker, WHO, Botswana  
 Dr. Siebien, WHO, Botswana  
 Mr. D. Munro, British Council Representative  
 Mr. E. Buttler, Deputy Director, USAID, Botswana  
 Ms. L. Mailloux, Programme Manager, Botswana  
 Mr. S. E. Smith, Prog/Project Manager, Swaziland  
 Mr. C. DuBois, Regional Health Development Officer, USAID  
 Mr. H. Stange, Assistant Resident Representative,  
 NORAD, Botswana  
 Mr. Trydell, Resident Representative, SIDA, Botswana  
 Mr. Van Sponeck, Resident Representative UNDP,  
 Mrs. S. Kimaryo, UNICEF, Botswana  
 Mr. Kuria, UNFPA  
 Professor T. Tlou, Vice Chancellor, Botswana

Also:

Mr. D.M. Malikongwa, Institute of Adult Education,  
 University of Botswana, Gaborone  
 Mr. J.W. Kuri, Programme Advisor, UNDP, Botswana  
 Mrs. M. Kobue, Lecturer, Dept. of Nursing,  
 University of Botswana  
 Mr. Oncor Omondi, Programme Coordinator PHC, NIR, Gaborone

WORKSHOP COORDINATORS

Dr. D.B. Sebina, Permanent Secretary, MOH Botswana  
 Dr. J.P. Carter, Nutrition Department Chairman,  
 Tulane University School of Public Health and  
 Tropical Medicine

STEERING COMMITTEE

Dr. N. Baumslag, Adjunct Assoc. Professor, Tulane U.  
 Mrs. V.N. Ngcongco, Under Sec. Manpower Development,  
 MOH Botswana  
 Mrs. E.K. Moagi, Regional Matron, Southern Botswana MOH  
 Mrs. K. Gasannelwe, Principal Tutor, NHI, Botswana  
 Ms. G.M. Moalosi, Planning Officer, MOH, Botswana  
 Dr. E.D. Maine, Medical Officer, FHD, Botswana  
 Mrs. G. Mogapi, Principal Health Administrative Officer,  
 MOH, Botswana  
 Mrs. Manyeneng, Head, Family Health Division, Botswana  
 Mrs. D.S. Mosieman, Senior Tutor Coordinator,  
 Post-Basic Community Health Nursing, Botswana

DIRECTORY

Dr. James Banta, Dean, Tulane University, School of Public Health and Tropical Medicine, 1430 Tulane Ave., New Orleans, LA 70112

Dr. Noami Baumslag, Georgetown Medical School, Washington D.C.

Dr. John Bennett, UNICEF ESARA, PO Box 44145, Nairobi, Kenya

Mrs. Nthuntsi T. Borotho, MOH, PO Box 514, Maseru 100, Lesotho

Dr. James P. Carter, Tulane University, SPHTM, Department of Nutrition, 1430 Tulane Ave., New Orleans, LA 70112 (504 588 5136)

Dr. W.M. Chiomba, Queen Elizabeth Hospital, PO Box 30377, Lilongwe, Malawi

Dr. Walter Comm, School of Health, Loma Linda University, Loma Linda, CA 92350

Ms. Nester T. Dlamini, Swaziland Institute of Health Services, PO Box 369, Mbabane, Swaziland

Charles Debose, USAID/Swaziland, PO Box 750, Mbabane, Swaziland

Dr. Marilyn Edmondson, Nursing Dept., Univ. of Botswana, Priv.Bag 0022, Gaborone, Botswana

Dr. H. Elneil, Regional Health Development Centre, PO Box A540, Avondale, Harare, Zimbabwe

Dr. Herman R. Folmer, Royal Tropical Institute, Mauritskade 63, Amsterdam, Netherlands (020 924949)

Mrs. K. Gasennelwe, National Health Institute, PO Box 985, Gaborone, Botswana

Dr. Halidi Gongoro, Athlone Hospital, PO Box 271, Gaborone, Botswana

Dr. V.R. Johnson Boston Univ., Boston, MASS.

Mrs. M. Kobue, Univ. of Botswana, Priv. Bag 0022, Gaborone, Botswana

Mr. James W. Kuri, UNDP, PO Box 54, Gaborone, Botswana

Prof. Ian MacDonald, Manchester Univ., Manchester, M 13 9 PL, UK

Ms. Laurie Mailloux, USAID, PO Box 90, Gaborone, Botswana

Dr. E.D. Maine, FHD, PO BOX 992, Gaborone, Botswana

Dr. A. J. Maleche, Univ. of Botswana, Pvt. Bag 0022, Gaborone, Botswana

Mr. D.M. Malikongwa, Univ. Botswana, Priv.Bag 0022, Gaborone, Botswana

Dr. E.T. Manganu, MOH, Priv.Bag 0038, Gaborone, Botswana

Mrs. W.G. Manyeneng, Family Health Division, PO Box 992, Gaborone, Botswana

Dr. John D. Martin, Nordic School of Public Health, MEDICINAREGATIEN, 413 46, Gothenburg, Sweden

F.M. Mburu, UNICEF, PO Box 33610, Lusaka, Zambia

Ms. E.K. Moagi, MOH, Priv. Bag 0038, Gaborone, Botswana

Ms. G.M. Moalosi, MOH, Priv. Bag 0038, Gaborone, Botswana

Mrs. G. Mogapi, MOH, Priv. Bag 0038, Gaborone, Botswana

Mr. M. J. Molapo, MOH, PO Box 514, Maseru 100, Lesotho

Dr. G.L. Monekosso, WHO, Regional Office for Africa, BP6, Brazzaville, Republic of Congo

Prof. David Morley, Institute of Child Health, 30 Guilford St., London WC 1N 1EH, UK

Mrs. D.S. Mosieman, National Health Institute, PO Box 985, Gaborone, Botswana

Mr. Donald Munro, British Council, PO Box 430, Gaborone, Botswana

Mrs. V. N. Ngcongco, MOH, Priv. Bag 0038, Gaborone, Botswana

Mr. Oncor Omondi, NIR, Priv. Bag 0022, Gaborone, Botswana

Ms. Rose L. Pule, Institute of Development, BSL, PO Box 1357, Gaborone, Botswana

Dr. P. Rojas, C/O UNDP, PO Box 54, Gaborone, Botswana

Dr. David B. Sebina, MOH, Priv. Bag 0038, Gaborone, Botswana (55349, 55557)

Scott E. Smith, USAID/Swaziland, PO Box 750, Mbabane, Swaziland

Mr. Helge Stange, Norwegian Agency for International Development, PO Box 879, Gaborone, Botswana

Dr. Walter W. Sullivan, Morehouse School of Medicine, Atlanta, GA 30310

P.S.P. Tembo, Lilongwe School For Health Sciences, PO Box 30368, Lilongwe, Malawi

Dr. Ruth T. Tshabalala, MOH, PO Box 5, Mbabane, Swaziland

Dr. Lori Vanderschmidt, Boston University, Boston, MASS. 02215

Dr. Ralph Yodaiken, Dept. of Labor, 200 Constitution Ave., Wash.D.C. 20210

AVAILABLE PORTUGUESE-SPEAKING FACULTY

(Portuguese-speaking Angola has expressed its interest in the MPH program.)

Dr. Sebastiao Souza e Silva, Coordenador, Mestrado em Saude Comunitaria, Departamento de Medicina Preventiva, Universidade Federal da Bahia, Rua Padre Feijo 31, 40000, Salvador - BA - Brasil

\* Dr. Ayrton Fisheman, Curso de Saude Publica, Escola de Saude Publica, Secretaria da Saude e do Meio Ambiente, Avenida Borges de Medeiros, 1501, 90.000-Porto Alegre-RS-Brasil

\* Dr. Ernani Braga, Director, Escola Nacional de Saude Publica - Fundacao Oswaldo Cruz, Ministerio da Saude, Rua Leopoldo de Bulhoes 1480, Manguinhos, Rio de Janeiro, Brasil

\* Dr. Paulo Marchiori Buss, Secretario Ejecutivo, Associacao Brasileira de Pos-Graduacao em Saude Coletiva (ABRASC0), Rua Leopoldo Bulhoes, 1480, Rio de Janeiro, Brasil

Dr. Hesio Cordeiro, Coordenador, Posgrado em Medicina Social, Instituto de Medicina Social, Universidade do Estado do Rio de Janeiro, Pavilhao Haroldo Lisboa da Cunha, Rua Sao Francisco Xavier, 542-40. Andar, 20550 Rio de Janeiro - RJ- Brasil

Dr. Reginaldo Zacarra de Campo, Director, Departamento de Medicina Preventiva e Social Faculdade de Ciencias Medicas, Universidad de Campinas - UNICAMP, Rua Dr. Quirino, 1856 - 1, Campinas, Sao Paulo, Brasil

\* Dr. Nagib Haddad, Director, Departamento de Medicina Social, Faculdade de Medicina de Ribeirao, Universidade de Sao Paulo, 14100 - Ribeirao Preto - SP - Brasil

Dr. Guilherme Rodriguez da Silva, Director, Departamento de Medicina Preventiva, Faculdade de Medicina de Sao Paulo, Universidade de Sao Paulo, Av. Dr. Arnaldo, 455, 2 Andar, 01246 - -Sao Paulo - SP-Brasil

Dr. Alonzo Kiato Meiro (Same address as Dr. da Silva, shown above)

\* Indicates faculty who have additional contacts.

The potential faculty listed above were suggested by Dr. Jose Romero Teruel, Coordinator, Analysis and Strategic Planning, Pan American Health Organization, Pan American Sanitary Bureau, Regiona Office of WHO, Washington D.C. 20037 (202 861 3200)

## POTENTIAL STUDENTS

Regional training programs offered between mid-May and mid-August for three years, as suggested, would enable more health professionals to participate in advanced courses, since they would not need long leaves of absence from their positions, and would not incur international travel expenses.

After the site visit, Dr. Baumslag estimated the student pool based on the number of students sent overseas for training and the number of potentially available students; numbers are probably underestimated due to difficulties in getting information.

In Lesotho, for example, USAID has averaged sponsorship of three public health master's level candidates, and the MEDEX physician extender program funded three students for Public Health Administration at U.Hawaii.

In Swaziland, 20 medical officers, four family/nurse practitioners, six MCH/FPNP and 179 nurses are clinically practicing. Also, of the B.Sc. students who graduated in 1984, only 6/61 will enter medical school. Five could be master's candidates; so could nurses and physicians working at the district and MOH level who lack public health training. Estimates of physicians eligible for master's level training are about 10 per year. The estimated need for public health nurses is an increase from 24 to 32 for 1988-89.

Botswana will have at least five master's program candidates annually. General estimates are 10 nurses, five doctors and five B.Sc. students per country per year for master's level training, and many more for bachelor's level. Response to the questionnaire sent to other SADCC countries indicates 5-10 physicians available for master's program.

### Present Manpower:

The NORAD study provided the following data:

Although health personnel training is a priority in SADCC countries, there is a shortage of health manpower that is expected to continue due to the ever increasing population. Most countries are drawing up health manpower plans to meet increasing demands for health services and for quality and quantity in training facilities. The total population of the nine countries is estimated to be 63 million, with an annual increase of about 2 million.

SADCC countries have great numbers of expatriates in their health services in all cadres. In some countries, 30 percent of the medical doctors are expatriates, and of the total of 3,500 to 4,000 doctors in the entire region, more than 2,000 are expatriates. Some countries have no dentist nationals at all. There is a need to localize health posts and to replace health workers who leave the service.

### Training levels include:

Level 1. Community-based Health Workers: (e.g. traditional birth attendants, family welfare educators, village health workers, etc.) Those with little formal education and a few weeks of training (except in Mozambique where 9 months of professional training is given).

Level 2. Assistants: (e.g. health assistants, enrolled nurses, laboratory assistants, etc.) These usually have 10 years of primary and secondary education in English-speaking countries, and 6-7 years in Portuguese-speaking countries, and 1-3 years of professional training.

Level 3. Technicians: (e.g. registered nurses, pharmacy or laboratory technicians, health inspectors, clinical officers, etc.) These have 11-13 years of primary and secondary education in English-speaking countries; 8-9 years in Portuguese-speaking countries; professional training for 3-4 years.

Level 4. Professionals: (University trained. e.g. university degree courses for nursing tutors, pharmacists, medical doctors, public health engineers, etc.) These have 11-13 years primary and secondary education; professional training ranges from 3 years (pharmacists) to 11 years (medical specialists).

Health workers at levels 1, 2, and sometimes 3, are trained in their home countries; some level 3 students are sent abroad. The SADCC region training capacity for level 4 is so limited that even those countries with training institutions have to send students abroad. Levels 3 and 4 will need to study abroad for a considerable time and, therefore, SADCC cooperation is very important in their training.

SADCC countries' policy is to train as many cadres as possible, within the country, or to find study places in Africa for students who must go abroad (a policy supported by WHO). Due to Africa's limited capacity, many students are sent to North America, Europe, and other countries.

Disadvantages of study abroad are: Not enough scholarships for qualified students; difficulties in finding places for students in African and other countries; difficulties in finding students who meet entry requirements of universities abroad.

#### General Education:

Students in English-speaking countries have 7-8 years primary and 4-5 years secondary education, while those in Mozambique and Angola have 4 years primary and 2-7 years secondary education. Because too few students complete 11 years of primary and secondary education, health training institutions in these countries must lower intake requirements.

All nine countries are expanding educationally. New general educational programs were scheduled for Mozambique in 1983, and in Angola, 3,000 students completed secondary school in 1980, but 50,000 were expected to complete the program in 1984.

In Botswana, 185 students passed the Cambridge examination in 1971, and 700 in 1981. All countries have similar examples of producing more and better qualified students for health training, and, while Junior Certificate is the minimum formal educational requirement, many students with GCE are admitted.

NORAD's survey charts of student enrollments at different levels in different countries are on the following pages.

STATISTICAL INFORMATIONCHARTS, TABLES, GRAPHSPrepared by NORAD

| CATEGORY                        | PAGE |
|---------------------------------|------|
| Public Health Workers.....      | 25   |
| Nurses:                         |      |
| Enrolled Nurses.....            | 26   |
| Enrolled N/Midwives.....        | 27   |
| Registered Nurses.....          | 28   |
| Registered N/Midwives.....      | 29   |
| Nursing Specialists.....        | 30   |
| Postbasic Nursing Programs..... | 33   |

CADRE: LEVEL I HEALTH WORKERS

| County     | No. of Schools | Annual Intake | Course Duration (years) | Language of Instruction<br>English = E<br>Portuguese = P | ENTRY REQUIREMENTS       |   | Designation/Remarks   |
|------------|----------------|---------------|-------------------------|--|--------------------------|---|---|
|            |                |               |                         |  | Years of Basic Education | Specifications                                      |   |
| ANGOLA     |                |               | 6 mos.                  | P  |                          | 18 yrs, able to read and write count.               | Health Promoters  |
|            | 1              |               | 45 days                 | P  | 1                        |   | Social activists  |
| BOTSWANA   | 1              | 50            | 11 wks                  | E/Setswana   | 1                        |   | Family welfare educators  |
| LESOTHO    |                |               | 4 wks                   | Sesotho  |                          | Read and write Sesotho                              | Village health workers  |
| MALAWI     | 1              | 30            | 6 wks<br>2 wks          |  | 8                        | Have working experience as TBA's                    | Primary health workers (experimental), traditional birth attendants |
| MOZAMBIQUE |                |               | 9 mos                   | P  | 4                        |   | API - Village health workers  |
| SWAZILAND  |                |               | 3 mos                   | Siswati  |                          | Read and write                                      | Rural health motivators   |
| TANZANIA   |                |               | 3 mos                   | Swahili  |                          |   | Village health workers (not yet started)                            |
| ZAMBIA     |                |               | 6 wks<br>7 wks          |  | 3                        | 25 years of age<br>Have working experience as TBA's | Community health workers<br>Traditional birth attendants            |
| ZIMBARWE   |                |               | 12 wks                  |  |                          | Read and write                                      | Village health workers  |

## CADRE: ENROLLED NURSES

| County     | No. of Schools | Annual Intake | Course Duration (years) | Language of Instruction<br>English = E<br>Portuguese = P | ENTRY REQUIREMENTS       |   | Designation/Remarks        |
|------------|----------------|---------------|-------------------------|--|--------------------------|---|----------------------------|
|            |                |               |                         |  | Years of Basic Education | Specifications  |                            |
| ANGOLA     | 21             | Luanda<br>80  | 2                       | P  | 6                        |   | General Nurse              |
| BOTSWANA   | 4              | 140           | 2                       | E  | 10                       | Jr. Certificate<br>aptitude tests   | Enrolled Nurse             |
| LESOTHO    | 4              | 80            | 1                       | E  | 10                       | Jr. Certificate   | Assistant Nurse            |
| MALAWI     | 1              | 60            | 2                       | E  | 10                       | Jr. Certificate<br>with pass in<br>English + 2<br>science subjects                                    | Enrolled Nurse             |
| MOZAMBIQUE | 4              | 150           | 2                       | P  | 6                        |   | General Nurse A            |
| SWAZILAND  | 1              | 20            | 2                       | E  | 10                       | Jr. Certificate   | Nursing Assistant          |
| TANZANIA   | 21             | 520           | 3 + 1                   | E  | 7                        | Primary school<br>education,<br>entrance exam,<br>2 yrs. secondary<br>preferred                       | Registered B-Nurse/Midwife |
| ZAMBIA     | 18             | 800           | 2                       | E  | 10                       | Form 3: Jr.<br>Certificate with<br>passes in Biology,<br>English & 3<br>others one science<br>subject | Enrolled Nurse             |

CADRE: ENROLLED MIDWIVES

| County     | No. of Schools | Annual Intake | Course Duration (years) | Language of Instruction<br>English = E<br>Portuguese = P | ENTRY REQUIREMENTS       |                                    | Designation/Remarks                       |
|------------|----------------|---------------|-------------------------|--|--------------------------|------------------------------------|---|
|            |                |               |                         |  | Years of Basic Education | Specifications                     |   |
| ANGOLA     | several        | Luanda<br>40  | 2                       | P  | 6 + 2                    | 6 yrs + nursing certificate        | Mother and child nurse                    |
| BOTSWANA   | 1              | 40            | 1½                      | E  | 10 + 2                   | 2 yrs enrolled nurse               | Enrolled nurse/midwife                    |
| MALAWI     | 6              | 95            | 1                       | E  | 10 + 2                   | Enrolled nurse                     | Enrolled nurse/midwife                    |
| MOZAMBIQUE | 2              | 49            | 2½                      | P  | 6                        |                                    | Midwife A                                 |
|            | 2              | 221           | 2½                      | P  | 6                        | Females only                       | Mother and child nurse                    |
| TANZANIA   | 19             | 620           | 2                       | E  | 7                        | Entrance Examination, females only | Maternal and child health aids (MCH aids) |
| ZAMBIA     | 8              | 250           | 1                       | E  | 10 + 2                   | Enrolled nurse                     | Enrolled nurse/midwife                    |
| ZIMBABWE   | 7              | 30            | 1                       | E  | 10 + 3                   | Medical assistant                  | Maternity assistant                       |

## CADRE: REGISTERED NURSES

| Country   | No. of Schools | Annual Intake | Course Duration (years) | Language of Instruction<br>English = E<br>Portuguese = P | ENTRY REQUIREMENTS       |   | Designation/Remarks        |
|-----------|----------------|---------------|-------------------------|--|--------------------------|---|----------------------------|
|           |                |               |                         |  | Years of Basic Education | Specifications  |                            |
| BOTSWANA  | 2              | 80            | 3                       | E  | 12                       | GCE O level   | Registered Nurse           |
| SWAZILAND | 2              | 71            | 3                       | E  | 12                       | O level with 5 passes of which 3 science subjects + English | Diploma in General Nursing |
| ZAMBIA    | 4              | 240           | 3                       | E  | 12                       | GCE O level pass English Maths Gen. Science Biology         | Nurse                      |
| ZIMBABWE  | 4              | 225           | 3                       | E  | 12                       | GCE O level with 4 credits                                  | Nurse                      |

CADRE: REGISTERED NURSES/REGISTERED MIDWIVES

| County    | No. of Schools | Annual Intake | Course Duration (years) | Language of Instruction<br>English = E<br>Portuguese = P | ENTRY REQUIREMENTS       |   | Designation/Remarks      |
|-----------|----------------|---------------|-------------------------|--|--------------------------|---|--------------------------|
|           |                |               |                         |  | Years of Basic Education | Specifications  |                          |
| BOTSWANA  | 2              | 69            | 1                       | E  | 12 + 3                   | Registered nurse  | Registered Nurse/Midwife |
| LESOTHO   | 3              | 70            | 3 +                     | E  | 12                       | GCE O level   | " " "                    |
| MALAWI    | 2              | 60            | 4                       | E  | 12                       | GCE O level<br>credits in<br>English Biology<br>and Physics     | " " "                    |
| SWAZILAND | 1              | 25            | 1                       | E  | 12 + 3                   | Diploma in general<br>nursing                                   | " " "                    |
| TANZANIA  | 3              | 150           | 4                       | E  | 11                       | GCE pass in Biology<br>Chemistry Physics<br>English and Swahili | " " "                    |
| ZAMBIA    | 3              | 60            | 1                       | E  | 12 + 3                   | Registered nurse  | " " "                    |
| ZIMBABWE  | 2              | 45            | 1                       | E  | 12 + 3                   | Registered nurse  | " " "                    |

## CADRE: NURSE ANAESTHETIST

| County     | No. of Schools | Annual Intake | Course Duration (years) | Language of Instruction<br>English = E<br>Portuguese = P | ENTRY REQUIREMENTS       |  | Designation/Remarks |
|------------|----------------|---------------|-------------------------|--|--------------------------|--|---------------------|
|            |                |               |                         |  | Years of Basic Education | Specifications                           |                     |
| ANGOLA     | 1              | 10            | 2                       | P  | 6 + 2                    | Nursing certificate                      | Nurse Anaesthetist  |
| BOTSWANA   | 1              | 10            | 1                       | E  | 12 + 4                   | Registered Nurse/<br>Midwife Certificate | Nurse Anaesthetist  |
| MOZAMBIQUE | 1              | 15            | 1½                      | P  | 9 + 2                    | Nurse A Certificate<br>(2 years)         | Nurse Anaesthetist  |

## CADRE: INTENSIVE CARE NURSE

|          |   |    |   |   |  |   |              |
|----------|---|----|---|---|--|---|--------------|
| ZIMBABWE | 4 | 24 | 1 | E |  | Registered nurse +<br>1 year experience | I.C.U. Nurse |
|----------|---|----|---|---|--|---|--------------|

## CADRE: OPHTHALMIC NURSING

|          |   |    |    |   |       |   |                             |
|----------|---|----|----|---|-------|---|-----------------------------|
| TANZANIA | 1 | 26 | 1½ | E | 7 + 4 | B-Nurse Certificate<br>+ 4 years working<br>experience +<br>entrance test | Ophthalmic Nurse Register A |
|----------|---|----|----|---|-------|---|-----------------------------|

## CADRE: PEDIATRIC NURSING

|            |   |    |       |   |       |  |                                       |
|------------|---|----|-------|---|-------|--|---------------------------------------|
| MOZAMBIQUE | 1 | 15 | 8 mos | P | 8     | Nurse A Certificate (2 yrs)                    | Pediatric Nurse<br>Course starts 1983 |
| TANZANIA   | 1 | 25 | 1½    | E | 7 + 4 | B Nurse Certificate + 4 yrs<br>+ entrance test | Pediatric Nurse Register A            |

CADRE: PSYCHIATRIC NURSING

| County    | No. of Schools | Annual Intake | Course Duration (years) | Language of Instruction<br>English = E<br>Portuguese = P | ENTRY REQUIREMENTS       |   | Designation/Remarks                                      |
|-----------|----------------|---------------|-------------------------|--|--------------------------|---|--|
|           |                |               |                         |  | Years of Basic Education | Specifications  |  |
| BOTSWANA  | 1              | 10            | 1                       | E  | 12 + 3 (4)               | Registered Nurse or Registered Nurse/ Midwife               | Registered Psychiatric Nurse Starts 1983                 |
| MALAWI    | 1              | 50            | 1                       | E  | 9 + 4                    | EN/EM Certificate   | Enrolled Psychiatric Nurse                               |
| SWAZILAND | 1              |               | 1                       | E  | 12 + 4                   | RN/RM Certificate + 1 year experience                       | Psychiatric Community Mental Health Nurse. To start 1983 |
| TANZANIA  | 1              | 45            | 1 1/2                   | E  | 7 + 4                    | B registered Nurse + 4 years experience + pass entrance ex. | Registered A Psychiatric Nurse                           |
| ZAMBIA    | 1              | 18            | 3                       | E  | 10                       | Junior Certificate  | Med. Ass. Psychiatric                                    |
|           | 1              | 60            | 2                       | E  | 10 + 2                   | Enrolled Nurse  | Enrolled Psychiatric Nurse                               |
| ZIMBABWE  | 1              | 40            | 1 1/2                   | E  | 12 + 3                   | Registered Nurse + 2 years experience                       | Psychiatric Nurse  |
|           | 1              | 40            | 1                       | E  | 10 + 3                   | Med. Ass. Certificate                                       | Med. Ass. Psychiatric                                    |

CADRE: THEATER TECHNIQUE NURSES

| County     | No. of Schools | Annual Intake | Course Duration (years) | Language of Instruction<br>English = E<br>Portuguese = P | ENTRY REOUIREMENTS       |   | Designation/Remarks       |
|------------|----------------|---------------|-------------------------|--|--------------------------|---|---------------------------|
|            |                |               |                         |  | Years of Basic Education | Specifications                          |                           |
| ANGOLA     | 1              | 10            | 2                       | P  | 6 + 2                    | Nursing Certificate                     | Theatre Nurse             |
| MOZAMBIQUE | 1              | 15            | 1                       | P  | 6 + 2                    | Nurse A Certificate                     | Surgical Instrument Nurse |
|            | 1              | 6             | 1½                      | P  | 9 + 2                    | Nurse A Certificate                     | Theatre Nurse             |
| ZAMBIA     | 1              | 30            | 1                       | E  | 12 + 4                   | Registered Nurse<br>+ 1 year experience | Theatre Nurse             |
|            |                |               | 1½                      |  | 10 + 2                   |   | Enrolled Nurse            |
| ZIMBABWE   | 1              | 24            | 1                       | E  |                          | Registered Nurse +<br>1 year experience | Theatre Nurse             |

CADRE: POST BASIC NURSING PROGRAMME

| Country   | No. of Schools | Annual Intake | Course Duration (years) | Language of Instruction<br>English = E<br>Portuguese = P | ENTRY REQUIREMENTS       |   | Designation/Remarks  |
|-----------|----------------|---------------|-------------------------|--|--------------------------|---|--|
|           |                |               |                         |  | Years of Basic Education | Specifications  |  |
| BOTSWANA  | 1              | 14            | 1                       | E  | 12 + 4                   | RN/RM + relevant experience                                   | Nurse Practitioner   |
|           | 1              | 14            | 1                       | E  | 12 + 4                   | RN/RM   | Community Health Nurse   |
| LESOTHO   | 1              | 19            | 15 mos.                 | E  | 12 + 4                   | RN/RM + 2 yrs. experience in health center                    | Nurse Clinician  |
| SWAZILAND | 1              | 20            | 1                       | E  | 12 + 4                   | RN/RM + 2 yrs. experience                                     | Nurse Practitioner<br>(Public Health Nurse or Family Nurse Practitioner) |
| TANZANIA  | 1              | 37            | 1½                      | E  | 11 + 4                   | Section A Nurse Certificate + 4 years experience              | Public Health Section A  |
| ZAMBIA    | 1              | 10            | 1                       | E  | 12 + 4                   | RN/RM + 2 years experience                                    | Public Health Nurse  |
| ZIMBABWE  | 1              | 10            | 1                       | E  | 12 + 4                   | RN/RM   | Community Nurse  |
|           | 1              | 6             | 2                       | E  | 12 + 4                   | RN/RM + Family Planning Certificate<br>2 yrs. work experience | Advanced Clinical Nurse  |

COSTS:

Approximately one-third of those students who qualify for health career training can't afford to matriculate; funding sources are needed.

Although tuitions vary from school to school, generally, USAID pays developing country nationals \$1,850 monthly for academic long-term training and approximately \$3,500 monthly for short-term technical training. These amounts do not include international travel. (Information from Mary Bouldin, USAID Office of International Training, cited in American Public Health Association letter, Jan. 12, 1982.)

Comparable figures from the Fogarty International Center, National Institutes of Health, are \$18-22,000 for stipend, approximately \$1,500 for travel, and approximately \$5,000 for host institution's incidental expenses, for a one-year International Fellowship. (From the office of Dr. Betty Graham, Chief, FIC International Research and Awards Branch, personal communication, April, 1985.)

It has been calculated at the Beirut School of Public Health that in-country training is approximately one-fourth the cost of sending health personnel to the U.S. for training, and the bonus is that training is more community oriented.

A Health Education/Nutrition course at the National Health Institute in Gaborone, Botswana, cost about P 110,000 per year in 1982 (Pula = US \$.59, Feb., 1985), or about P 9,000 (US \$5,310) per student. The estimate is based on P 3,000 for each of the 12 students' salaries and minimal accommodation costs at NHI; approximately P 25,000 for course support costs (budgeted books, transport, materials, etc.); and total staff salaries. (From Jack Finlay, Health Education/Nutrition Training, Gaborone, Botswana, correspondence, Feb. 28, 1983.)

The University of Zimbabwe offers a two-year part-time Master's degree program in Public health for \$350 p.a. tuition to Zimbabwean citizens. Tuition fees for non-Zimbabweans are double this rate. (Fees were under review and likely to be increased when this information came from G.I.H. Chittenden, University of Zimbabwe, Harare, Zimbabwe, July 29, 1983.)

In A Report to the President & Congress on the Status of Health Professions Personnel in the United States, (April 10, 1980, U.S. Department of Health Education and Welfare, Public Health Service, Health Resources Administration, Bureau of Health Manpower, Division of Manpower Analysis), average expenses of health professions students in the 1976-77 academic year were: Osteopathy, \$11,126; Dentistry, \$10,747; Optometry, \$9,197; Pharmacy, \$6,262; Podiatry, \$13,091; Veterinary Medicine, \$7,273.

The report compared education of health personnel in the U.S. to conditions in Australia, Belgium, Canada, Norway and Poland, and noted the "striking" differences between the U.S. and the five countries in financing modes. In the U.S., governmental support of

health manpower education has increased since the 1960's, but Federal funds make up only one-third of the 1973 health professional schools' expenditures; the remainder comes from state funds, tuition, fees, private endowments and patient fees. By contrast, all five countries, despite varied political systems, deem development of human resources a national responsibility and finance all or nearly all health personnel education with public funds, so that youth from low-income families can enter health careers.

Free health education tuition is available in Australia and Poland. The Canadian government funds 80 percent of university education; Norway provides the main support for health professional schools and even pays 85 percent of private school costs; the Belgian government totally supports national schools and pays all teachers' salaries and 80 percent of other costs in non-national schools. Various scholarships, grants, loans and bursaries (some repayed by service) defray students' living expenses in these countries.

In making cost estimates, the Tulane study assumed that start-up costs would be provided, and that the program would need outside support for at least 10 years before it could be localized. The 10-year investment will be cost-effective if the program is consistently monitored and updated. Public health expertise at all levels will reduce dependency; regional training will replace the need for expensive overseas training; research will improve significantly, while focusing on material domestic problems, instead of esoteric and irrelevant subjects.

The idea of a 10-year program was endorsed by Dr. Mburu, UNICEF, Lusaka, Zambia, when he spoke at the Botswana Workshop, February, 1985, on behalf of his working group, which had the responsibility of summarizing the discussions. He said that long-term relationships are needed with funding sources, not two- or three-year terms but in 10-year, or more cost-effective, 15-20-year terms. Dr. Mburu's group estimated recurrent costs to be two-thirds of development costs.

Other considerations in funding programs in the region, the group said, are the critical shortage of staff; ties of present facilities to their universities and resulting limits on expansion; the need for more basic and special research.

Cost-effectiveness factors include the number of students -- the larger the class, the more cost-effective. Most programs consider 30 students as minimum, allowing for an attrition rate of 10-20 percent, over three years.

Factors to consider when balancing the budget are: Number of complementary faculty, student-faculty ratio, cost of transportation for field studies, communications, books and journals, computer facilities, overhead expenses, research and development programs, recurring costs, sources of continuing support, and capital investment.

NORAD suggests that a system for teacher exchange, within the

same profession, would benefit the schools; expenses of such a system should be paid by a cooperating agency, and could be administered by the Regional Training Council of SADCC.

Tuition costs are difficult to estimate from existing programs, since many are either government or agency supported. Costs in the Phase IV (Implementation Phase) for four Tulane/Morehouse faculty and consultants, administrator and administrative assistant, office and miscellaneous expenses, are budgeted at \$137,580; WHO costs for student stipends and travel, administrator's and administrative assistant's salaries, travel and per diem, etc. are budgeted at \$154,790; a total of \$877,110 for three years. Comparing this amount to the cost of sending 30 students overseas for more than three years (30 students, average \$30,000 annually, 3 years = \$2,700,000), the \$2,700,000 could be spent to run a school of public health with considerable elasticity.

If the period of concentrated core training is reduced, so is the cost. Donor sponsorship of the program plus nominal local costs and in-kind local contributions would allow for a program of excellence to be developed in the entire region; educational waste would be averted and many positive spin-offs gained.

#### NORAD Tuition Estimates:

With the exception of the medical school in Zimbabwe, where the cost is U.S. \$13-14,000, training is considerably less expensive in Africa than elsewhere. For example: Training costs per year in U.S. dollars is: \$20,000 in the U.S.; \$13-14,000 in Canada or the United Kingdom; \$5-7,000 in Tanzania, Kenya and Nigeria. Cost estimation methods differ in the nine countries, and many institutions train under difficult conditions, but as quality increases, the cost is expected to increase, but to always remain lower than training abroad.

MINUTES OF THE FEBRUARY 19-21, 1985, BOTSWANA WORKSHOP

"TOWARDS A MOBILE PUBLIC HEALTH TRAINING PROGRAM IN SOUTHERN AFRICA"

A Workshop to Review the Tulane University Feasibility Study Report.

Proceedings of February 19, 1985:

Chairman of the Session, Dr. David B. Sebina, Permanent Secretary for Health in Botswana, in his introductory address, welcomed participants and representatives of agencies. He then invited Minister of Health, the Honourable M.P.K. Balopi to address the meeting.

The Honourable Minister expressed his appreciation to WHO Regional Director for Africa, Dr. Monekosso, for taking time from his busy schedule and important tasks, to officially open the Workshop. He pointed out that he and Dr. Monekosso had both taken up their new positions on February 1. The Minister thanked Dr. Sebina for his statement of allegiance, and said he looked forward to the support of his new staff.

The Minister then welcomed participants and representatives of agencies to the Workshop and to Botswana, and wished them fruitful deliberations.

In his opening remarks, Dr. Monekosso noted the developmental objective of the Workshop was "To develop a critical cadre of Public Health experts in the Southern African Countries."

He considered it a great honor to be invited to the Workshop and thanked the Government of Botswana and Tulane University for inviting him. He also expressed appreciation for the welcome reception extended to him at the airport, saying it was like a "homecoming" to him.

Dr. Monekosso went on to indicate that WHO was watching with interest the developments on this question of Public Health Training in Southern Africa, particularly as a cooperative venture between countries of the subregion; he saw it as a venture calling for sympathetic support of major donor agencies. He said, "Expertise in Public Health is vital to socio-economic development and the pursuit for a better quality of life." He also noted that new initiatives are necessary, and that similar efforts can be observed in other subregions of Africa and by certain institutions supported by bilateral agencies, all these in response to felt needs such as:

- \* The thirst for learning and keeping up with advancing technology;
- \* The need for higher qualifications that will open avenues for promotion;
- \* The acquisition of new technologies for solving serious public health problems.

In sharing his perspective of the health situation in Africa by the year 2000, he indicated that Africa needs a "Marshall Plan," that will lead to self-reliance and self-sufficiency. He said WHO should be a close partner of Ministries and assist in developing policies, strategies and action plans, and in implementing these.

In conclusion, he noted the need for well-informed and experienced persons to face up to the challenge -- what Africa must do is to stop talking and get on with action, he said, a journey of a 1000 miles begins with the first step. Action was needed:

- \* At Community level to support integrated development of

communities;

- \* To strengthen the health care infrastructure;
- \* To support hospital care and;
- \* To support efforts by groups of countries.

This concluded the opening session.

Dr. James Banta, Dean of Tulane SPHTM, stressed the difference between curative and preventive approaches to community health. He noted that there were similarities between industrialized and LDC's when it came to health problems. Educational objectives are to construct an ecological model of health and disease, to measure the extent of disease, perform diagnoses, operate health systems, and to master techniques such as methods of sanitation, immunization, nutrition, and oral rehydration.

He said management and administration techniques are essential components.

The biggest problem is to change human behavior, to empower people to help themselves; everyone is an educator, he said.

Dr. Banta stressed the role of the advocate and the need to encourage self-help. Prevention includes prevention of anemia, malaria, hypertension control, cigarette abatement and, it ranges from kitchen gardening to seat belts.

Perhaps our greatest challenge is the pursuit of clinical excellence, he noted.

Dr. Banta's presentation was followed by comments and observations from the floor. The following points were considered essential to the Public Health Training program and its curriculum:

- \* Inclusion of other aspects of primary health care in the curriculum, e.g. community involvement and multisectoral approach, human behavioral sciences; the need for change of attitudes was considered essential.

Dr. Naomi Baumslag, Professor of Pediatrics, Georgetown Medical School and member of the Tulane team, stated that the diffusional approach to training results in massive educational waste and ineffectual resolution of the problems. What is needed is not an evolution in public health training but a revolution.

She discussed the feasibility study conducted by Tulane SPHTM in the BLS countries. The basic idea was to complement regional resources with U.S. resources to develop a uniquely African Institute of Public Health.

Dr. Baumslag discussed the range of public health training modalities in the U.S. Twenty-three schools are accredited and foreign students comprise 10% of the student enrollment -- half of the foreign students attend one of three schools. The costs of tuition vary from \$1,417 to \$14,130. The types of programs, stress on specialty training, and duration of course depend upon the school.

African programs and training opportunities were far more difficult to document -- degrees, diplomas, range and effectiveness of training are much more diffuse. Nurses are at a distinct disadvantage because their years of experience and, even course training tends not to be accredited.

Each of the countries visited demonstrated training capabilities and had available faculty. The Universities have courses which could be adapted to public health training programs.

In all three countries, the Institute of Development Management (IDM) provides training for health administrators and there are, in

addition, extension programs attached to the universities.

Some of the main deficiencies that the study discovered are lack of books, journals, means of communication and information gathering techniques.

Research is variable and ranges from determining attitudes toward the handicapped to chemical analysis of traditional medicines.

The student pool of potential candidates can probably assure at least 10 nurses, 5 physicians, and 5 baccalaureate students per country per year.

Best projections for the program necessitated several "guesstimates" but Dr. Baumslag demonstrated that by taking hidden costs into account, training an unspecified number of students per year in Africa (30 or more) could amount to about one-fourth of the approximately \$2,700,000 (in 3 years) required to send 30 students overseas.

It was clear to the investigative team that public health training was recognized as important, and manpower development was a major concern in all countries involved in the study.

Regional cooperation has not been an unmitigated success but, if cooperation rather than operation is promoted, the beneficial impact would be tremendous. Factors critical to cooperation are the institutional arrangements, and, that none of the countries committed to the agreements made are excluded from other joint programs. There has to be an attitudinal change to pride in regional programs.

#### Proceedings of February 20, 1985

The Chairman, F. Mburu, opened the session and requested comments on the previous day's proceedings.

Dr. James P. Carter, of Tulane SPHTM and project director, spoke about the importance of reviewing the background materials provided to participants in order to build upon the information provided from many different sources, including such resource people as Professor Sydney Kark and Emily Kark, and emphasized that participants were not starting from ground zero, and that it was necessary to review this material to get the most out of the workshop to avoid re-inventing the wheel.

Mrs. Rose Pule was invited to explain the work of the IDM, one of the few successful regional projects.

Mrs. Pule explained that the organization started in 1974 with the help of CIDA, and is a regional undertaking of the three BLS countries -- Botswana, Lesotho and Swaziland, with its headquarters in Botswana. It is involved in health care and nursing administration. Funding is from governments and tuition fees -- 40% and 60% respectively.

Questions arose regarding the history of its development -- whether CIDA helped in staff or funds. It became apparent that there were staff members from CIDA; the program is being localized.

The NORAD team studied the IDM facility capability and one of its recommendations was to strengthen this institution. It was further elaborated that discussions along this line are going on. Whatever decisions are taken will have to be taken jointly by the BLS governments, e.g. affiliation of this institution to a university which will be an advantage to students for advancing their careers to a degree level.

The role of the Mobile Public Health Training Program in Southern Africa in IDM was questioned. It became apparent that the MPH program could adopt the approach taken by IDM, i.e. regionalization of the

establishment. The concept behind the establishment and benefits of the MPH training Program were found to be a reasonable focus for the discussions.

### Proceedings of February 21, 1985

The day's chairman, Dr. D.B. Sebina, Permanent Secretary, Ministry of Health, Botswana, called the meeting to order and invited group reporters to present discussions. The recommendations were as follows:

1. A regional training program in Public Health be established for the four participating countries -- Botswana, Lesotho, Swaziland and Malawi, and the invitation be extended to other SADC countries.
2. That the existing institutions, e.g. NHIS, Universities, IDM, etc., be utilized and strengthened where necessary.
3. That staff in these institutions be further developed to teach in the program.
4. That a curriculum geared to the needs of the communities be developed with research as one of the major components.
5. That finance required to run the program be obtained through:
  - a. Participating country subventions;
  - b. Tuition fees;
  - c. Donors.

The chairman then called for presentation of reports.

Mrs. N. Borotho presented the report of the first day's deliberations, followed by Dr. R. Tshabalala for the second day's deliberations. The reports were accepted as a true record. The Chairman then requested participants to go through their recommendations. The recommendations came out as listed above, except for the time frame, which suggested implementation of the plan of action within at least 2 years' time. Some participants expressed fears that 2 years was too optimistic, but the consensus was that the time frame be left as it was and that it would be adjusted as the need arises.

A small group of participants was selected and requested to further consolidate the group recommendations to be included in the draft report. The rest of the participants were requested to evaluate the achievement of the Workshop objectives, while the small groups compiled their reports. Almost all the objectives were achieved, except parts of Objective 6, which were referred to a committee which will develop program specifics.

Two of the objectives were modified as follows:

Objective 1 -- To find out if the feasibility study findings are relevant for the participating countries.

Objective 7 -- To examine ways of reducing the number of years and amount of resources put into training programs that do not ensure recognition and advanced academic standing credits for university studies.

The small groups presented their reports, which were endorsed and adopted by the participants.

Dr. Banta, Dean of Tulane SPHTM, closed the Workshop. In his closing remarks, he thanked the Botswana government for hosting the Workshop. He said the meeting had been fruitful, and that the

objectives were met. He also said the participants had learned new things from one another, and that the collaborative work had started and should continue.

Lesotho delegate, Mrs. N. Borotho, on behalf of the participants thanked the Botswana government for hosting the Workshop, and international agencies and resource persons for helping the Workshop achieve its objectives. She went on to thank the Tulane Team for pioneering this important program. She also thanked hotel management and support staff for making the Workshop a success. Finally, she wished everybody a safe journey home!

The Chairman requested the participants to thank the Steering Committee for its success in organizing the Workshop. He then declared the Workshop adjourned until the opening of the new School of Public Health in Southern Africa.

BARRIERS TO REGIONAL PUBLIC HEALTH TRAINING

(Delivered at the Banquet By Dr. James P. Carter, Project Director)

I will make certain assumptions, then, tell you about surprises:

ASSUMPTIONS : "Public Health Training" in this context refers to the training of community and preventive medicine-oriented primary health care workers .

"Training the trainers" can result in a multiplier-effect if the opportunities are provided for them to work and to teach in an educational setting.

SURPRISES : There was opposition to the concept at all levels.

FIRST, the students -- they like the idea of going abroad to the U.S., U.K., and elsewhere in Europe, for an extended period of time -- anywhere, except to another developing country, i.e. India or Nigeria. Students from Lesotho studying medicine in Nigeria were having some adjustment difficulties at one time, for example.

SECOND, the USAID missions in the developing countries themselves -- many mission directors feel that health is not a high development priority. USAID also has a style of bureaucracy that is based on the inviolate principle that "the man in the field" knows best. Unfortunately, his judgement is often accepted on technical matters, even when he has not had the benefit of expert consultation. The Mission Director, too, likes the idea of having a few scholarships to spread around. After all, it is something tangible and they are always much appreciated by the recipient, as well as the host government.

THIRD, we have in the U.S. several layers of organizations and, of course, individuals, who profit from the steady influx of foreign students, the majority of whom are coming from the developing countries. For want of a better name, the first layer is composed of "middle-men". These are organizations between the student and the school which usually have contracts with USAID. They help place the students in schools where they can get the kinds of training requested. They meet students on their arrival. They frequently give them an orientation to the U.S., and subsequently get them off to various schools which have accepted them, and where they are enrolled. They continue to follow them while they are in school, monitor their academic progress, communicate with their faculty advisers, and arrange for the students to attend meetings of various professional groups and societies when appropriate, and special seminars, often during school vacations.

While all of these are useful functions, Senator Nancy Landon Kassebaugh and Mr. Christenson on her staff, and others, consider the costs of those non-essential services to be exorbitant -- somewhere in the neighborhood of \$5,000-\$10,000 per student.

FOURTH, the schools themselves usually profit, because rarely are scholarships and tuition waivers available. These students come with tuition fully paid. At our institution, i.e. Tulane, it costs approximately \$9,000 per year. This comes to \$13,500-\$18,000 in tuition, for the M.P.H. degree.

When commenting on our proposed "Mobile Public Health Training Program", one administrator at our institution was noted to say: "We

are cutting off our nose to spite our face." One-third of our student body comes from the developing countries. If we go out there and teach, we will lose a lot of tuition money or bread and butter income for the school."

But let's look at it from the standpoint of an investment counselor. Let's say it costs \$45,000, including replacement costs, to bring one person to the U.S. for an M.P.H. degree. Let us also look beyond this economic figure and examine what happens to people at the human level. As an investor, you are providing for some things that you may not realize you were getting, as part of the bargain.

FOR EXAMPLE :

1. At a minimum, fully one-third of the courses taken have little or no relevance to the critical problems (or their solutions) in the health sectors of most developing countries. (This is a conservative estimate, according to Walter Comm of Loma Linda, from whom you have already heard.)

2. The long-term effects of exposure to, and acquisition of the U.S. lifestyle, may set the stage for frustration and dissatisfaction when the graduate returns home. How many physicians have left government service, and gone into private practice, in order to maintain this lifestyle? How many have refused to return to the rural areas where there are fewer amenities and inferior school systems? Most choose to remain in the cities.

Their reasons for doing so have been varied and justifiable:

\* Too much of a sacrifice in the children's education;

\* Too radical a change from the lifestyle they had been leading in the States;

And, the most important reason of all:

\* "Let somebody else go. We have put in so many years out there already. We have paid our dues."

This is what the former medical assistants, now doctors, said after their return to Zaire, after completing the last few years of medical school in France.

There is also a significant percentage of students, usually those with higher degrees, e.g. M.D.'s and Ph.D.'s, who manage to remain, or to return, to the U.S. and Canada. The percentage varies from one country to another and at different times, for a particular country. Ethiopia and Ghana used to have very high rates of return. Now they are among the worst.

When you put all of this together, therefore, when you consider the costs, the relevance of the training, the problems with keeping them down on the farm, after they have seen Dayton, Ohio, you, as an investment counselor, will have to wonder about your return, in dollars and cents, on your initial \$45,000 investment.

How much human resource and health sector development did you get in return for it? The answer, of course, is difficult to quantify. In a qualitative sense, however, as far as resource development and Nation-Building are concerned, I think we will all have to agree that, alas, there is "nothing much going on."

One of the purposes of this Workshop has been to share ideas and examine different models for training community health and preventive medicine-oriented primary health care workers. We have made a start,

and above all, we have been honest about our successes and our failures.

Let us also not forget that there is a lot of training going on already in the SADCC countries. Any Regional Public Health Training program should complement and not duplicate what is already there. It should also strengthen career and academic advancement opportunities.

The above sums up, from my perspective, our reasons for being here. I would also like to thank USAID, on behalf of all of us, for supporting this Workshop.

#### WORKSHOP OPENING SPEECH

(By Guest Speaker, Dr. G. Monekosso, WHO Regional Director for Africa.)

It is for me a tremendous honor and great privilege to be asked to open this Workshop which has as its developmental objective:

"To develop a critical cadre of Public Health experts in the Southern African countries."

Honorable Minister, it is for me a special opportunity to meet you very early in your ministerial mandate in health, since we can be likened to twins -- having taken office, both of us on the 1st of February, 1985.

I am very happy to be visiting your great country, Botswana, for the first time. I have traveled extensively in Africa North of the Zambezi; this trip provided by old friends in Tulane University and encouraged by the kind invitation of the Botswana Government, has led to fulfilment of a long-standing ambition -- to meet the brave brothers and sisters in independent Southern African countries.

At this time, when I am beginning what my best friends describe as an impossible task (MISSION IMPOSSIBLE), it is reassuring to come here to a welcome that resembled a homecoming. It was coming home because I feel perfectly at home and happy in the knowledge that I go into this task with full support of my brothers and sisters in Botswana.

I am grateful to Tulane University for their invitation in raising the question of Public Health Training in Southern Africa, and am happy to say that WHO is watching this development with great interest, as a cooperative venture between countries of a subregion; a venture that calls for the sympathetic support of major donor agencies.

Tulane University and WHO are fully aware of the tremendous strides that are being made by our host countries. Expertise in Public Health is vital to socio-economic development and the pursuit for a better quality of life. We know that the present invitations will strengthen existing national institutions responsible for meeting a wide range of health manpower needs of the countries represented here.

Similar efforts can be observed in other subregions of the African Region. The undoubted fact that a socio-economic developmental crisis is becoming endemic in Africa suggests strongly that new initiatives are needed. There are plans for the establishment of Public Health Institutes in other parts of Africa, with the participation of

bilateral agencies.

These institutions respond to certain felt needs:

- \* The thirst for learning and keeping up with advancing technology;
- \* The need for higher qualifications that will open up avenues for promotion;
- \* The acquisition of new technologies for solving serious public health problems.

And, it is our view that the proposed training program (or programs) will respond to these needs. Let me share with you my perspectives of the health situation in Africa at the year 2000, and how we expect to be at that famous rendez-vous. We hope that our friends will walk with us, side by side, possibly hand in hand.

Africa needs a Marshall Plan that will lead to self-reliance and self-sufficiency. We propose to follow the primary health care path until it becomes an increasing wider road -- even a boulevard. We believe that WHO should be close partners of Ministries and assist in developing policies, strategies and action plans, and implementing these; with the support of other African countries, and with technical assistance of the bilateral agencies and non-governmental agencies of the more advanced countries. Consequently, African health development would be the result of cooperation between:

- \* National health development expertise;
- \* African regional health development expertise;
- \* International health development expertise.

There are only 15 years between now and the year 2000. The special "African Crisis" initiatives, World Bank, United Nations, etc., have not come too soon. It is regrettable that they were not conceived before the current emergency. Europe, through an organized international effort, was lifted out of the crisis that followed WWII exactly 40 years ago; South East Asia was rescued from its economic crisis of 20 years ago. We have every belief that Africa will not only survive this crisis but will rise to the dawn of a new era.

And, as far as "health" is concerned, what should we be doing? We must resolve resolutely to apply the recommendations of the Alma Ata Conference and the resolution that invites member states to proceed to "Health for All by the Year 2000."

First and foremost, we need action at the Community level. We need to devise and implement TARGET-ORIENTED COMMUNITY-BASED PRIMARY HEALTH CARE IN SUPPORT OF INTEGRATED DEVELOPMENT, IN ALL COUNTRIES, EVERYWHERE .

Secondly, these must be supported and sustained by the efforts of national health authorities who must:

1. Promote the attainment of a "national consensus for health development";
2. Develop and strengthen a health system infrastructure, capable of:
3. The delivery of effective programs in support of local hospital based medical care, health center based health promotion, and community center based integrated development.

Thirdly, national efforts would be supported and facilitated by the international developmental agencies.

There would be:

1. Assistance in the implementation of the major program areas listed above; such assistance would be programmed and delivered in a structured manner, country by country, with careful and systematic coordination of the inputs of the various agencies. WHO and the countries are partners in coordination, monitoring and evaluation of all external inputs.

2. Multilateral assistance and cooperation involving groups of countries, within subregional groups. The Tulane initiative falls into this category. So does the distinctive approach of WHO/AFRO in establishing in collaboration with countries SUB-REGIONAL HEALTH DEVELOPMENT CENTERS in Cotonou (Benin), Harare (Zimbabwe) and Maputo (Mozambique). It is expected that these would be strengthened and coordinated as a NETWORK, possibly part of an INTER-REGIONAL network (involving countries in other regions of the world).

There is an urgent need for well-informed and experienced persons, men and women of goodwill from all the corners of the earth, to join their African brothers and sisters to implement the global policies, strategies and action plans developed in WHO. I do not believe that a greater challenge than this exists in contemporary history.

It is thus with pleasure, Mr. Minister, that I declare open this Workshop.

#### WELCOMING SPEECH

(By The Honourable M.P.K. Balopi, Minister of Health, Botswana)

Mr. Chairman; Honourable Ministers; Your Excellencies; Dr. Monekosso, our Regional Director of WHO for Africa; Dr. Banta, Dean of the Tulane University SPHTM and your team; representatives of international agencies, organizations and educational institutions, distinguished delegates from Angola, Botswana, Mozambique, Lesotho, Malawi, Zambia and Zimbabwe. I greet you on behalf of my government and on my personal behalf and express my government's appreciation to the Regional Director of WHO Africa Region, Dr. Monekosso, for honoring our government with his presence.

It is a symbol of WHO's continued support to memberstates in their pursuit of the "Health for All by the year 2000" goal! You have taken time off your busy schedule to come to Botswana, something we will remember, cherish and value. I welcome you on behalf of the member states represented here and on my behalf as the Minister of Health for the Republic of Botswana. I would like to thank the Tulane University School of Public Health and the Southern African Countries for asking Botswana to host this important Workshop. My government is humbled by the honor bestowed on our Ministry and the confidence shown in us.

I would like to thank all the international agencies represented here and assure you that your assistance and cooperation is deeply appreciated. I welcome participants, resource persons and guests.

This workshop brings together government representatives, educators and practitioners in health, international agencies and institutions, and distinguished scholars in the public health field. The stage is therefore set for intensive deliberations.

We, as governments, would like to hope that your deliberations will be guided by the health profiles, socio-economic climates, cultural

orientation, and health goals your countries have set for themselves. I believe that these four factors provide the parameters within which we can examine the subject of Health Manpower Development in our African region.

Ladies and gentlemen, our human health resources play an important role in determining our health care systems. Our health workers are the architects and agents of change in our health care systems. No health system can be described outside the skills and competencies of its health workers.

My government believes that human resource development is an invaluable investment, it's an investment that leads to national stability, self-reliance and social development. While the market value of diamonds, gold, oil, coal, meat and other products fluctuates for the worse from time to time, our human resources are our internal forces which can be tapped, mobilized and repatterned within our boundaries to offset the effects of economic and political pressures. Our Human Resources are ours to build, deploy and treasure. They possess a unique characteristic which cannot be found in any other commodity, and this unique characteristic or quality is "commitment."

Distinguished guests, ladies and gentlemen, I welcome you.

PUBLIC HEALTH PROGRAMS REVIEWED AT THE BOTSWANA WORKSHOP

(\* \* \* Indicates Q&A responses following presentations.)

Dr. John Bennett, UNICEF, Nairobi, Kenya

Development Assistance often goes through several ministries -- education, health, planning, agriculture, water development, and so on.

A lot of the assistance requested by government is related to training, perhaps not foremost training in the sense that we've been discussing, in terms of universities or training institutions, but the everyday training that has to go on in connection with the implementation of programs.

For example, in Expanded Programs for Immunization (EPI), there is a lot of training. Different levels of management, reorientation of staff, the distribution and preparation of training materials, and so on. Essential drugs is another example. In Tanzania, there was a tremendous need for training before starting an essential drugs program. Everybody had to be brought into training courses on exactly how to use the packages of drugs that were now going to be dispersed. A training manual had to be produced, seminars held, trainers trained, and so on. There is a whole series of repercussions that go with every new program -- training of trainers, preparation of materials, workshops, refresher courses, reorientation and so on.

Initiation of community-based health activities also needs a whole series of training. Training of trainers, training of committees, sensitization of communities, reorientation of health staff, training of village health workers, training of traditional healers. Those are the sort of activities I am referring to when I say that a lot of UNICEF assistance goes to training. It is those training activities in relation to implementation. UNICEF also assists with many workshops and conferences.

There is a body of expertise within UNICEF. In addition to advisors in health, there are advisors in social statistics, in water development, adult education, appropriate technology, child development, and so on. UNICEF has a wide range of experts and advisors who are able to participate in workshops and training activities.

UNICEF has produced a lot of training material in different countries. It is usually tailored for the country in local languages, using local artists and the actual financial assistance going to help pay for the work, or even providing paper in some countries that don't have paper.

UNICEF has a graphics section in the Office in Nairobi, and in many of the other countries, there are small units that can produce materials, photographs, slides, posters, etc.

UNICEF assists governments, sometimes to get people training, but it's not on a long-term basis, usually for short courses or exchange visits. UNICEF can arrange for exchange visits between different countries because its assistance goes to so many different projects scattered around different parts of the world; we have built up a knowledge of where interesting things are happening and can advise

countries on where to send people, if they want to learn (e.g. how to build latrines by the thousands). If they want, for example, to see water development through community participation, then Malawi is a good place.

So, we can help with that sort of information exchange, because UNICEF has been giving assistance to 19 countries in the Eastern and Southern Region. We have built up information on the EPI programs, for example, and have copies of all the EPI documents of different countries, copies of all the evaluations that have been done, and so on. So, I suppose that UNICEF might have a fairly unique broad spectrum of information. WHO, of course, would have all the health information as well, but UNICEF would have all the information on pre-primary education, community-based feeding programs, etc., so that the spectrum of information is slightly broader and different.

As for actual participation in universities and teaching institutions, again, if there are requests by governments to assist a medical school or a training institution, that request comes from a government ministry, either education or health, and it is usually to be a part of the UNICEF program which is developed over a period of years; it will be built into the program of assistance. There are many examples where assistance has been given to departments of Obstetrics and Pediatrics in the field of teaching. Nairobi University has had assistance for books, field work, postgraduate students, community medicine, and transportation to take students to the field. So, again, it depends on whether the requests come through the government ministry channels. If a non-government organization wishes to receive assistance from UNICEF, the request has to come through official government channels.

Dr. Mburu might have to add to the UNICEF picture. I've tried to indicate the sort of assistance given to different countries that relates to training, especially training for health.

\* \* \*

There are other agencies and institutions which are or could be involved in regional and international training. Some of them are already involved; others might be. The existing research institutions may be an example of that to a degree, and also associations for health professionals, the Nursing Association and the Medical Association. Phasing of ways and means of pooling (discussed at length in the group session) might be important, and technical cooperation might start with a subset of the Southern African countries. There are already some examples of cooperation -- an element that is already being used is the Nursing Accreditation and evaluation of Primary Health Care by staff from adjoining countries. We (discussion group) were thinking that perhaps if one looked more closely at these examples, one could draw some lessons from them.

A survey of existing plans: We didn't know much about existing plans, but presumed that manpower plans were already available in the different countries, that there were plans for creating institutions, for money that could be used to bring people together, and that there would be some possibility of coordinating these plans. For example periodic workshops and conferences rather like this one should continue. A process of working out exchanges is required, for example, when staff would be available and when people could be used on their

sabbatical leaves.

If possible, some learning modules on subjects which would be basic and refresher should be developed, e.g. epidemiology or statistics.

Dr. Walter Comm, Head of Loma Linda University School of Health Extension Program, Riverside, CA.

Loma Linda University is a private denominationally owned university. The School of Health was formed in 1967, and has operated an off-campus program for the last 12 years. At the present time, we are operating 10 centers within the U.S. and Canada.

In Florida, we have a program for Family Practice Residents. It is a part of their rotation, a part of their training. This center is funded by the Kellogg Foundation.

In Salt Lake City, Utah, we have another unique program, which is for sanitarians. The School of Health has spent up to two years determining what the curriculum should be. As I mentioned previously, when we started our off-campus programs, half of the things we were teaching were totally useless. It wasn't until we had the local input and planning that it became meaningful. The School of Health learns with every cycle of M.P.H. classes. All five international centers operated by the School of Health are graduate programs. Students pick up their graduate degrees from Loma Linda. We have four centers in the Inter-American countries. Two of the centers are conducted in the Spanish language, one in French, and one in English. Our latest endeavor is in Singapore. The students enrolled in the off-campus program in Singapore are hospital administrators, business managers, presidents and vice-presidents, etc. We have another inquiry from Argentina and Brazil for the same type of administrative program we offer in Singapore.

Loma Linda's thrust now is the Certificate Program. Among Loma Linda's unique features are the Educational Materials Center and the International Resources Room. From these two sources, we produce new printed matter and audio visual material. I think it was pointed out previously that anywhere from 39% to 40% of our student body at Loma Linda is from foreign countries, so we have had a little bit of experience in dealing with different cultures.

Loma Linda does not focus heavily on government funding. Our funding comes by subsidy. It comes from the foundation of the Seventh-Day Adventist Denomination. It also comes from foundations such as the Kellogg Foundation, the Robert Wood Johnson Foundation, and the Sunbeam Foundation. The foundations grant money for very specific purposes. We also contract directly with government agencies. The agencies will provide X number of dollars and the School of Health will provide the programming.

All student records are kept on computer at the home base in Loma Linda.

In conclusion, I'd like to quote Dr. Banta, who said that "people should be responsible for their own health and this means education." As far as Loma Linda is concerned, we're indebted to Tulane in several ways. Many of our faculty members obtained their degrees from Tulane. Loma Linda University supports the concept of Mobile M.P.H. for

Southern Africa. As our manpower and our resources permit, we will support the mobile health concept.

\* \* \*

Many of the students enrolled at Loma Linda take the international health curriculum. The faculty has had a good deal of experience in international health on the various continents. At the university, we allow the students to make their choices with regard to areas of study. It could be international health or health promotion, or a combination of the two. Time does not permit me to show you the various curriculums class by class.

Dr. H.A.R. Elneil, Director, WHO Office, Harare, Zimbabwe.

The project is a point by point agreement between the Ministry of Health, the University of Zimbabwe, and WHO represented by the African Region. In Zimbabwe, it was an expressed wish of the member states of all the region, that an effort should be made in this area of training for health development. Zimbabwe offered to host the Center. That is the reason for the agreement being signed by Zimbabwe, represented by two institutions -- Ministry of Health and the University -- and WHO. It is a region that caters to all English-speaking countries of the African Region. And participants would be coming from all 18 English-speaking countries of the African Region.

These were the provisional dates envisaged when the program was worked out, and that is February-November, so that we can follow the academic year of the University. Essentially, the period starting at the end of November, going on until the end of January, is the vacation for the University. This is following the academic year at the University. The countries involved, participants, WHO procedures stipulate that applications should go out from Ministries of Health through the WHO Program Coordinator in the country, to the Regional Office. The information, usually about all courses, is sent to the countries about six months before any courses start, and invitations for applications will be expected in that period, so the countries will begin to send in the nominations of individuals for different courses from June, July, and August. The students who are selected will be informed 2-3 months before the beginning of the course. Applications were received from 16 or 18 participants from the nine African countries.

The agreement stipulates that regular WHO staff members are stationed in Harare to run the course in a number of areas. The contribution from the University of Zimbabwe is the availability of lecturers already employed by the University of Zimbabwe. So, this is the contribution from inside Zimbabwe. There are some people who may contribute to the course from outside Zimbabwe, and invitations have gone out through the WHO Program Coordinators of the different respective interested African countries. People from many institutions and from Ministries of Health indicated their availability for classroom or field delivery of the courses. We also have quite a lot of pledges from institutions outside Africa, people who are quite prepared to travel on their own funds, to collaborate and teach in the program, whether it is in the classroom or field training.

The program, according to the signed agreement, is financed completely for six years by the regular budget of WHO. The idea is

that after the six years, it will be phased out in another six years, in 25% installments, to the Zimbabwe government, to run it as a National Health Development Center. Hopefully by then, other countries would have developed their own national health development centers. Then, it is envisaged that perhaps a network would start operating, in the context of technical cooperation among developing countries. If Harare, at the end of the project, ended up with a good critical mass of trainers in health management, but not so well-developed in areas of operations research, which is probably better developed in some other African countries, then, all the countries between them are going to have all of these components reasonably well-developed and ready for exchange of experience.

\* \* \*

The involvement of the University of Zimbabwe is to invest in the implementation of the agreement; the contribution from their part, therefore, is significant to the establishment of the center. The MOH gave us the buildings; the University gave us the sharing of all the teaching facilities they have -- classrooms, field locations, use of library, use of audio-visual aid units, and part-time teaching availability of their staff. This was circulated to all staff members of the University on the advice of the Dean, so that those who were interested could put down their names. A number of them did, in all discipline areas. And that was edited and re-edited by the University authorities until it was finally cleared for inclusion in the prospectus of the Center. WHO provides everything else -- staff, cars, funds for local recruitment, materials, supplies.

The overall costs are not very easy to come up with, for the simple reason that in WHO, the Fellowship component is charged to the country's budget. A course may extend to 3-4 months, or for 9 months, if it is going to be a Diploma course, or for a longer period if it is going to be an M.P.H. or Dr.P.H. Therefore, the funding of the fellowship would come out of the country's allocation, and the WHO program coordinator of the country would be keeping a check on this. He will be provided with a computer print-out every 3 or 6 months so that he can tell the country how much money is left in the Fellowship Program, and, if it sends somebody for 3 years, that means it must also budget and supply for that 3 years. Thus, the total amount needed for the Center is shared between the participants' countries.

Dr. Herman Folmer, Director, International Course in Health Development, Royal Tropical Institute, Amsterdam, Holland.

The Tropical Institute in Amsterdam is a graduate school -- just a plain graduate school. I am not representing any government. The Institute, therefore, has to run on sort of a project basis. We do receive, of course, some financing from the government. All of our other activities are project-based and project-serviced by governments, institutions, bilateral and multilateral agencies, and any other agencies that we come across.

The nature of the Institute is multidisciplinary. Our main concentration areas are rural development and family health care. It is for a transfer of knowledge in health care. We also have a section in anthropology and sociology.

The course for which I am responsible, is the International Course in Health Development, which means that our participants come from all

parts of the world. Recently, we had a map made and put needle points where, in the past 20 years, we had participants from. I don't think there were many countries lacking needlepoints. A few had several needles sticking in them.

I would like to reiterate what Dr. Vanderschmidt said. Increasingly, we feel that teaching about problems which are actually here should not be done in Amsterdam. I could formulate it in nice wording, but I would rather relate to you an incident we had last year in our course, which I remember, and which I will not likely repeat.

As part of the block, Health Management Planning, the block which I am responsible for, WHO recommended training EPI, which I am sure you are aware of. We spent a day or two on it, and then, we went through a step process of EPI. We took up with our participants, the model of community coverage, and this whole matter of outreach for immunization purposes. Every participant said, "How do you do it here? What do you think?"

Well, we thought, Amsterdam has 900,000 inhabitants. Why not do it exactly according to the book? We took a pencil; we drew points. We said, this area is part of our sample...that area is...that area is... and each participant was accompanied by a local guide who could help him translate, because we happen to have a difficult language, and we don't speak English, at least on the average, we don't. So, we proceeded to go to these areas and knock on doors. When we returned to the Institute and started to compare our experiences, we found that in nearly every house, the reply was, "No children; no children; no children."

Somebody even opened the door and said, "Little children. Yes, I had some once," just as if he were feeling his pocket. It was amazing. It took us 2 1/2 hours and three entire blocks before we found seven children under 5. This was hard to do, and if the participants from these countries had decided to take an entire village back home, half the subjects would likely be children. You've got to realize that practical training in academics in Amsterdam was not that appropriate.

The main subjects in this course are Health Development, Epidemiology, Ecology, Socio-Economic Development, Family Health Care, and a number of specialties in specific disease areas, such as ecology, biostatistics, epidemiology, as they apply to tuberculosis, schistosomiasis and nutrition. The courses lead to a master's degree. Teaching is heavily based on simulation exercises, in which we try to come close to reality.

It goes without saying that our main funding or support, just as Dr. Bennett already has said, has to go through government.

Dr. Vivian Johnson, Boston University, Strengthening Health Delivery Systems Project, West African, Francophone Countries.

The Strengthening Health Delivery Systems Project (SHDS) is a program of collaboration in Primary Health Care (PHC) in 20 countries in West and Central Africa. The region in which the project operates is bounded on the north by Mauritania, Mali and Niger, on the east by Chad and the Central African Republic, and on the south by the Republic of Congo and Gabon.

Early in the 1970's, following the successful Smallpox Eradication Campaign, 20 countries in that region requested that they continue

their relationship with the U.S. -- the country with whom they collaborated during the Smallpox Eradication Campaign. The 20 countries defined four areas in Primary Health Care training in which they wanted technical assistance. Out of that request, grew the Strengthening Health Delivery Systems Project (SHDS), which is going into its ninth year of operation.

SHDS started in 1976, and operates from a field office in Abidjan, Ivory Coast. There, the Director, Dr. David French, a public health physician from Boston University, and three other Americans carry out program activities working under the aegis of WHO, which serves as a Secretariat for the 20 participating countries through its regional office in Brazzaville, the Republic of Congo. Overseership for the SHDS project is carried out by the 20 participating countries through a Project Review Committee (PRC), made up of the 20 Ministries of Health, who meet bi-annually to review progress of the SHDS project. Each year, there is an executive body of six members of the 20-country PRC, who review the Implementation Plan for the coming year, and assess the achievements of the past year. This executive body is called the Project Coordination Committee (PCC).

The USAID granted Boston University the contract to implement the project, so SHDS is a collaborative effort in which USAID, Boston University, WHO, and 20 Central and West African countries are working together. It has worked very well, having given approximately 100 courses in Primary Health Care and training approximately 2,100 people in the region, within the four areas of PHC training defined by the 20 member countries. Those areas are: Management Training, Training for Manpower Development, Training for Expanded Programs of Immunization (EPI Projects), as well as training for Disease Surveillance, and training in the use of Applied Research to help attain low cost health services.

During the 8 years SHDS has operated, PHC training materials have been developed, and courses given, in the four objective areas. We have developed two training courses which are available in both French and English. One is a Health Services Research Course which includes a course guide for administrators and trainers, as well as a training course manual. The other is a training course for community health workers. There are nine modules in this course: First Aid, Dispensing Drugs, Nutrition, Sanitation, Maternal Health, Care of Children, Working in the Community, Care of Adults, and A Guide for Trainers and Supervisors. These modules are produced and distributed by the WHO Regional Training Center at Lome, Togo, which serves the French-speaking areas. (The modules are also produced in English.)

SHDS staff and consultants are currently developing a training manual for management of PHC programs. It will also be available in French and English, and we hope to have it completed by the end of 1985. Another aspect of SHDS training which has been very successful is our work with the Nursing diploma granting institutions in both the English-speaking and French-speaking areas in Central and West Africa. We have worked with them on the revision of curriculum so that it now includes Primary Health Care components. We are currently working with nursing institutions in the development of Continuing Education programs in PHC to provide follow-up PHC training for nurses who are already in the field.

We have recently started to develop an additional training program introducing the use of microcomputer technology in the development of program information systems. We began by developing a management information system in our office in Abidjan. And, we are currently combining that process with health data collection in Sierra Leone to help that country to develop a disease surveillance system using microcomputers to improve health services. The project is very promising because efficient data collection and analysis provides a sound basis for effective decision-making regarding the use of limited health resources.

A significant feature of our training program is the fact that over 70% of the consultants are Africans from the region. Therefore, the SHDS project enhances the development of the health services infrastructure in Africa. We are proud of the success of the SHDS project as an example of effective collaboration in the improvement of health care services and we wish you success in the development of a collaborative program in the Southern Region.

\* \* \*

This collaboration grew out of the successful Smallpox Eradication Campaign experience where those countries were, in fact, already in a collaborative relationship, working with WHO, and in this case paired with the U.S. Having gone through that success, they recognized that there were possibilities for expansion and extension of those efforts and they therefore defined the four objective areas I mentioned for further collaboration. They have continued to work collaboratively with us by coming together in those annual meetings in the executive body, which incidentally, is a group of six of the 20 members, and coming together bi-annually, with the entire 20 member countries reviewing the project, and having the opportunity for exchange and finding out about the various possibilities.

I'm not certain about the original collaboration, but I do know it has continued, because there have been many advantages and they have been able to receive the kind of training that they requested on a regional and subregional basis. Also incidentally, much of the training is carried on nationally, because we do a training of trainers, a kind of activity in which people go back to their home countries and develop training courses there. If requested, we go in and assist. Sometimes, we are not requested to do so, and in other instances, we are. So they work cooperatively; they also work at the national level.

All of the funds come from the Agency for International Development in the U.S., and they are provided to Boston University as the contractor. These funds also go directly to Who at Brazzaville for their part of the expenses. So the funds go in two directions.

Professor Ian MacDonald, Education for Primary Health Care, Manchester University, England.

I am from Manchester University, based in the Department of Adult and Higher Education. I'm responsible for three small courses or programs and all of them are called Education for Primary Health Care. These are post-graduate, post experience courses -- two ongoing, and, as of September, 1985, with the beginning of the master's course, there will be a third.

The first is a short course of six weeks which takes place in summer, and the ongoing post-graduate course we have now is a one-year Diploma course; addition of the master's in September will make a third. The courses I am involved with are done in collaboration with the Department of Community Medicine in Manchester, but these courses make no pretense of extra-specialized medical knowledge. For courses of that kind, and we do get requests from lots of places, I would direct people to, among other places, courses run by my eminent colleague, Professor Morley in London, and also the Liverpool School of Tropical Medicine.

Our programs in Manchester are based on an understanding of Primary Health Care which not necessarily everybody shares. But I can only put it to you that Primary Health Care is really about the attempt to bridge the gap that is growing all the time between communities, especially the poor in communities, and professional health care. For us, that area of interaction between the service provision and people, especially marginalized and less-privileged people, that area of interaction is the focus of Primary Health Care and so is the focus of our courses.

In the course which we call Education for Primary Health Care, we try to take seriously the two imperatives, as we understand them, of Primary Health Care. These imperatives have much support in the literature and in the gospels of Primary Health Care, that is to say, of integration of professional help or otherwise called intersectoral multidisciplinary approaches, on the one hand, and participation by communities in the promotion of better health on the other. These, of course, could be the most dreadful cliches in the book -- integration, participation -- but we try to take them seriously, and see what this could mean in practice for our participants. And, in this perspective, Primary Health Care has to do with the collaboration between an appropriately oriented professional group and the community. As our title implies, Education for Primary Health Care, refers to the training or re-training, and maybe sometimes, untraining of professionals for this work, and also an understanding of educational processes in communities. For us, primary health care is part of the search for a new model of health care delivery and health promotion, and the approach we take is in the basic direction, not only of increased technological ability, however appropriate, but rather a basic direction is one of educational processes, learning with communities, building not only on their needs as we perceive them, but on the community's experience, the community's existing solutions of the problem, and the community's perception not just of disease, but of life and the things which promote life.

Morrison, Presley King, and David himself, and others, have helped all of us question hospital-based systems, disease palaces, skill

prisons, and we've moved towards public health approaches. But I think I may be in contrast with the experience of other speakers. For us, the move to Primary Health Care represents not just public health with a new hat, but further understanding of what is needed to promote health, beyond health information, to health by the people. Again, this could be the most dreadful cliché again, but we try to take it seriously -- by, and not just for, people. And, the disciplines which arguably are the most relevant as we see it in this task, are the result of community development and adult non-formal education. Behind the same works can sometimes be many different realities. For example, when people were talking about responsibility -- asking people to be responsible for their own health. I'm sure this is true for all interpretations of Primary Health Care, but I see with my colleagues working in England that self-responsibility in an English and Western context is very much an individual thing, making the individuals take their health in their hands.

The perspective of the course we run, which is Third World oriented, is very much enabling the community, and, of course, individuals within it, but the emphasis is on the community to take responsibility for its own health, to improve, however modestly, its own health situation. The department I work for has a long experience with adult education and community development. That doesn't make it the best department in the world, etc., but inevitably over 20-25 years, you accumulate a lot of experience and some insight, hopefully. We have seen an exciting growth in the area of education for development. The movement away from a formal model of education (Institution-based has been often inappropriate to the educational needs of developing countries) towards a non-formal people-centered model and this, of course, has obvious parallels in the health field.

Sometimes it is very interesting, more in the education field, to see people in the health world seeming to re-invent the wheel. One thinks of, for example, the community health worker -- all this stress, all the literature on the training, selection, credibility, and accountability of community-based workers -- and one only has to dip a little bit into the literature of community development, not just in anglophone Africa, but in francophone Africa, with "animateur rural and les animateurs" to see that all kinds of experiences about community-based workers, both positive and negative, have been learned, and, there are experiences to be drawn on already. This is true also for other key work participation. Development can be understood in this perspective as involving an educational process whereby, by increasing the knowledge base by communication, these communities can be helped to move on to improve the quality of their lives. The department then, has a base of community-oriented education, and our courses are built on this base. In addition to their own components, they draw on courses such as the management of formal and non-formal education, literacy and community development. Students who apply, take one of these other courses according to their needs and interests. The very interesting presentation by Rose Pule is of special interest for me, of course, because Rose is a graduate of our department, even before we had formalized our primary health care approach. And I think that is not without significance.

The Department of Community Medicine provides the necessary medical orientation, including components in epidemiology, and things like an appropriate approach to pharmaceuticals in Primary Health Care. We

have a special interest also, in disability and Primary Health Care. The aims of all the courses at different levels of concentration are especially to equip participants with the skills and attitudes which they might require to initiate or carry out a Primary Health Care program, especially at middle level management, and particularly, in so far as concerns the educational dimension of these programs. The methods we use are hopefully adapted to the message of Primary Health Care. We promote adult and non-formal educational techniques, and so, we must use them ourselves, especially in group work.

We are increasingly aware of the contradictions involved in training people so far from home countries. These contradictions are in part compensated for, I think, by the exchange brought about by an international setting. We also have a practical element in our courses. The department of General Practice in Manchester runs out of the Health Center in an inner city part of Manchester, very near the university. The Health Center admits the gap between the health services and the community, especially certain sectors like the Asians and black West Indian -- very large components of our Northern England community. By working with identified groups, our students have started to help in a modest way, in a non-formal educational approach, to bridge the gap between the health services and these elements of the community. And hopefully, this is going to supply in a small way, this invaluable experience of listening to communities and working with them, even if these are not exactly the communities that one would face in one's own situation.

To conclude, access to our courses, the outpost graduate courses (except the summer school which is open to anybody with experience), our Diploma and Master's (Diploma especially), is open to nurses because experience in a post-graduate department aiming at the Third World has led us inevitably to be flexible. Nurses are admitted to the Diploma and that in itself could lead to the master's.

I'm going to conclude by asking if there is a possible role for a small, modest enterprise like ours in this rather important endeavor. Perhaps, I think, that is up to the countries and regions themselves. At least I can perceive one small way, which is temporarily helping people with experience, but lacking formal university educational qualifications, until such a service is replaced by in-country institutions.

\* \* \*

What I was suggesting was something very modest. The purpose of the exercise is to oblige professionals to listen to communities, to listen to what people have to say about their health, thus, creating the light. We are solicitors for them, participating inherently in the planning process, working with the government or community to improve health services. We admit that we are not reaching the needs of lots of the people in our community. But if we can help in any way, if the students can help in any way, the gap that I'm talking about, by filling the gap between health services and community needs. Such groups of people, like the women, are one example of adults whom we can only reach at home. The students, in a very modest way, try to work with groups of women to try to help them say something about how they see health, their children, and in that way give them some understanding and strength in their own convictions. Hopefully, because of our services, taking their approach seriously, bringing them to the realities, they will see how to improve their own health

services a little bit.

Other groups have been identified which have obtained good results doing what we have recommended. The entire issue forced the professionals to work in a non-directive way, in a non-formal education way, with groups of people helping themselves, by saying something about their own health care and their own needs.

Dr. John Martin, Associate Professor and Consultant in Primary Health Care to Swedish International Development Authority (SIDA)

I would like to present two points of view: The first is how the Nordic School of Public Health is organized, and secondly, the kind of assistance which we might be able to lend in the future.

We are situated in Gothenburg, Sweden. Our school was established to direct itself towards assisting in health care development in five Nordic countries -- Denmark, Finland, Iceland, Norway and Sweden. We provide our services to a rather small population, roughly 22.5 million, and we have only one public health school. Of course, as you have noted, in the U.S., it has been recommended that there be one school for every 10 million population.

We are essentially a Nordic Institution, which applies itself to the provision of higher education and research, of which we would like to do more. Right now, very importantly, we are directing our attention to the health services. I should say here that our school is a recently established institution. It was reorganized into its present state only in 1978. Our main focus is the Nordic countries, but increasingly, we have been developing links with developing countries. I think that reflects something that we all are aware of -- that Denmark, increasingly Finland, Norway and, of course, Sweden, give a lot of technical assistance to developing countries, and so it may seem surprising that it is only now that an institution is being organized to try to provide more technical skills to the health work of those agencies.

Perhaps, there is some relevance to our discussions here. We are a Nordic Institution. We are an International Regional Institution coming under what is called the Nordic Council of Ministers -- a council consisting of political leaders from the participating countries, and below the council are activities governed by a School Board with representatives from each of the five countries, currently chaired by Norway.

Although the School is located in Sweden, we primarily direct our efforts towards providing higher education in public health. It may surprise you to know that although health care is highly developed in the northern countries, it is only rather recently, the mid 70's, that higher education in Public Health became organized in the northern countries.

We concentrate heavily on the health services issues of each of the countries, which requires that the countries be prepared to state very clearly what their particular needs are. I feel that those of us from the outside might want to hear a little bit more clearly from the participating countries here, what you feel your precise health needs are.

We run our training in a modular fashion. Four main courses directed towards a Master's in Public Health Degree. These courses ar

roughly of two months duration, spread over a year, and they concentrate on four topics: Health Services Management, Community Health, and the one which probably should come first on the list, Epidemiology and Biostatistics -- in other words, training in the very basic tools of public health, and finally, Environmental Health. We also offer optional courses to our students, so that Environmental Health can be replaced by a choice of courses which are: Community Dentistry, Social Pediatrics, which is the most popular and most relevant, followed by Nursing Science, and a recent addition, Health Education. The school is also developing on the international side, We are planning to introduce an optional course here for Health Care Organization in developing countries.

Although our main educational purpose and effort is directed towards the Master's of Public Health Degree being offered, to not just doctors, but to a wide variety of professionals who are involved in some way with health care, we also feel that it's highly relevant to have occasional short courses for Senior Level Health Managers who might not otherwise be able to participate in a full one-year course. Again, that's an idea that might be worth considering here, to be included in the public health training that we are discussing. We also provide facilities for health-oriented conferences; we feel this is a good way to get people together, for a very short period to direct their attention to particular health care issues, and perhaps arrive at some consensus. We had one recently in cooperation with both the Europeans and the Headquarters of the World Health Organization (WHO) on the issue of intersectorial action.

Our conference set out, and in fact achieved, not just to discuss the issues but to commit each of the participating countries to some kind of feasible follow-up action, which we as a school will undertake to coordinate of. Here again is an idea which you might like to consider on the organization of the school.

We operate on a very low budget. The annual budget at the moment is equivalent to U.S. \$1.25 million, which provides for everything. This provides salaries for a small staff; there are only four full-time professors and four associate professors. The task is not only to teach, but to organize teaching. We manage to limit our costs by inviting, in fact, utilizing health experts, both academics and health service experts, from the northern countries, who come and undertake the majority of our teaching requirements.

Here again, I think this is something of relevance to our discussions. The budget also provides for approximately 30 students who come for each of the four modular courses each year. Their travel to the school is provided for by a very small financial grant; again something worth discussing.

When we discuss administration and organization, it's feasible to organize public health training on a regional basis, with limited staff, and with a limited budget, which I think is important for us. To end off our international activities, which are of relevance to developing countries, our main activity at the moment is an annual two-week seminar, held each May or June in collaboration with international development authorities and the Headquarters of WHO. Each year, the seminar discusses an issue of Primary Health Care organization. For example, this year we will look at the Management of Primary Health Care.

Participants come from both Africa and Asia. They are from countries with which Sweden is particularly closely associated in terms of bilateral assistance. Also, at those meetings, are representatives of the Nordic Technical Assistance Agencies, and we feel this is a very good opportunity for them, to learn from developing country participants themselves, what the true realities are. Therefore, they will be better able to channel their technical assistance perhaps more sensitively and accurately.

We also, through cooperation with SIDA, provide technical assistance to individual countries. Just recently, I have had a chance to participate in the drafting of the Primary Health Care components of the 5-year national development plan for Zambia, to participate in designing training components for water and sanitation programs in the regions of Tanzania, and also in designing training components of the essential drugs program in Bangladesh. So we do have quite a lot of involvement in training and curriculum design. We tend to participate more in training which takes place in the developing countries themselves. As I said, we are a modest institution, and therefore, we would expect to do this in collaboration with other institutions, and, of course, with a backing of International Bilateral Technical Assistance Agencies.

As an example, we have been invited to participate in the planning and conducting of a training seminar here in Botswana, late this year. This seminar will be concerned with control of tuberculosis. Another small but very important role is that we have the ability to identify public health experts in each of the Nordic countries who have had a lot of experience working in developing countries, and we may be able with the assistance of technical donor agencies to contact them and possibly contract their specific skills on a short-term basis to particular developing countries.

The main courses are, of course, aimed at the Nordic participants and take place in the Nordic or Scandinavian languages, e.g. Danish, Norwegian and Swedish. Our international courses are, of course, conducted in English.

\* \* \*

Funding the Nordic School of Public Health and construction of its building: The annual budget is divided between the five countries according to the numbers of students which they send to study at the school. The cost of the school building, which is a very small building, was also divided equally between the member countries to start the school in 1978.

The Nordic School of Public Health has emerged from more or less standing regional cooperation at a political level under the auspices of what I described as the Nordic Council of Ministers which meets periodically to review their separate views on regional issues of importance. They particularly restrict themselves to issues such as educational and cultural matters, but also there are opportunities when, for example, Nordic ministers of finance, Nordic ministers of foreign affairs meet to discuss. So we have to view this from the background of regional cooperation at a high political level.

When it comes to the issue of Public Health Training, then, of course, countries are very careful, particularly with one issue -- finite resources. They want to be very careful to adapt the resources. (Iceland, for example, saying: "I'm not going to subsidize the

training of people from Sweden.") So I'd say the board members of the school come with rather strict guidelines from their governments as to what the school's policy should be, and what the school's program should be, within that policy, and particularly how resources should be distributed. For example, there is conflict on one issue -- ratio of staff. Sweden, where the school is located, is not an attractive place for international teachers to come, because of high levels of taxation and cost of living. So the permanent members of the school's staff or assisting teaching staff are all from Sweden, and that is an issue which causes continuing, not conflict perhaps, but friction in the school board meeting.

Perhaps, there is a tremendous need, which I can see by observing my own school, for the countries to be very clear about what they want to get out of the school. That has been the starting point of our school in the Nordic countries. They want to have a cadre of people, not necessarily with degrees, but people who know more about the technical aspects of running the health services in their countries. That's why I mentioned previously that we not only concentrate on a Master's in Public Health, but even more on short courses which give nothing but knowledge and the sharing of knowledge with senior level participants, with which they can then go back and be better at carrying out their responsibilities in their individual countries.

Could another international agency, such as WHO, serve as an umbrella for the continuation of the discussion and the planning process? (Dr. Carter)

WHO would be respected by outside countries, but with regard to funding, I have an idea that it might be a different matter. Perhaps I'm taking a rather Nordic view here. It just seems from what I've heard that public health may not be a high priority. Nevertheless, a lot of funds seem to be offered.

From the northern point of view, my presence here is funded by SIDA, and they, therefore, are interested. Their interest, of course, could be much stronger. I feel that, perhaps, this project could be a breakthrough.

I'm a little bit concerned that when we leave tomorrow, there may not be a sufficient idea among us about how we should proceed to get some action taken here. Particularly, I'm concerned about the countries of this region. It seems rather clear that donor agencies are going to expect some kind of request from the BLS and other countries in the region. In due course, a properly worded request should emerge for funds or subsidies or whatever.

Dr. F.M. Mburu, Area PHC Advisor, UNICEF, Lusaka, Zambia

When we are developing a new course, we have to look at it from two different positions. The first is the traditional one which is normally a course with conventional methods. The second is the unconventional approach. In this region, you either have schools of medicine or departments, or institutes of health, or schools of nursing. At another level, we have schools of public health. These are neither schools of medicine nor schools of public health in the American mode, nor departments of medicine, but they are rather facilities to train clinical officers. A good example is the Public Health Training College in Gondar, Ethiopia. These are neither doctors nor nurses, but rather clinical officers or medical assistants. So in mentioning schools of medicine in this region, I mention the conventional, knowing that whatever graduates you produce must help in some way to deliver primary health care.

Secondly, you need to have something similar academically to the Western system. That is, our system must provide training in collaboration with a university, because an institute that is not part of a university cannot grant a degree. We need some kind of foundation, and that foundation must be an established institution, whether it be an institute of public health or a university.

One other point that perhaps has not been mentioned in our discussions is that in all these universities, the relationships we have had with foreign donors have been long-term. The university has actually been given time to develop over many years. Even Makerere, which is one of the oldest, was established over many years. In Zimbabwe, even today, if you go to the medical school, you will find a very strong long-lasting connection with Scotland. Thus, any kind of support must not be based on, say 2 to 3-year terms, but longer; the local governments will later find that they cannot support it after only 2 to 3 years.

Most of the universities which exist in this region were started with some cooperation from Europe. Examples are the universities with medical schools, such as the universities of Dar Es Salaam, Nairobi, Zambia, and Zimbabwe. Notice that all these were at one time under British Colonial rule and for some reasons, which all of you know, they are therefore tied very closely to the U.K. Makerere is among the outstanding universities with medical schools. I say outstanding because of age and output. Makerere used to be tied to the University of London and for some years, it has been able to stand on its own. Schools with departments of Community Health or Public Health, are the universities of Nairobi, Makerere, Dar Es Salaam, Zimbabwe and Zambia. There is also some kind of community health training going on in the Portuguese-speaking countries of Mozambique and Angola. The University of Addis Ababa also has a department of Community Health. Of relevance here is to perhaps indicate that all these universities with departments of Community Health have post-graduate training in Community Health. In our concept of Community Health, there is a strong component of community involvement.

Recently, the University of Nairobi started a new program offering a master's program with assistance from WHO. The rationale behind it was to produce highly technically qualified people with competence in community health to serve this particular region. Courses were

arranged so that for nine months, the student is based in Nairobi, and for an additional six months, the students go to their countries of origin, or to another country of choice for special elective training. Initially, it was thought that 50% of the student intake would come from Kenya and 50% would come from those countries which do not have departments of community health or schools of medicine. This, however, has not been the case.

There are some constraints which are important for us to mention and perhaps, you should be aware of them. The first is one of cost -- the initial cost to start a course. We have to also think of recurrent costs, which by my estimation, run in the region of 2/3 of the developmental costs. The second one is staffing. The kind of staff you need to run a department of community health, whether for undergraduates or post-graduates, or to run a School of Public Health, must be competent and must be qualified to teach a lot of courses.

Generally, there are only two sources for that kind of staff -- local and international. If they are international, there is a strong foreign exchange element which many governments in this region cannot afford. The third important component is facilities. All the universities which I have mentioned, or all the departments I have mentioned, are tied to schools of medicine and they are not independent entities. There must be minimal basic facilities; there must be room for expansion. If the economies are declining, then, of course, there is no room for expansion. The fourth one is research -- basic research and applied or operational research. All these will cost money.

The final one is output, that is in terms of the graduates leaving that kind of department. One must compute the talents needed for the next 10 years, and perhaps, the long-term needs. There are not many countries which can continue producing large numbers of graduates from any department. We have to think in terms of 15-20 years. For the last few years, the schools of medicine were supposed to be standing on their own, but they have found it extremely difficult.

\* \* \*

Within our region, one of the major constraints in trying to develop institutes of community health or public health is that we are tied to what I call traditional modes of training. A new institute will require new modes of training...a new constitution and several degrees of freedom. For instance, at the University of Nairobi, the idea is to develop an Institute of Public Health, independent of the Faculty of Medicine, that is tied to the University of Nairobi. However, that would require really pulling out people, who are already employed by the University of Nairobi, from the Faculty of Medicine and setting them aside. That has another set of concerns because, even within or under the Faculty of Medicine, we are critically short of staff. The question is, if we are at the moment unable to supply the minimum required staff for the Faculty of Medicine, how can we staff a new institute? Initially, when the Dutch were one of the funding agencies for the Department of Community Health, there was no problem. In fact, 10 years ago, the department had ample staff. Ten years later, in 1985, they are running at half capacity.

Dr. Lobe Monekosso, Director General, WHO Regional Office for Africa, Brazzaville, Republic of the Congo

### Review of the three so-called Regional Staff Development Centers:

There is confusion in the minds of both the member states and of the WHO staff members as to what a Regional Staff Development Center was to be. The words of the W.H.A. resolution that led to the creation of these centers calls for the creation of National Health Development Centers. In our particular Region, two things have happened because of two different needs. One is the recognition of member states of the need for a School of Public Health type institution. That is a fundamental requirement, fundamental need, and individual countries or groups of countries are seeking to satisfy that need. That includes the government of Zimbabwe as far as I could figure out from the agreements signed with WHO.

However, when the concept of Regional National Health Development Centers was evolved, it was not evolved as a training institution of the School of Public Health type. Indeed, in Cotonu (Benin), which had a School of Public Health, an Institute of Public Health, the name was promptly changed to a Regional Staff Development Center, without any further ceremony, and without any real change in the work that was being done. My predecessor, in a message delivered at that Center, which he created in his own home country, after the second graduation ceremony, expressed the hope that the center would soon start addressing itself to the "questions of health development and not to classical public health training." In other words, what we are actually faced with in the near future is to separate out what is a School of Public Health. If the government of Zimbabwe wishes to have a School of Public Health, and we have commitments to work with them, we shall proceed in consultation with the countries that are likely to be interested in the School of Public Health. We will do what the Region wishes us to do.

As far as national health development centers are concerned and regional ones, the center should probably have been created as a national health center in the first instance, and then some of these national health development centers could then be assigned subregional, regional or even inter-regional roles, but they are the responsibility and the property of the country in which they are situated. The functions of those centers were defined in a number of meetings and discussions that were held in Geneva in a number of WHO meetings. Essentially, these centers were initially conceived as a Secretariat for a multi- or inter-sectoral high level body national health council, that would finalize the national effort towards public health and primary health care implementation in a multisectoral sense, at the grassroots level, which is another awesome task in administrative and managerial terms. Managerial and administrative requirements were to be fulfilled by training programs in existing institutions, and because they were not available, this has led to confusion, as they had to be provided in the Center itself.

These centers were not initially conceived of as training institutions or schools of public health. The agreement as to the regional center, or more correctly speaking the subregional center, becoming a national center is a valid one, and the comments of Dr. Sebina are pertinent. This Center will become the property of the government of Zimbabwe after 6 years. Then, it will be up to the discretion of that government as to whether they wish anybody else to share in their health center or not. Knowing that country, my

prediction will be that probably, they will wish to continue in the community spirit of sharing of the institution with the southern region.

But the basic issue will be hard to face, not only with them, but with the other centers as to whether, in fact, we are talking about schools of public health. Then, we will go ahead and create schools of public health in collaboration with people like you and others interested in this exercise, because schools of public health are distinctive academic institutions of considerable value. They have a pattern of their own. Epidemiology is a basic discipline and they go on to do a number of things. And, there is no contemplating institutes or schools of public health that are not worthy of that name. That is a separate exercise from national health development centers, which we hope countries which voted for the resolution would create.

Dr. David Morley, Institute for Child Health, Great Ormond Street Hospital Medical School, London, England.

The Institute of Child Health, which is the medical school of the Great Ormond Street Hospital, London, is a postgraduate center for research and training in paediatrics.

The Tropical Child Health Unit, concerned with raising standards of child health in developing countries, as well as teaching and research, has Organization Teaching Aids at Low Cost (TALC) working closely with it. The latter, run by housewives in St. Albans, Hertfordshire, distributes 1,000 lectures monthly, consisting of 24 transparencies and a full script. TALC also sends out about 40,000 books annually, also low cost. We find that books costing more than L3.00 do not sell well in the Third World.

Fortunately, this work has received recognition and support from the Swedish International Development Authority (SIDA), who now make available a grant through which we can help bring out suitable books in the primary health care field at low cost. We believe that producing low cost books and other teaching material is essential if we are to achieve health for all by the year 2000.

The Tropical Child Health Unit also has a resource center which receives 2-3,000 visitors annually. Here, we keep a collection of materials from many countries in the field of primary health care which is accessible to visitors as well as students working with us.

The Child-to-Child program is also based on the Tropical Child Health Unit. Child-to-Child is an international program which teaches and encourages children of school age to concern themselves with the health, welfare and general development of their younger, pre-school brothers and sisters and of other younger children in their community. Children under 5 years of age spend much of their time in the care of their older brothers and sisters and the older child therefore has a strong influence on the development of the younger child. Child-to-Child helps the older child to understand this responsibility and explains how he or she can contribute easily but constructively, shaping the future life of the little children of the family and community.

Unfortunately, health is a low priority subject in primary schools in all countries, largely because it is not a subject that is examined before entry to secondary school. To overcome this, the Child-to-Child program has developed a number of readers suitable for use in teaching language. In these readers, Child-to-Child concepts are explained in

simple form so that older children can envisage themselves perhaps protecting a younger child from accidents or managing in a simple form, their rehydration during an episode of diarrhoea.

There are a number of Child-to-Child programs in many countries of the world; our responsibility is to make available a "basket" of ideas for programs rather than in any way suggesting how they should be set up or developed.

The Tropical Child Health Unit also runs a number of courses. The Master's Course in Mother and Child Health has proved particularly popular, and we have about six times the number of applicants for whom we have places. This year we are starting a new Diploma Course for Trainers and Supervisors of Community Based Rehabilitation Workers. Of all the under-privileged in the less-developed countries, probably the disabled suffer most; unless they live with close proximity of a large hospital, such as a teaching hospital, physiotherapy services are not likely to be available to them.

We also run a Certificate Course in Nutrition for nurses. There has been a great demand over the years for training in nutrition for nurses which is not met either in the developed or developing countries, and we have set up this course in the hope that it will lead to similar courses being run in other countries.

The master's course has two terms of core work, and, because it is at London University, they have to have an exam. Then, they do a term when they are looking at health services, and for part of this time, i.e. 4 weeks, they do research into our National Health Service.

One example of the research they did: We had two students, one from India, and one from Greece. We persuaded them, very unwillingly, to talk to 16 mothers, at different times, to go to their homes, about children they had lost in the neonatal period two years before. The trouble was they couldn't get out of the houses. The mothers were so delighted to have someone who would really listen to them, to relate their experiences to. Then, they analyzed these experiences, and the hospital they were working with in Newcastle was so pleased, that they asked them to return to describe to the hospital their findings for a short period of 3 weeks research on the National Health Service. We find by doing this research, they find out more about the National Health Service than we could ever teach them about it in a classroom.

Then, they go off for the most important part of their program, which is 10-12 weeks overseas, doing studies. We now clearly have 60-100 of these studies. Most are good enough to write up. One which interested me was a Malawian doctor who studied what the farmers were doing, some agricultural thing, in a remote area of India, and returned with a very interesting study. We try to get intersectorial in these studies.

Each year we have a number of quite outstanding studies. One student took his study and registered at London University and got his Ph.D. These we regard as extremely important.

One thing I do suggest is to try and get a newsletter going to keep a link with ex-students. (We have 15 a year, and have 200 graduates.) This is so students, who come from all over the world, can keep in touch with us.

Something quite different, which might interest some of you interested in Child Health, is that we have many problems in weighing

children. I have been involved in this for many years and have an engineer who has been working on a simple way of doing this. He had designed an incredibly accurate spring, which will stretch, 3.5 cm per kilogram, to an accuracy of one-thousandth of an inch. The trouble about the Salter scale is that the spring is inside it. The mother can't see it. The number comes up on a round disc and it is displayed on a square disc, and the mother can't understand it. But if you use a spring, the mother can actually see the spring stretching with the weight of her child. This is usually done monthly. We are going to have one which will be in the newborn period which will stretch 5 cm/kg. That means 1 1/2 mm per day = the child putting on an ounce of weight daily. When the mother sees day by day, her child's weight going up, that will introduce her to the idea of a chart later. The snags are that all the existing charts won't be suitable. So a particular chart will have to be used. Actually, you can also use the chart for arm circumference, and if you want an arm circumference tape, you can just cut up the chart and put it around the arm. So it has many uses.

Mrs. Rose Pule, Institute of Development Management

IDM is a successful example of regional cooperation which might serve as a model for the kind of program we are talking about.

The IDM is a regional organization for the southern African continent. It is governed and made up of people from government departments, like the directors of personnel and the Institute of Education.

The Institute has its headquarters in Botswana, and it has two other campuses in Swaziland and Lesotho. Those are managed by the countries' directors and the head of organization and administration is the Senior Director. The Institute was first started in 1974 by CIDA (Canadian CIDA) as a result of felt need by the three governments as far as management was concerned. The three countries felt that they didn't have trained people at various management levels, such as health management as well as middle management, and particularly, middle management. There were some people who were working as middle managers who were not trained in management skills. So the Institute was founded.

It runs courses in various disciplines in management. Education, for instance, includes a number of courses for Head Teachers of primary and secondary schools.

Another course is Management in Finance; a lot of people who are dealing with finance in both government and non-governmental organizations, don't know how to manage finance.

We also have courses in Health Management. These were started because of felt needs among these three countries. We have regular courses in these areas, but we also do consultancies for both government and non-governmental organizations. The health courses in particular were put on here first in 1976. The first course was for Matrons and Senior Sisters. This course was developed into a longer course, and we have also added another called Health Care Administration. The two courses are peripheral courses. Now they are called Health Care Administration and Nursing Administration. Both are 8-month courses with 6-weeks internship in hospitals and clinics.

We also put on a course last year on the Training of Trainers in

Health Applied Straight Staff Management; this was a request from the Commonwealth Secretariat, after realizing that Health Applied and Straight Staff Management were not well managed.

This is what IDM does, especially in health. We are trying to upgrade the courses in Nursing Administration and Health Care Administration to the diploma level.

Funding, of course, has been a problem, but we hope to be able to do this by next year. Finance comes from the three governments, 30% (1/3 each), and 60% comes from the course fees.

\* \* \*

The costs are divided among countries. The faculties rotate to the three countries. For instance, this year, the course is in Botswana, but the other courses in Finance Management and Education will be in the other BLS countries. The health courses in particular, do not only draw from the BLS countries; we have students from Kenya, Malawi, Zambia, Liberia, and Cameroons. And, this year, I'm expecting quite a number of students from those countries. Malawi is sending about six this year; Kenya, two; Liberia, maybe one.

There have been fears about IDM losing its identity for the BLS countries if it became SADCC, so they were still trying to see whether they would like to become SADCC; I know that they would all like to have the health program become a Diploma program.

The proportion coming from Botswana depends at present on the number of students they have. CIDA initially committed to stay with IDM for 10 years. The last year ended, and now the organization is on a much reduced budget; everything is cut back, markedly reduced.

We had a little bit of a problem when it came to academics because people had to be developed fast. In fact, we still have fellows in training who are going to be returning soon, but, even if the localization process is fairly fast (We have 18 consultants now, 12 of whom are locals, and six are expatriates.) it will still take some time.

We hope that within the next year or two, when the other fellows come back, we should be nearly completely localized. In the distant future, it may be possible to upgrade IDM to the point where it belongs to the three governments equally and all the time.

We approached the three universities two years ago, and they were agreeable, and made suggestions that perhaps, the health programs could be affiliated to the Universities of Botswana because they already have a nursing education program, but they were quite ready to consider any other program.

Mr. H. Stange, NORAD

An orientation to the NORAD sponsored SADCC Survey of Health Training Facilities, mentioned in the background document supplied by Tulane University:

First, the background: NORAD first was approached after the SADCC meeting in 1981 in Malawi, with a request to undertake a survey of the SADCC region, to get a complete picture of the Health Manpower Training Institutions that exist in order to present a background document to make it possible to assess where the needs shall be in the future for Health Manpower.

The study was undertaken in 1983, and I present a document with several recommendations. The general recommendation was that there was absolute need for a regional approach to Health Manpower Development. The main needs, as expressed by the nine countries themselves, were for academic personnel, tutors, and administrators and managers.

From the survey, some concrete proposals come out which were presented to the SADCC Regional Training Council, based in Swaziland, and which is responsible for Health Manpower Training efforts within the SADCC region.

Some specific proposals were put forth to the SADCC Council of Ministers and were approved as private projects, which would be undertaken, after further investigation and further detailed studies of the proposals, as to how they should be implemented.

We have seen from this list of projects, that the SADCC Council of Ministers has recommended, that there are five concrete proposals that concern Botswana, where they actually suggest that Botswana be host for the programs. These five concrete proposals were presented very briefly, and it was the contention that a more thorough project must be presented to the Council before a decision on it was made. But, as Mrs. Pule told us today, there is now in process a program of study on these five specific proposals, trying to find out if they are feasible, and, if so, how is it feasible to complete these projects.

The projects are: Training of Nurse Tutors at the University of Botswana -- to expand this program, open it to participants from all the nine SADCC countries; to establish a Regional Resource Center for Nurse Tutor Training Programs here at the University of Botswana. There was also a the recommendation to expand the Health Education/Nutritionists Training Program to open it to participants from all other SADCC countries.

Finally, there are the two proposals of expanding the IDM Program in Nursing and Health Care Management. We have asked IDM to open that, also, for other SADCC country members. And, in connection with this, I believe there is also to be proposed that one should establish a Regional Research Center for IDM for this training program.

These are priority-1 projects on the Regional Training Council's list of training programs that SADCC should undertake. The priority 2 list, which also includes Botswana, concerns the anaesthetists training program, which could be combined with the training program in Mozambique to establish a program which could serve several countries on a long-term basis. These are the projects we would like to see developed. This is to put this information into the picture so that you are aware of these continuing discussions. You should also consider that we have the SADCC organization which is involved, and

one should think that knowing how SADCC has been established, and knowing also the possibilities that the SADCC organization has, that you should see that channeling regional training programs through SADCC would probably have a better chance of success. Without their support, there will be major problems.

Dr. Walter Sullivan, Morehouse College of Medicine, Atlanta, GA; and The Association for Minority Health Professions Schools.

I represent two organizations: primarily Morehouse School of Medicine, and the Association for Minority Health Professions Schools.

Morehouse School of Medicine was organized as the first Black medical school in America during this century; Howard University and Meharry Medical College were founded during the 19th century. There are now four medical schools in America serving primarily Black students. Drew School of Medicine was founded after the Morehouse School of Medicine.

Our institutional mission is to alter existing patterns of medical care by educating Black students to become primary care physicians in medically underserved rural and inner city communities. This mission may also be applied to African countries. Although we expect that most of our students will practice in America, we anticipate, however, that some will wish to contribute their skills to the peoples of African countries.

In a couple of months we will have one of our fourth-year students come to Botswana where she will undertake some medical activities.

It is consistent with our mission to assist not only communities in America but to assist, where possible, health care training institutions in Africa and the Caribbean. We have expertise which, we believe, can be shared with and adopted by schools in Africa and the Caribbean and we believe that we at Morehouse School of Medicine can learn much from you and indoctrinate the same in our curriculum.

Our mission among medical schools in an industrialized world is very unique. Most American medical schools concentrate on training specialists and on developing advanced medical technology which will be used by these specialists. While many such schools have provided assistance to African countries these activities represent a digression from the major philosophical focus of those institutions and are removed from their major teaching and research efforts.

The unique orientation of the Morehouse School of Medicine permits us to provide a different commitment to an African institution with whom we can work and allows us to call on individuals, departments and resources at the School of Medicine which are part of our mainstream activities.

Our institution is young, but we have learned many lessons and developed several approaches which we believe can be shared. For instance, we recognize that the numbers of graduates we produce each year cannot, by themselves, bring about changes in health care delivery which are needed in the U.S. Our graduates, however, must teach others and use their influence to spread the philosophy, the orientation and skills provided them at Morehouse.

By the same token, we recognize the importance of training trainers in African countries so that the assistance which we might provide can be multiplied many fold.

The School of Medicine was founded as a two-year basic medical sciences program in 1975 as part of Morehouse College. The program became autonomous in 1981, when we admitted our first four-year class. We will graduate our first M.D. in May of this year. However, 60 young people have already received the M.D. degree, during the last three years, from medical schools such as Howard, Meharry, The University of Alabama, and others. Most of our students are pursuing their residencies in the areas of Family Practice and Community Medicine. The Morehouse School of Medicine is in Atlanta, as part of the Atlanta University Center. The Center is composed of six institutions: four colleges, one university, and a theological center. These institutions cooperate on a number of programs and in many instances avoid duplication of programs. If a student, for example, at Morehouse College wishes to major in education -- Morehouse College does not offer a baccalaureate in education -- the student will matriculate in education courses at Morris Brown College, but receive the degree through Morehouse College.

I mention this because there are many things that we have learned in the Atlanta University Center which could be exported here. For example, I have listened to various arguments or comments about where the program now under consideration, might be located, and how cooperation might be developed. We think that we have learned much in this regard which we can share with you. Atlanta is also a setting which is very appropriate to the Morehouse School of Medicine because Andy Young is our mayor, and maintains an active profile in international affairs. Through Mayor Young's efforts, Atlanta is becoming an international city. There are a large number of airplane flights to Europe, South America, and the Caribbean from Atlanta and negotiations are currently under way to provide service to the African continent. A number of international business firms are located in Atlanta, and as proof in the local telephone directory of some of Young's activities, I noticed that the Mahogany Beauty Salon advertises they use StaSof Fro which is a product of a minority-owned firm in Atlanta. Just recently the firm established manufacturing facilities in another part of Africa.

These few words were mentioned to illustrate that Atlanta, although it may be in the Southern part of the U.S., is a very important part of my country and is a vital international entity which is growing.

During 1982, my brother, the President of the School of Medicine, visited Africa with Vice President George Bush. Vice President Bush encouraged the Morehouse School of Medicine to become involved in international health activities. This has given impetus to international health activities which have occurred and are occurring at the School of Medicine.

The other group which I represent is the Association of Minority Health Professions Schools. This is a consortium which includes the Charles Drew Postgraduate School of Medicine, Los Angeles; Meharry Medical College, Nashville, Tennessee; The School of Pharmacy, Xavier University, New Orleans, Louisiana; The School of Pharmacy, Florida A&M University, Tallahassee; and the School of Pharmacy, Texas Southern University, Houston. Howard University is the only major minority health professions institution not represented in the consortium. We have current conversations with Howard regarding their possible affiliation with the consortium. There is no disagreement in philosophy, but rather Howard University is strongly supported by the

Federal Government and tries to avoid any appearance of conducting lobbying activities.

The Association is five years old and several members are engaged in international health activities and are anxious to involve themselves even more. These institutions have educated large numbers of African health professionals as well as other professionals who are now in their respective countries.

Finally, it is important to mention the common cultural and social ties shared by the U.S. and Africa. We are both providing leadership and service to oppressed people who are struggling to become truly free and self-sustaining. It is challenging, inspiring and appropriate that we work together in this struggle.

Dr. Hannelore Vanderschmidt, Co-Director, Center for Educational Development in Health, Boston University; Associate Professor of Education and Public Health, Boston University

The Center for Educational Development in Health started in 1968, at Harvard's School of Public Health. Its mandate was, at that time, and still is, to train teachers for the health professions who are going to work in the developing countries and in the U.S. We have worked, from the start, in a field called Competency Based Training. Competency Based Training, in a nutshell, is helping people work effectively on the job, developing courses and curriculum which are not based on the U.S., French or English models, but are based on what you need to know to do the job over here. I think that approach, with its practical, no nonsense focus, is appropriate for a group like yourself, planning a School of Public Health, because you have a unique student group, special requirements, and a limited budget. You push yourself to establish priorities, to determine what are the essentials. First, teach the skills your students need to know; later on, when you have some leisure, some reserve, teach the skills that are nice to know.

What have we done in this field which might be of assistance to you? In the early '70's, we developed a text on competency-based training, called "Systematic Course Design for the Health Fields." We field-tested that manual in seven countries, with the help of USAID funding. We found out that the book was helpful but a little too complicated and used big words. So we made it less complicated, streamlined the model, and made it much skinnier. Now it's more efficient and accepted. It's now called 'Developing Competent Health Workers.' We have used that book in about 20 countries all over the world.

One of the things we have done, is to develop readable texts to help develop courses and to plan projects in the human service fields. We have also trained more than 500 students at Harvard, and now at Boston University, in competency-based methods. This year, we are going back to Harvard School of Public Health to teach our course, mostly to people from overseas, or who intend to teach overseas. Harvard has a School of Public Health where about 20 or 25% of the students come from overseas.

We have also taken the courses overseas. We've worked most successfully, when we've been able to come back a number of times, to work with our counterparts. One-time interventions often don't work.

Sustained effort is much more productive. For example, we went to Nepal 17 times. We developed curriculum with the nationals to train auxiliary health workers and health assistants. Our method is to go in; let the people develop their own curriculum. Our job is to be the coaches, and to work with faculty as they develop their course. We are ready to conduct teacher-training workshops where courses are developed, to read course-related materials, to edit, and to help our colleagues plan field tests.

It is essential to take the course out in the field, teach it, make necessary changes, clean it up, and publish it. It's a good idea to write down your course plans clearly and completely so that when the person who developed the course goes to England for a couple of months or a year, someone else can take the course over.

In Nigeria, we worked with principals of schools for auxiliary health workers to develop courses for village health workers. We worked with the nationals to develop their own courses, even though some excellent course materials for village health workers were available. Our participants wanted to develop their own materials. It's been our experience that people are much more comfortable if they develop their own instructional packages using the resource materials that we bring in our suitcases: 100 pounds of books, slides and visuals. When we worked in Morocco, we started out by using our own text on curriculum design. Participants said to us, "We don't want your book, we want to write our own book on competency-based training. Why don't you help us?" So, we helped them write their own book. Now there is one manual, "Le Guide de Boston" and another manual "Le Guide de Maroc".

We can help you in the curriculum planning and design stage of your course in Public Health. We would be delighted to play the role of coach and helper to get some of your ideas coalesced and working, some of your materials written, and in such a format, that they can be taught and transmitted to others.

We also would certainly welcome some of you to come to Boston University. We have a three-month summer course in Primary Health Care for people from the developing countries.

In general, I agree with Dr. Carter, however, that the best teaching is out here, because here, you know what your needs are; you can say "no, no, that is no good for us...". Back in Boston (and in other schools in the West) we tend to focus on teaching in developed countries. It is often difficult to be responsive to the needs of specific institutions overseas.

Developing and teaching a public health program here in Botswana is promising. I wish you every success.

\* \* \*

Usually the Center for Educational Development in Health (CEDH) works on a country to country basis. We are usually funded by either USAID or WHO or some other international organization. Do we give certificates or degrees? CEDH gives certificates when we teach courses overseas; we also give certificates when international groups come to Boston where we have sponsored a number of courses in teacher-training and management.

Boston University is a degree-granting institution and offers courses and degree programs for Africa and elsewhere. We participate in teaching these courses but Boston University has its own rules and

degree requirements. CEDH works according to the regulations of the parent institution.

Ralph Yodaiken, M.D., Occupational Safety and Health Administration (OSHA), U.S. Government, Washington, D.C.

In the U.S., we have a work force of approximately 100 million people, employed in about 4 million work sites. It is of interest to the countries present at this meeting to note that at 99 % of these work sites, 500 or fewer workers are employed, or to put it another way, only 1 % employ over 500 persons. You will find that with the growth of industry, this is the way things will shape up in your countries as well. The most numerous are the small traders. The biggest companies, the 1 % however, employ a large portion of the work force. In the U.S., they employ 50 % of the work population.

We find now, after the appropriate legislation was enacted in 1970, that the big companies -- the IBMs, the Mobils, and the DuPonts -- in general, are less difficult to monitor for occupational health. Many, by no means all, have good work place health programs. On the other hand, the smaller work sites have poor health programs; they can't afford better, and they are difficult to monitor for compliance. Unless you have appropriate legislation, you will have no control over any occupational disease, and will never recognize the tremendous drain they are on your health resources. We in the U.S. are now paying for our failure to appreciate the significance of many of our dust diseases and to deal with the causes of pneumoconioses. Some of these are well known to you, such as asbestosis; other occupational health diseases and injuries are less easily recognized -- loss of hearing, sight, cancer of the pancreas or liver. Any one of these may be attributable to working for many years at a hazardous, unregulated job. In some cases, a short exposure will be just as dangerous.

We have learned by experience that many health care workers are not trained to deal with occupational disease. To correct this, the National Institute for Occupational Safety and Health (NIOSH) set up Educational Resource Centers around the country. We have 12 of them now. At these centers, physicians, nurses and other members of the occupational health care team, such as industrial hygienists, are trained. The courses may last three years, and the trained individuals return to work with industry. But short courses are also run for those who do not have all that time to spend. There are, for example, mini-residencies, short course for nurses, and others.

The Occupational Safety and Health Administration (OSHA) and NIOSH can offer advice and information on how to set up appropriate programs. We can also offer information -- books, such as the NIOSH Criteria Documents for Occupational Diseases.

In conclusion, I would like to urge you all to make sure that occupational health is included as part of the curriculum you design. A lot of people would benefit from that kind of training.

OTHER WORKSHOP DISCUSSIONS

(Responses to questions from the floor.)

Health Development Centre -- Zimbabwe:

The center is the result of a tripartite agreement between the Zimbabwe government, the University, and WHO. Course information is sent to 18 English-speaking countries, 6 months in advance.

Financing for the first 6 years is from WHO; its take-over will be phased over a number of years. Hopefully, other countries will develop their own national centers. However, technical cooperation among all countries is expected to continue.

It is difficult to say what the annual recurrent costs of the Zimbabwe Health Development Centre are because each participant is sponsored by his country through WHO allocated funds.

The resolution that triggered the establishment of the centers came from member states; to be precise, the resolution called for the establishment of national centers. These centers are better started by member states and later given subregional and multi-sectoral responsibilities. The centers will be undergoing a review; the result of which will be put up for discussion.

The center is expected to give technical assistance to ensure expansion of graduates' training.

Discussions have made it evident that a School of Public Health is needed for the subregion; the Zimbabwe Health Development Center is not a school of public health.

Boston University:

Boston University has helped countries through bilateral agreements to develop curricula. It has also begun work with WHO. All funds come from USAID, WHO, or other organizations.

Nordic School of Public Health:

Nordic countries finance the school, which was designed by the Nordic Council of Ministers; such high level cooperation is given highest consideration. Each member state produced guidelines for running the center, and these guidelines were presented and discussed by all Board members.

Until the school was founded, students went to American and English schools to learn Public Health. Countries with bigger populations send more students than others, e.g. Sweden and Norway. The board reviews applications annually. There are advantages of all partners of the school.

The annual budget (U.S. \$1.24 million) maintains a small staff. Short-term consultants, who receive their regular salaries, are engaged sometimes. The school offers them accommodations and pocket money, but does not pay their salaries.

Morehouse School of Medicine:

To encourage graduates of Morehouse School of Medicine to work in remote or rural areas, commitment in primary health care is sought when students are interviewed. Students do their traditional apprenticeships in a disadvantaged community setting, and also work in a rural hospital.

Manchester University:

To ensure that students at Manchester University are well trained in primary health care, they are sent to work with minority groups.

SHDS Project in West Africa:

Funding for this project comes from USAID.

Procedural Difficulties in Presenting the MPH Project to SADCC:

Tim Zwane, Permanent Secretary, Swaziland. noted that when the project was presented and discussed by the Regional Training Council a year ago, the RTC was not very impressed with the idea, and, it's not known if this workshop's recommendations will make a difference.

Dr. James P. Carter, Project Director, explained that since the project was informally presented to the SADCC Regional Training Council a year ago, it has evolved into an entirely different concept, which may be more acceptable to SADCC. Dr. Carter said there is "no doubt that some kind of endorsement or adoption of the concept by SADCC would go a long way to mobilizing the various agencies to make some kind of a commitment to go through with it."

Panel Discussion: "The Need, Advantages and Implications for the Human Resource Development for Health Care" was moderated by Dr. Vivian Johnson; panelists included Dr. John Bennett, Dr. John Martin, Dr. Herman Folmer, Dr. H. Elneill and Dr. Lori Vanderschmidt. \*\*

Panel Discussion: "Presentation of Global Experiences in Training for Community Health Care; Case Studies of Strategies and Approaches Used by Various Countries and Institutions" was moderated by Dr. John Bennett; panelists included Prof. Ian MacDonalld, Dr. F. Mburu, Dr. David Morley, Dr. Vivian Johnson, Dr. Walter Comm, Dr. Ralph Yodaiken. \*\*

\*\* For panelists presentations, see Table of Contents: "Public Health Programs Reviewed at Botswana Workshop," which begins on page 48.

MOBILE PUBLIC HEALTH TRAINING FROM CONCEPT TO FEASIBILITY

(Presented at the Botswana Workshop by Naomi Baumslag M.D. M.P.H., Professor of Pediatrics and Community Health, Georgetown Medical School, Wash.D.C.)

A QUANTUM LEAP INTO PUBLIC HEALTH TRAINING

We must make a quantum jump in this century. With the explosion of knowledge in medicine and the growth of epidemiology, Public Health departments have broader vision and have shifted their emphasis from hospital care to prevention and primary care for populations.

With this momentum, we can no longer believe that state manpower shortages can be alleviated by conventional training routes. We need to be in control of the limited funding to produce maximum effects. Currently, the diffusional approach to training results in massive educational waste and ineffectual resolution of the problems. (Table 1.)

In the whole of Subsaharan Africa, there is not one school of Public Health to serve the African continent of 400 million which by the year 2000 will have increased to 600 million. The U.S. on the other hand, has one school of Public Health for every 10 million population (Table 2). If our commitment to "Health For All" is to become a reality, then something more radical is needed. Rigid and archaic routines will have to be replaced by progressive and flexible Public Health Training.

With this in mind, with our colleagues in Botswana, Lesotho, and Swaziland, we carried out a feasibility study to ascertain if by complementing regional with U.S. resources (Table 3), a uniquely African Institute of Public Health could be developed (Fig.1) that would serve as a training center, provide educational resources, data analysis and advice to ministries and act as a fulcrum for research. With this in mind, we designed a Mobile Public Health Training feasibility study which was funded by USAID.

The study was designed (Table 4) to measure the technical, financial and political feasibility of Mobile Public Health Training in the Southern Africa region. In the preparatory phase, Public Health Training was reviewed in the U.S. and Africa through a literature search, questionnaires and personal contacts, and a set of guidelines developed. The available training programs in Africa and the U.S. for African students by and large confirmed our suspicions that training was deficient in quality and quantity.

U.S. Programs: These are found in traditional medical schools and at schools of public health. Twenty-three of these schools of public health are accredited by the Council of Education for Public Health. In these schools, foreign students comprise about 10% of the student enrollment. More than half the foreign students in the U.S. attend one of three schools -- Loma Linda (37%), Johns Hopkins (29%), and Tulane (37%). At Harvard School of Public Health, 21% of the students are from overseas. Few schools have specially adapted programs for students from foreign countries and many courses such as Public Health Administration may be highly irrelevant for them as they have a U.S. orientation and use U.S. examples and programs.

Costs, length of course and selection criteria vary (Table 5). Tuition costs range from \$1,417 in Hawaii (a state school) to \$14,130

at Yale (private school). USAID estimated in 1980, that the cost of living for these students (including food, lodging and books) was \$1,800/month. The average estimate for master's level training in the U.S. or the U.K. is given as \$20,000. However, we believe that this is a gross underestimate when hidden costs are taken into account.

Programs tend to be traditional, requiring a core of biostatistics, epidemiology and Public Health Administration. All require a baccalaureate degree as minimal qualification; some require practical experience in health and many admit a wide variety of health professionals as well as health-related professionals. Most have a specialty tract and this varies from school to school. Surprisingly, nutrition ranks very low as a specialty. (Table 6) Where the specialty was listed, Public Health Administration headed the list. Whether this is a function of need or funding, it is impossible to say.

An increasing number of nontraditional programs have been developed to meet the needs of working health professionals who require skills and knowledge but are unable to leave their jobs and family. These are innovative and described as "nonresident," "external," "extension." They utilize self-study, television and radio, as well as correspondence courses. In some cases, universities have formed cooperative programs, e.g., Berkeley, UCLA, Hawaii, Loma Linda, and Washington University offer nonresident Health Administration degrees. Michigan State has a Public Health Administration degree program with weekend concentrations. The University of Washington (Seattle) has a new extension Master of Public Health degree, which I believe is of particular interest to us. Over three calendar years, students are in residence for four weeks of intensive full-time classroom work each summer. Through a combination of off-campus courses, directed self-study and a required thesis, a high level of training has been attained. Twelve credits can be taken as electives as appropriate graduate level courses. The program not only maintains a level of excellence, but also a measure of independence, as it is financed through its own revenues. Of note, is the fact that unlike the in-residence program, there are no specialty tracts.

The University of Massachusetts, University of California at Los Angeles, and the University of South Carolina have gone a step further and have established a four-year bachelor's degree program concentrating on Public Health. So there are many different ways even in the U.S. to reach student populations and increase the number of trained Public Health professionals.

African Programs: Data on African Public Health Training opportunities in Sub-Saharan Africa were hard to come by and we had to augment available information by sending questionnaires to selected medical schools. We were able to ascertain that Benin City was just beginning to provide Public Health Training with a new perspective. Other programs were in departments of Community Medicine. Programs generally are limited with few students, mostly physicians; nearly all require a thesis. Some award an MPH, others a DPH. This in itself creates prestige and promotional problems. Furthermore, the duration and cost vary considerably, although in general costs in Africa for training are much lower. Zimbabwe Medical School appears to be the exception -- it is as high as \$13,000/year. There is no way that we could ascertain quality of training in this study and what, if any, extras were realized from the increased expenditure. Duration of training periods also affect cost. While most take one year to

complete, some, such as the Benin program, last for two years. Most of the Public Health training is for nationals and does not appear to have many resources or elasticity. New programs were started in Kenya and in Zimbabwe after this study was completed. Criteria for admission also vary. Most require professional experience of at least 6 months to 2 years. A full-time training thesis is required of all. Students from countries without departments of Community or Preventive Medicine have to go far afield for Public Health training opportunities. Some even have to go to school in South Africa at Medunsa, or even resort to UNISA's correspondence programs.

Training is generally conventional. WHO in Benin City is trying a new approach using modules, multidisciplinary teams, and competency-based training. The Multi-Mobile Medical Center of the United Republic of Tanzania offers part-time as well as full-time training. The part-time training is spread over three years.

Although the cost of training in Africa appears to be much lower, without any evaluation, comparative studies are not possible. Availability, originality and African priorities seem to be lacking, but more recently, some schools have added courses on traditional medicine to increase the regional relevance.

Of significance is that while millions of dollars are being spent to send a few Africans for Public Health Training overseas, there is no institute of Public Health in the Southern Africa region. As the population increases from 60 to 90 million in the year 2000, our ability to meet the commitment to "Health For All" will be impossible unless drastic steps are taken to narrow the gap.

Site Visit: The detailed findings of the site visits are included in the feasibility report. Although the study is now two years old, we believe that the numbers have not changed significantly and the issues are very much to the point. With the team effort, we were able to identify the resources and need in each country under study, viz. Botswana, Lesotho, Swaziland, and ascertain the technical, financial and political feasibility of the proposal.

Technical Feasibility: Each of the countries visited has institutional capability and faculty that could be drawn on to provide part of the envisaged training. Lesotho has a National University which has 115 full-time faculty assigned to 22 departments, and if a bachelor's program in Public Health were offered, there would be many suitable elective courses. There is also strong support for developing health courses suitable for the master's program. Graduate programs at the time of our study were being revised and planned. In conjunction with the Ministry of Health and the National University of Lesotho, a Faculty of Health Science was being formed. This is responsible for awarding a Nurse-Clinician Diploma in Primary Health and has great potential for the Mobile Public Health training.

In addition, several nurse training programs are available. Recently, the NUL had a workshop for training teachers how to teach. There is also an extension program that is planning to add health courses to their program, viz. the Institute of Extramural Studies (IEMS). At the time of our study, mechanisms for upgrading training and giving students credit for relevant experience were being examined.

The educational waste and frustration level of personnel could be

alleviated by such measures. As educational requirements in countries increase, this will become an important way of maximizing the use of educational funds. Lesotho has discontinued training enrolled nurses. As in other parts of Africa, the Bachelor of Science Nursing degree has become more desirable. For enrolled nurses with experience, career development and job satisfaction are new problems that a career ladder with upward mobility would have obviated (Fig.2). Suitably qualified faculty is available and many of those interviewed are involved in training and have professional qualifications.

Likewise, Swaziland has institutional capability. The University of Swaziland, in addition to undergraduate programs, has post-graduate degrees at the master's level in the Arts, Education and Science, and relevant certificates and diplomas in education and agriculture. However, there are no graduate level health courses. Many courses could be used if a bachelor's degree in Public Health were offered. The University, however, only awards a diploma for health inspectors. Training is given at the Swaziland Health Institute (SHI). It is the University which provides the syllabus and moderates the health inspectors exams. This has, as elsewhere, caused problems for nurses trained at the same institute who have to have the same entry requirements, take similar or the same courses, but for whom no university accreditation exists. Without accreditation, nurses are at a disadvantage if they want to enroll in a degree program. The gap in years between a diploma nurse program and a baccalaureate program at the University can be three or four years, and is a big source of educational waste. At the SHI, there are a number of suitable courses. Both SHI and NHI need a single comprehensive course in Public Health, as recommended by a WHO consultant in 1981, who evaluated the programs.

Training in Botswana is provided by the University of Botswana, which also has a wide variety of suitable undergraduate courses (suitable for bachelor's degree in Public Health). In addition, the University offers a post-graduate 3-year course in Nursing Education -- a B.Ed. Nursing degree -- which up until recently, took seven years to obtain (4 years of nurse midwife training plus 3 years for bachelor's degree). This has recently been changed through an arrangement of accreditation by the University of Botswana and the National Health Institute, MOH. The program appears to serve nationals mainly, and currently appears to have little elasticity. Several nurses from Swaziland were sent overseas for a B.S. Nursing Education degree. The reason is unclear; whether they didn't use the regional training because it was less prestigious, or donors suggested other training programs, or entry requirements were too restrictive, still has to be determined. Of note, is that some schools of nursing give some credit for previous training, but it is not universal. The same applies to Public Health Administration.

In all three countries there is an Institute of Development Management (IDM) which trains Public Health administrators. This institute has centers in Swaziland, Botswana, and Lesotho. The major effort is concentrated in Botswana, and the Institute had trained, at the time of the study, 17 Botswana in Health Care Administration and 19 in Nursing Administration. If courses were upgraded and had university links, they could be the cornerstone of the proposed Public Health Training Program. It seems that currently, for whatever reason, people are sent overseas for Public Health Training and the IDM is

bypassed.

In addition to the programs discussed, there are extension programs attached to each of the universities. In addition to IEMS in Lesotho, there is the Institute of Adult Education (IAI) in Botswana which extends courses beyond the university and could organize seminars and health courses. In Swaziland, The Division of Extramural Studies (DEMS) has a number of programs that could be used effectively for electives. For example, the theater as a health educational tool. These extension services could be used for training also. Furthermore, not only is UNISSA in South Africa used for correspondence degrees, but recently, Indiana State University has also offered correspondence courses to the region. The potential of such training opportunities in health has not been fully explored.

There are many resources and faculty available for Mobile Public Health Training. (Shown in the feasibility report). In the planning phase, the type of curriculum chosen would, in the final analysis, be the deciding factor as to which courses and faculty are best suited.

Facilities and Research Capabilities: Government, university and nurse training institutions are most interested in the approach that is proposed. Public Health Training is considered critical for primary care.

Throughout the area, facilities and educational materials are in short supply, particularly books, journals, and computer facilities. The latter impacts on information retrieval and research capabilities. A central communications center is essential with a delivery system network. Students who go overseas currently are exposed to a wealth of information, while those who remain in the country are deprived of this important stimulus.

The National Institute of Research (NRI) in Botswana has several studies underway at present. Nine faculty members are involved, and activities range from determining attitudes towards the handicapped in Botswana, to malaria medication usage. Research at the University of Swaziland is in demography and social work as well as chemical analysis of traditional medicines. There are numerous other examples of ongoing or potential research activities which could be stimulated and expanded.

Estimation of the Student Pool: Estimates were made based on the number of students sent overseas for training and the number of students potentially available. Figures are difficult to get so we have probably underestimated the numbers. In Lesotho, for example, on the average, USAID has sponsored three Public Health master's level candidates per year, mainly in Public Health Administration. During the study year, the MEDEX physician extender program funded three students for Public Health Administration training at the University of Hawaii.

In Swaziland, where the need for Public Health training is as important as elsewhere, 20 medical officers, four family/nurse practitioners, six MCH/FPNP, and 179 nurses are clinically based. In addition, of the B.Sc. students who graduate in 1984, only 6/61 will enter medical school. Five of the remainder -- 10 % -- could be candidates for a master's program. It will be appreciated that many nurses and physicians at the district and MOH level do not have any Public Health training at all, and would be candidates for the MPH degree.

Estimates of physicians eligible as potential candidates at the master's level are in the range of 10/year. The estimated number of Public Health nurses needed for 1988-89 will increase from 24 to 32. From Botswana, we believe at least five candidates per year will be available for entry to a master's program. Generally, it is estimated there would be 10 nurses/country; five doctors/country, and five B.Sc. students/country at the master's level. The pool at the bachelor's level would be much greater.

Results of a questionnaire sent to other SADCC countries indicate that 5-10 physicians from Zimbabwe to Zambia would be available for a good program at the master's level.

Unquestionably, it would not be feasible to have the program located in and dedicated to, any single country. The program is technically feasible as proposed for the region and would need to be phased in. Programs for graduates and undergraduates would differ in objectives and training intensity, but could be run in concentrated blocks and delivered concurrently by complementary faculty. And, finally, a continuation or stabilization phase would be needed so that senior level faculty could be trained overseas while regional candidates could be trained as faculty by the mobile team.

Financial Feasibility: To estimate costs, several assumptions had to be made. It was assumed that start-up costs would be provided, and that the program would last for 10 years before benefits could actually be realized. Although great accomplishments have occurred in the region, much remains to be done to assure a cost-benefit return. The investment over a 10-year period will be cost-effective if the program is consistently monitored and updated. Public Health expertise at all levels will reduce dependency; regional training will replace the need for expensive overseas training, and research will improve significantly, while focusing on material domestic problems, rather than on esoteric and irrelevant subjects.

The factors that contribute to the cost-effectiveness of an educational program include the number of students; the larger the class, the more cost-effective it is. Most programs consider 30 students a minimum number, as one can assume an attrition rate of 10-20% over three years. Other factors that must be considered in balancing the budget are the number of complementary faculty; the student faculty ratio; the cost of transportation for field studies and supervision; communications; books and journals; computer facilities; overhead expenses; research and development programs; recurring costs; sources of continuing support and capital investment. Finally, it must be added that tuition costs are difficult to estimate from existing programs; many are either government or agency supported.

If the period of concentrated core training is reduced, so also will be the costs. Donor sponsorship of the program in region would allow for a program of excellence to be developed; educational waste would be averted and many positive spinoffs gained.

Political Feasibility: Throughout the study, it was clear that Public Health Training was recognized as important and manpower development was a major concern in all the countries. The precedent for regional cooperation among the countries of the Southern Africa region has already been established. For example, the University of Dar es Salaam accepts Zambian students in their Pharmacy Degree Program; the IDM has accepted students from other countries in the

region. Botswana, Lesotho and Swaziland have a common nursing education board. Regional cooperation has not been an unmitigated success, but whatever the reasons for this, if the legal and political mandate is provided by recognized bodies such as SADCC, and if cooperation rather than separation is promoted, the beneficial impact would be tremendous. Regional cooperation has worked well among the BLS countries with IDM, and until recently, with the universities as well as the Commonwealth Secretariat.

What appears to be critical to cooperation, is firstly, the institutional arrangement and, secondly, that when agreements are made with countries, they should be made so that none are excluded from joint programs. Furthermore, there has to be an attitudinal change with pride in regional institutions.

In conclusion, for Public Health Training to be cost-effective, relevant and excellent, there are five recommendations:

1. Develop Regional Equivalency and Accreditation mechanism so students can have upward mobility in their careers.

2. Establish a Regional Institute of Public Health with shared faculty and other essential resources to provide education, research, training, data collection and analysis, and to serve as an educational resource center.

3. Develop a critical mass of Public Health expertise in the region.

4. Develop a Public Health curriculum suited to Primary Care, which is problem-oriented and competency-based, with regional relevance at the master's and/or bachelor's levels, and with elasticity and academic excellence not compromised.

5. Create a uniquely African program with an educational research component built-in, and exploring new methods for rational decision-making essential to Public Health.

Table 1

### **CURRENT PUBLIC HEALTH TRAINING**

---

- REGIONAL TRAINING OPPORTUNITIES ARE LIMITED
- OVERSEAS TRAINING IS LIMITED BY COST AND CONTENT
- TRAINING HAS NOT RESULTED IN A CRITICAL MASS OF PUBLIC HEALTH PROFESSIONALS
- TRAINING IS OFTEN IRRELEVANT
- CURRENT PROGRAMS PROMOTE DEPENDENCY
- SEQUELAE

Table 2

- THE USA HAS ONE SCHOOL OF PUBLIC HEALTH FOR EVERY 10 MILLION.
- SOUTHERN AFRICA HAS NO SCHOOL OF PUBLIC HEALTH FOR 60 MILLION. SOON TO INCREASE TO 90 MILLION BY THE YEAR 2000.

Table 3

**MOBILE PUBLIC HEALTH TRAINING – THE CONCEPT**

---

INSTEAD OF MOVING STUDENTS OVERSEAS, CORE FACULTY WOULD TRAVEL TO THE REGION TO PROVIDE CONCENTRATED TRAINING AT THE MASTERS AND BACCALAUREATE LEVEL. THROUGH THE USE OF COMPLIMENTARY RESOURCES A CRITICAL CORE OF PUBLIC HEALTH PROFESSIONALS COULD BE TRAINED, IT WAS HYPOTHESIZED. MORE FOR LESS WITH INCREASED RELEVANCE AND LESS DEPENDENCY.

EDUCATIONAL WASTE WOULD BE REDUCED INSTITUTIONAL CAPABILITY, RESOURCES AND RESEARCH INCREASED.

Table 4

**FEASIBILITY STUDY  
MOBILE PUBLIC HEALTH TRAINING – SOUTHERN AFRICA**

---

**CONCEPT  
STUDY**

**PHASE 1. PREPARATORY**

- developed guidelines for public health training
- developed needs and resource assessment instrument
- researched public health training in US and Africa

**PHASE 2. SITE VISITS**

Tulane team with team from Botswana, Lesotho and Swaziland

**PHASE 3. WRAP UP FEASIBILITY WORK SHOP**

Table 5

MPH FOREIGN STUDENTS ENROLLMENT AND TUITION COSTS  
IN SELECTED U.S. SCHOOLS OF PUBLIC HEALTH

|                | Total Student<br>Enrollment | Number of<br>Foreign | Average Length<br>(Months) | Tuition<br>Fees (\$) |
|----------------|-----------------------------|----------------------|----------------------------|----------------------|
| Alabama        | 165                         | 13                   | 18                         | 3,830                |
| UCLA           | 580                         | 44                   | 9                          | 3,901                |
| Columbia       | 193                         | 24                   | 11                         | 11,690               |
| Harvard        | 403                         | 86                   | 11                         | 6,999                |
| Hawaii         | 338                         | 43                   | 9                          | 1,417                |
| Illinois       | 216                         | 15                   | 11                         | 4,160                |
| Johns Hopkins  | 834                         | 242                  | 11                         | 6,230                |
| Loma Linda     | 704                         | 274                  | 11                         | 6,365                |
| Massachusetts  | 95                          | 5                    | 18                         | 5,250                |
| Michigan       | 742                         | 72                   | 11                         | 6,280                |
| Minnesota      | 448                         | 33                   | 9                          | 3,752                |
| North Carolina | 600                         | 52                   | 9                          | 2,540                |
| Oklahoma       | 225                         | 35                   | 18                         | 3,445                |
| Pittsburgh     | 500                         | 37                   | 9                          | 3,999                |
| Tulane         | 364                         | 134                  | 12                         | 6,905                |
| Washington     | 321                         | 31                   | 24                         | 2,400                |
| Yale           | 287                         | 12                   | 24                         | 14,130               |
| Total          | 7,040                       | 1,156                |                            |                      |

Table 6

**AREAS FOREIGN STUDENTS SPECIALIZE IN  
(US PROGRAMS ONLY)**

---

|   |       |
|---|-------|
| 1. OTHER*   | 33.5% |
| 2. HEALTH SERVICE ADMINISTRATION                    | 11.6% |
| 3. EPIDEMIOLOGY                                     | 10.8% |
| 4. PUBLIC HEALTH PRACTICE AND<br>PROGRAM MANAGEMENT | 10.0% |
| 5. BIostatISTICS AND HEALTH SCIENCE                 | 7.8%  |
| 6. ENVIRONMENTAL SCIENCE                            | 7.8%  |
| 7. BIOMEDICAL AND HEALTH SCIENCE                    | 6.3%  |
| 8. OCCUPATIONAL SAFETY AND<br>HEALTH                | 2.8%  |
| 9. HEALTH EDUCATION                                 | 2.8%  |
| 10. NUTRITION                                       | 2.5%  |
| 11. UNKNOWN   | 1.6%  |

\* Other: defined as population studies, international health, behavioral science and family planning.

Table 7

**AFRICAN PUBLIC HEALTH TRAINING PROGRAMS (selected)**

|                        | NIGERIA        | BENIN                   | UGANDA        | ETHIOPIA      | TANZANIA      | GHANA | ZIMBABWE      |
|------------------------|----------------|-------------------------|---------------|---------------|---------------|-------|---------------|
| FACULTY<br>(full time) | 21             | 5                       | 7             | 4             | 21            | 10    |               |
| STUDENTS<br>(national) | 10             | 10<br>24 (F)            | 10            | 5             | 5             | 7     |               |
| TUITION COST           | \$340          | na                      | \$500         | free          | 3045 sh.      | na    | \$400         |
| DURATION               | 12 mos.<br>MPH | DPH 1 yr.<br>MPH 2 yrs. | 12 mos.<br>PH | 2 yrs.<br>MPH | 2 yrs.<br>MPH | MPH   | 2 yrs.<br>DPH |

Figure 1

# MOBILE PUBLIC HEALTH TRAINING

---

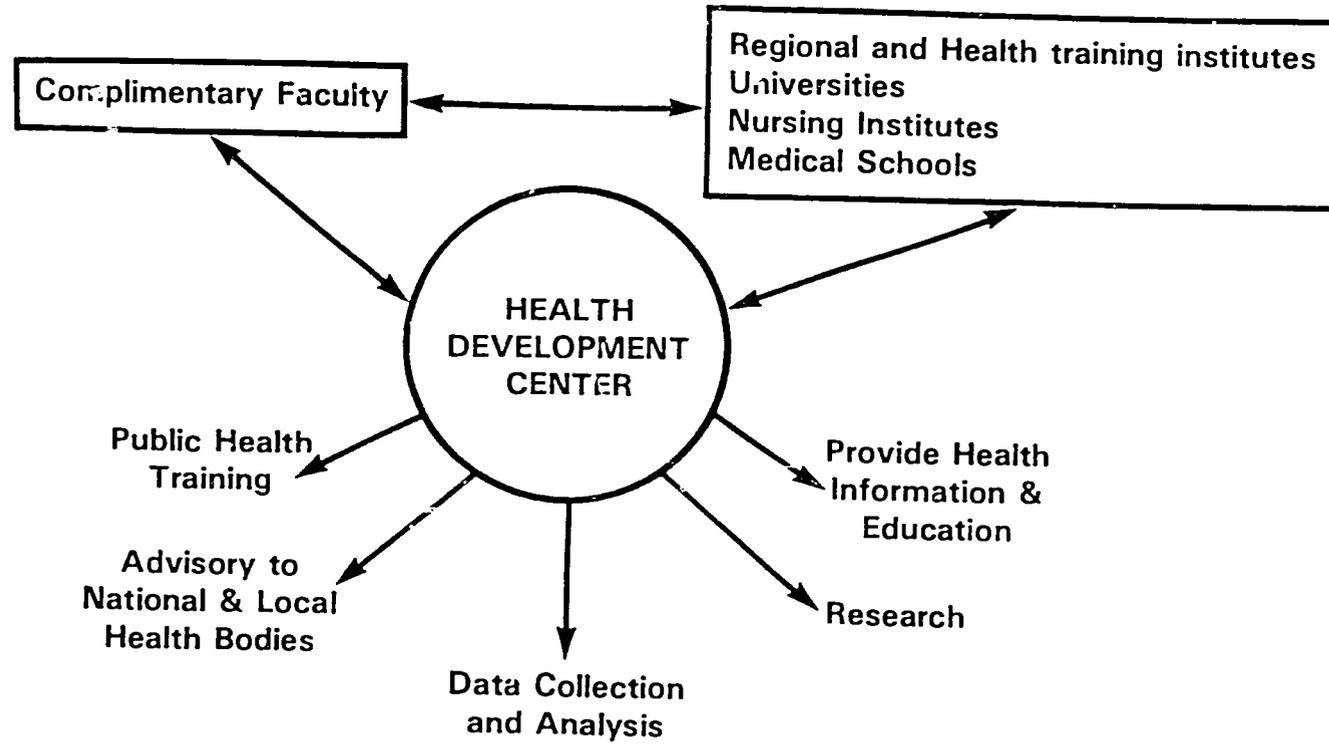
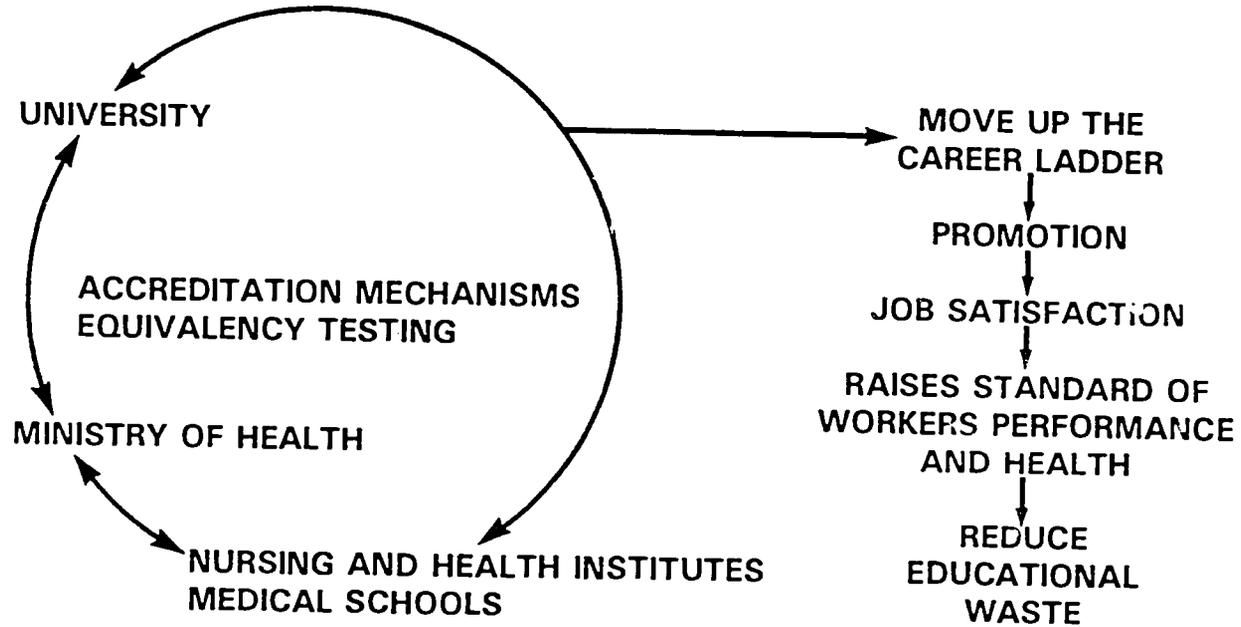


Figure 2

## CAREER LADDER FOR UPWARD MOBILITY

---



MOBILE PUBLIC HEALTH TRAINING FROM FEASIBILITY TO IMPLEMENTATION  
(From the Tulane University Feasibility Study Report)

Dr. James P. Carter, M.D., Dr.P.H.; MPH Project Director; Chairman and Professor, Nutrition Department, Tulane School of Public Health and Tropical Medicine.

The desirability of implementation was already apparent when we were less than halfway through completion of the feasibility study. This was true not only for the host governments of Botswana, Lesotho, and Swaziland, but also for the other constituent countries of SADCC.

Each of these countries expressed the felt need for the training of a cadre of public health workers within the context of primary health care. Furthermore, they expressed the need for cost-effective training programs in the region, which would complement the already existing training programs in the health sciences institutes, nursing schools, and universities in Southern Africa. There is very little doubt that we do have a consensus on this point, on the part of the SADCC country governments in the region.

They each have special needs, and the request from the SADCC representative of the government of Angola is a case in point. He expressed the need for some courses to be taught in the Portuguese language, which would be open to students from all of the Portuguese-speaking countries in Africa.

In addition, the desirability of implementation is also becoming apparent within USAID, particularly the Africa Bureau. There has been close coordination with Mr. Arjuna Cole, our Project Manager, who is in the public health section of the Africa Bureau in Washington. We have also received invaluable assistance from Mr. Chuck DuBose, who is the Regional Public Health Officer for Southern Africa, based at the USAID Mission in Swaziland. In addition, Mr. Lane Holdcroft, in the Regional Office for Africa in Washington, D.C., has also been very supportive. He has indicated to us that if the final feasibility report is as good as we expect it to be, that they will find some way to fund the project's implementation. He indicated that if necessary the Consortium for African Development Assistance (CADA), based in Paris, could be brought into the picture as a possible conduit or funding mechanism.

The Regional Bureau for Africa is also considering various means of providing assistance to the countries of East and Southern Africa in the strengthening of their health delivery services. A brainstorming session with representatives from each of these countries is supposed to take place in Kenya, in order to provide a forum during which the country representatives can present their ideas about methods of strengthening their health care delivery systems to USAID, regional, mission, and central office personnel. It is not inconceivable that the project we are proposing here, could fit into the overall plans of the Regional Bureau to provide technical assistance to the health sectors of the East and Southern Africa countries.

In addition, we have received positive indications of support from the Dutch government and the Institute for Tropical Medicine in Amsterdam. They plan to send a representative to the workshop in the fall of 1983.

Lastly, there remains a final approach to funding, directly through

the SADCC, when the feasibility study has been completed and the final report submitted. This report can be submitted to SADCC with the Recommendation that they consider bringing it forward for funding at their annual November meeting with the bilateral and multilateral donor agencies. The Norwegian Agency for Development Assistance (NORAD) has already indicated to us that if SADCC brings the project forward, that they will be happy to support it.

In addition, there are a number of private multi-national companies and foundations which might be willing to support the implementation phase of this project, but we have decided not to approach them at this time and to rely most heavily on USAID, the Dutch government, SADCC, Norway, and possibly other donor agencies which directly support SADCC and its various projects.

Furthermore, this office will also have the responsibility for working out necessary arrangements for the transfer of academic credit from the Institute for Public Health and Tropical Medicine to one or several of the local universities. In short, this office will continue the planning process for the purpose of establishing the proposed complementary public health training programs in order to have everything ready for enrollment of the first students, possibly during the fall of 1986.

The most logical agency to set up this office would be USAID, Washington, Regional Africa Bureau. USAID could provide funds until other funding sources can be put into place in order to firmly establish the proposed Institute as a multi-national, multi-disciplinary supported project.

INFORMATION RECEIVED PRIOR TO THE BOTSWANA WORKSHOP

Although not everyone invited to the February 19-21, 1985, meeting in Botswana could attend, input was received from several individuals and organizations concerned with public health programs in which their expertise gained from past and present programs was shared.

The following are abstracts of input received prior to the workshop:

Community-oriented Primary Health Care (COPC) now operating in the Hebrew University of Jerusalem and Hadassah Medical Organization School of Public Health and Community Medicine -- Professor Sidney L. Kark and Emily Kark.

COPC provides primary clinical care for individuals in a community-oriented practice. Programs may focus on main health problems affecting the community in general, or be specifically directed toward priority health needs of different community groups. Health service is promotive, preventive and curative. The Community Health Care Center in Jerusalem, which serves as a practising base, is an integral part of the School of Public Health and Community Medicine and is administered by the Department of Social Medicine.

The graduate studies program leading to a Master of Public Health has been developed and modified since its inception in 1960. An obligatory field-workshop and seminar in community health care is a curriculum feature, and the curriculum's general objective is to provide the graduate training for multi-disciplinary professional groups required for practice, teaching, and research in public health and social medicine. The groups include physicians, dentists, nurses, veterinarians, social workers, health educators, nutritionists, biostatisticians, environmental and occupational health workers, and scientists interested in community health.

A Course Leading to the Degree of Master of Science (University of London) In Mother and Child Health -- David Morley, Professor of Tropical Child Health, UOL.

The UOL Institute of Child Health offers an M.Sc. in Mother and Child Care to qualified graduate students and a Diploma in Mother and Child Health to students who don't qualify for the postgraduate degree. The course purpose is to train future teachers of Mother and Child programs for medical schools and auxiliary training institutions of Third World countries. Over 160 Fellows have trained in it and a previous UNICEF/WHO course, and they now hold responsible positions in their own countries.

Emphasis is on maternal care, family health and nutrition, as well as communication, management, and leadership skills. Focus of the M.Sc. course is providing management, training and support for local community health workers and middle level personnel. M.Sc. students have 8-10 weeks overseas study in the curriculum, and the course was set up in London in hope that it would lead to other universities undertaking similar training programs, a hope that has become reality in Nigeria, Durban, India, Indonesia and The Philippines.

Extended MPH Degree Program of the University of Washington School of Public Health and Community Medicine -- Robert B. Wainwright, M.D., D.T.M.L.H., Malcom L. Peterson, M.D., Ph.D., and Janis M. Farrier.

The format of this curriculum radically differs from traditional two-year programs leading to MPH degree. Students fulfill all academic and institutional requirements for MPH over a three-year span of intensive, on-campus courses and seminars. In its four years of operation, many more applicants have enrolled for the Extended Degree Program than for the regular MPH program and the academic performance of these students is comparable to that of regular full-time MPH program students.

The Botswana/Meharry Project: A Nursing Achievement in Public Health, Maternal and Child Health, and Family Planning -- Jean Swinney, R.N., M.A.

This five-year plan resulted from collaboration of USAID and the government of Botswana. Its goals were:

1. To provide training or retraining in public health, maternal and child health and family planning for personnel who staff rural health facilities;
2. To prepare an integrated curriculum in PH/MCH/FP for use in the basic nurses training schools; train a selected tutorial staff to continue using the curriculum;
3. To establish a health education unit with trained local staff to serve health needs in PH/MCH/FP and preventive health;
4. To develop field training and practice facilities and establish effective postnatal and family planning service in the three Botswana government training hospitals.

The plan was so successful that it was extended and now serves as a basis for other projects. By the project's end in August, 1979, 501 nurses completed the inservice course (only 98 completed unsuccessfully); 21 participants were in advanced training or had completed it to become tutorial staff (including a local replacement for the senior public health nurse of the original project health team); all family planning methods were delivered by nurse midwives and project participants (consulting with physicians for problems only).

A dramatic increase in use of various family planning methods also resulted from the introduction of family planning services and education into the hospitals.

Botswana Institute of Health (Its first 10 years of operation and its present courses and instructors) -- Dr. D.B. Sebina.

NHI began with 117 students in four courses in 1973 and by 1983, the National Institute of Health had 720 students in 10 programs, which include basic nursing, health assistant, dental therapists, nurse anaesthetists, pharmacy technicians, health lab. assistants, medical records, midwifery, family nurse practitioner, community health nursing and community mental health.

Addition of courses continues and post-graduate opportunities include: Enrolled nurses proceeding to registered nursing programs; health assistants proceeding to health inspector or health inspector tutor; B.Sc. in Nursing or in Health Education; three-year Health Laboratory Technicians program. Former NHI students account for approximately 80 percent of the staff.

The Inter-American Division Program of Loma Linda University -- Winston J. Craig Ph.D., M.P.H., R.D.

The Office of International Health of LLU was in the process of writing new guidelines for its off-campus programs. Proposals include a six-year program with courses offered annually in concentrated fashion for 4-6 weeks at a time.

In 1979, an off-campus teaching sequence for an M.S.P.H. degree began at four different sites in Central America and the Caribbean. The majority of students were physicians, nurses and health administrators, but non-health professionals were also accepted. The program's objectives were to coordinate teaching, research and service efforts of faculty with expertise and interest in solving public health problems of Third World countries. M.S.P.H. degrees are offered for those without professional health training and experience, and M.P.H. for health professionals.

Service projects of this Seventh-day Adventists program have been located in Pakistan, Sarawak, Haiti, Tanzania, Marshall Islands, Philippines, Central America and the Caribbean. Goals are to help people help themselves to better health, to assist existing organizations to greater effectiveness, and to encourage development of local health training programs.

Curriculum for the Public Health Diploma Program of the Muhimbili Medical Center, Dar Es Salaam, United Republic of Tanzania -- Prof. W.J. Makene.

Goals include: providing doctors with skills needed to be the District Medical Officer; offering a curriculum flexible enough to admit people of different educational backgrounds.

Duties of district medical officers include promotive and preventive health services; management of district health programs, such as disease control; maternal/child health and family planning; medical legal services; and administration of office and staff.

DPH candidates pursue approved study programs of full-time attendance for minimum of one calendar year or maximum of three years for part-time students. Courses include: epidemiology, biostatistics, development and management studies, behavioral science and health education, sanitation, parasitology/entomology, and a field work project.

Role of the Public Health Worker in Famine Relief -- Claudio Schuftan, M.D.

Their unique position places public health workers in a key role in initiating relief operations. Because they are on-site before and when disaster strikes, they can observe early warning signs of disasters, such as drought, and take steps to minimize their effects. Using whatever meager resources available, PHWs cope with disasters -- triaging victims, organizing community members into health brigades, becoming the right hand of whomever is in control in the community, and serving as liaison between external relief teams and the community.

To function effectively as members of the health team, PHWs need training that relates to their expected roles. They also need on-going education to sharpen logistics and managerial skills, as well as continuing education in health service.

Model Curriculum - 3 Summers -  
(From the Tulane Feasibility Study)

Summer I

|      |     |   |          |
|------|-----|---|----------|
| *AHS | 601 | Introduction to Human Health and Disease    | 2        |
| BST  | 601 | Public Health Statistics                    | 3        |
| EHS  | 601 | Principles of Environmental Health Sciences | 3        |
| NTR  | 631 | Principles of Nutrition Science             | <u>3</u> |

Interval between Summer I & II 11

|      |     |   |   |
|------|-----|---|---|
| *MCH | 608 | Growth and Development in Childhood and Adolescence<br>(By Self-Help Learning Module) | 2 |
|------|-----|---|---|

Summer II

|     |     |   |          |
|-----|-----|---|----------|
| EP1 | 601 | Epidemiology for Disease Control                                    | 3        |
| MCH | 601 | Introduction to MCH   | 2        |
| MCH | 609 | Reproductive Physiology and Contraceptive<br>Methodology            | 2        |
| TMD | 601 | Animal Agents and Vectors Disease                                   | 2        |
| HMS | 601 | Introduction to the Organization and Delivery of<br>Health Services | <u>3</u> |

Interval Between Summer III & IV 12

|     |     |                  |   |
|-----|-----|------------------|---|
| NTR | 797 | Research Project | 3 |
|-----|-----|------------------|---|

Summer III

|     |     |  |   |
|-----|-----|--|---|
| NTR | 731 | Clinical Nutrition   | 2 |
| IHL | 604 | Health and Economic Development  | 2 |
| MCH | 601 | Methodology for Designing and Organizing<br>Ambulatory Health Services | 3 |
| NTR | 637 | Nutrition Planning   | 2 |
| NTR | 700 | Nutrition Seminar  | 1 |

\*AHS 601 may be waived for physicians, nurses, and other health professionals. MCH 608 (by lecture on self-help learning module) may be substituted.

| Programmatic Requirements |     |  | 24                 | Credit Hours |
|---------------------------|-----|--|--------------------|--------------|
| NTR                       | 631 | Principles of Nutrition Science                                    | 3                  |              |
| NTR                       | 731 | Clinical Nutrition   | 2                  |              |
| NTR                       | 700 | Nutrition Seminar  | 1                  |              |
| MCH                       | 601 | Introduction to M.C.H.   | 2                  |              |
| MCH                       | 609 | Reproductive Physiology, Contraceptive Technology                  | 2                  |              |
| MCH                       | 608 | Growth and Development in Childhood and Adolescence                | 2                  |              |
| MCH                       | 610 | Methodology for Designing and Operating Ambulatory Health Services | 3                  |              |
| IHL                       | 704 | Health and Economic Development                                    | 2                  |              |
| EHS                       | 604 | Environmental Health for Developing Countries                      | 2                  |              |
| TMD                       | 601 | Animal Agents and Vectors of Disease                               | 2                  |              |
| NTR                       | 797 | Field Study/Research Project                                       | 3                  |              |
|                           |     |  | Total Credit Hours | 36           |

The model curriculum shows how the Masters degree program could be divided up over three consecutive years. It should be noted that instruction in the administration of Health Services is an integral part of each course; this includes planning, evaluation, and management.

2.1 The proposed curriculum that Tulane School of Public Health has developed as a mobile program will provide core requirements of 12-14 credit hours as well as required programmatic courses.

2.2 Students will be able to choose an area of specialization such as Nutrition or Family Planning or Maternal and Child Health.

2.3 Field study and research projects will be supervised in country.

2.4 Additional subjects will be identified for elective training programs, specifically courses in advanced administration and management, community health nursing and nurse practitioner training, and tropical medicine.

2.5 A mechanism will be developed for providing continuing education in public health.

2.6 The possibility of correspondence courses will also be explored.

3. By the end of three years of the operational project, a critical mass of regionally trained public health faculty will be able to begin to take over teaching of the basic curriculum.

3.1 New electives will be phased in where appropriate and/or existing electives upgraded.

3.2 Gradually the regional staff will be weaned and will assume full responsibility for the certificate and masters degree training program.

4. All the potential participants will be contacted and a consensus on the training needs of the region developed along the lines suggested. Mechanisms for cooperation between the countries in the Southern Africa Region and Tulane School of Public Health will have to be established.

5. To do all this it is proposed to:

- 1) Develop Curriculum guidelines.
- 2) A Needs Assessment Instrument.

The work plan outlines the steps that will be taken to assess the feasibility of the mobile MPH and certificate training program.

GROUP DISCUSSION REPORTS ON  
BOTSWANA WORKSHOP OBJECTIVES  
AND FINAL RECOMMENDATIONS:

Five groups were set up to discuss the objectives listed below:

1. To examine input needed for development and implementation of a relevant PHC-oriented Mobile Public Health Training Program. (Group 1 modified this objective to read: To find out if the feasibility study findings are relevant to the Southern African region.)
2. To determine if the feasibility study is relevant to other countries.
3. To draw on expertise, programs and experiences of other Southern African countries through exchange of information.
4. To explore methods of drawing national resources into technical cooperation for development of health manpower in Southern Africa.
5. To identify major themes essential to developing a relevant Mobile Public Health Training Program.
6. To provide an opportunity for development of sound progressive educational programs at all levels [including a Bachelor of Education in Nursing (B.Ed.Nursing)]; and, academic programs to facilitate upward mobility of health workers without loss of time.
7. To reduce the number of years and resources put into training programs that do not ensure recognition. (Groups 4 and 5 modified this objective to read: To examine ways of reducing the number of years and amount of resources put into training programmes that do not ensure recognition and advanced academic standing credits for university studies.)
8. To foster fruitful inter-institutional cooperation between ministries, university health training institutions, national, and overseas universities.
9. Foster research into health systems and HMD.

REPORTS OF WORKSHOP GROUPS

Group 1 included: Botswana, Swaziland, Lesotho, Malawi, IDM, and U. B.; facilitator was Dr. W. Comm. It studied objectives 1 and 8.

Group 2 included: Botswana, Malawi, Swaziland, Lesotho and U.B. It studied objectives 2 and 9.

Group 3 included: Lesotho, Swaziland, Botswana, Mr. S. Smith and Prof. D. Morley; facilitator was Dr. J. Martin. It studied objectives 5 and 6.

Group 4 included: Dr. Folmer, Dr. Rosenthal, Dr. Mburn, Mr. L. Mailloux and Mr. Trydell. It studied objectives 4 and 7 with Group 5, which included: Dr. L. Vanderschmidt, Dr. Sullivan, Dr. C. Dubois, Mr. Strange and Mr. Kuria.

Groups' discussions of the workshop objectives were reported as follows:

GROUP 1

In its study of Objective 1, Group 1 discussed the relevant feasibility of the MPH program in terms of political feasibility, institutional arrangements and infrastructure, technical feasibility, financial implications and content.

It decided that the program is politically feasible because "It is evident that it could serve the felt need." The IDM program is an

example of agreement on the need and commitment to setting up a regional program. MPH could be linked with existing institutions, and faculty could be mobile and co-teaching should be promoted. Course content should be agreed upon and geared to the region's needs.

Additional costs are anticipated for upgrading/additional facilities and for providing housing for visiting training personnel. A full-time coordinator/director and office facilities are needed; also expansion of library, support equipment, and staff.

Recurrent costs will be for personnel and faculty, including overseas and regional co-lecturers. Co-lecturers will need training and upgrading to take over the program.

Institutional arrangements recommendations include:

1. For setting up the program, use the IDM experience i.e. for establishment of a memorandum of agreement on the need and commitment.
2. Consider possibility of linking the program with existing institutions.

3. The faculty could be mobile and co-teaching should be promoted.

Content should be agreed upon and geared towards the region's needs (directed by setting).

Financial Implications:

1. Initial costs (capital, cost);
2. Additional costs (Upgrading/additional facilities -- buildings, classrooms, student dormitories, also, housing for visiting facilitators/instructors/faculty members for 3 months);
3. Full-time coordinator/director (office and accommodations), expansion of e.g. library and support equipment and staff (Will MPH follow IDM arrangement of having facilities in all countries?);
4. Recurrent costs (personnel, faculty from overseas and the region co-lecturers).

Long-Term Considerations include: duration of region's dependency upon the "mobile" program; co-lecturers' need for training/upgrading in preparation for taking over the program.

Conclusions: While some generalizations need clarification, conceptually the proposal is feasible; it should be validated with other countries as to its application to their needs.

Group 1 endorsed the organization of a Regional Training Center for Public Health and concluded that Objective 8 will be covered with the regional center's organization.

Agreement among participating countries is needed on the following:

- A coordinating mechanism at the Policy Level;
- Location of various components, e.g. Headquarters;
- Finance by donor and participating countries;
- Training levels, e.g. Diploma, bachelor's, etc., including entry requirements and career pathways.

Group 1's recommendations were:

1. Establishment of a Regional Public Health Training Programme.
2. Set up a small Task Force to further refine the workshop's deliberations and to formulate terms of reference for those which require further study.
3. Establish a coordinating mechanism at the policy level to which the Task Force reports. The coordinating mechanism should:
  - a. Be responsible for the endorsement of workshop recommendations; consideration of, and making decisions about, the

location of the various components of the program; finance, participating countries, donors; training levels; entry requirements.

b. Prepare a final proposal, submit it to potential donors, and make decisions on the long-term institutional and organizational arrangements for the training program's implementation.

## GROUP 2

After discussing Objective 2, Group 2 reported research currently underway, such as: Work at the National Research Council, Malawi; the University Research Unit and MOH Research Committee, Swaziland; Also, that collaboration by the National Health Institute and National Institute of Research and Development of Botswana with MOH in health research was possible.

A "National Research and Development" Conference to promote health research was held, and six countries attended a research training workshop -- Zimbabwe, Malawi, Botswana, Swaziland, Lesotho, Zambia.

Research training is part of the nurses' core in Botswana. Bibliographies have been compiled.

Group 2 recommended "immediate establishment of a Health Research Resource Center in the region to facilitate the development of a Mobile Public Health Training Programme." It also recommended the following steps and time tables for the establishment of a Health Research Resource Center:

1. Agree to create a Research Center Commission, prepare terms of reference and constitution. (6 months).
2. Assess each country's resources and needs. (3-6 months).
3. Decide on a host country when the assessment report is approved.
4. Prepare a project document (Total of 6 months; 2 months to draft) which contains:
  - a. A list of each country's resources and needs (1 month to circulate);
  - b. Expectations and specific objectives for the center (1 month to review and modify);
  - c. Structure of the Center (1 month to prepare final document; 1 month for final review). Includes: facilities; staffing; equipment; library; operations; Countries' supervision of policy, government, and funding;
  - d. Costs and possible funding (internal and external);
  - e. Short- and long-term plans;
  - f. Evaluations.
5. Hold a meeting for approval of project document (3 months).

After discussion of Objective 9, Group 2's recommendations were:

1. Use research as a tool in daily work as a problem-solving activity.
2. Use a community-oriented approach with local personnel as staff.
3. Those who will use research results should define topics.
4. Create a Regional Research Center to house current and past research topics, curriculum for research training activities and research methods.
5. The Research Resource Center requires a full-time coordinator and multi-national staff. It should be created immediately; should produce periodic newsletters; funding should be from each country in the region and it should be established in one country. It should provide bibliographies of research materials and be linked to initial

data systems.

6. A yearly forum should be held to discuss research activities, needs, issues, and to evaluate research proposals submitted for funding.

7. Training workshops are needed to teach methodology and improve skills.

### GROUP 3

After discussing Objective 6 and the organization of training, Group 3 noted that the training program's effectiveness may be limited by loss of medical health professionals into private practice, and that this problem may require "appropriate actions by respective governments."

Group 3 recommended organization of training as follows:

1. Teachers will be drawn from the following categories, and the mixture will be governed by the need to provide sufficient skills to cover the entire curriculum. The categories are:

- a. Local professional trainers and service personnel;
- b. International teachers from the African Region, Other Developing Countries, Developed Countries, International Organizations.

2. Teachers will be required to have educational skills, and, appropriate technical skills and qualifications (e.g. at a level higher than trainees).

The group noted that setting too high a level of teachers' qualifications could lead to difficulty in recruitment or "divorce from reality." Also noted was the need for providing opportunities for further training for locals.

3. Curriculum Development should include assessments of community health needs, professional skills, and trainers' needs.

4. Location will be determined by the availability of appropriate existing educational institutions, including those responsible for distance learning and curriculum content.

5. Learning opportunities should be established in between the stated modules, to cover the period between the 12-week modules of the course.

Group 3 Endorsed Group 5 recommendations.

Group 3 further recommended that leaders of the four country groups should meet to make arrangements for official country commitments to cooperate; to inform the other countries of the region about the workshop outcome and further investigate their interest in cooperation; and to keep the donor and international organizations in touch with developments.

It also recommended that Group 3 reports serve as reference for a country meeting and subsequent curriculum development.

It recommended consideration of existing institutions, core staff, national base, existing facilities such as NHI, IDM and universities. It also recommended study of: how courses can be promoted and block teaching can be arranged; cumulative build up on courses (NHI's, IDM, University); strengthening of existing staff; funding (intercountry, donors, tuition).

After its discussion of Objective 5, Group 3 recommended that

service, trainers, and managers be trained at the B.A., M.P.H., and Short-term levels.

Major themes decided upon were: Community involvement, intersectoral action, educational skills, identification of health problems (methods, at-risk groups, interventions), management skills, role of hospitals, and research.

Consideration should be given to the time between courses, supervision and evaluation.

#### GROUP 4

Group 4 noted that Natural "resources" -- human, physical, financial -- should be pooled "for purposeful technical cooperation for effective development of health manpower in Southern Africa." The present cooperation among the SADCC countries is "desirable, feasible and necessary." SADCC countries agree on a common health goal, and therefore, on common Human Resource Development Objectives.

Options (in theory) are fixed or mobile training, at a single location or at multiple locations, which are either integrated or specialized per location.

After discussion of Objective 4, Group 4 recommended "that a multiple-specialized School of Public Health be created." It recommended the following steps (Estimated time steps: 1-8...12-12):

1. Each country wishing to participate needs to identify itself and nominate a team to work in planning a Task Force (2 months).
2. Building on reports by Tulane, NORAD, etc, identify national resources and institutes within the region (3-12).
3. The Task Force compares national manpower needs with identified resources (3-12).
4. Dialogue with participating countries should lead to a profile of a School of Public Health that meets identified UNMET needs (2-12).
5. Seek national commitment for a School of Public Health.
6. Ensure proposal within SADCC Framework.
7. Approach Donors.
8. Draw up plan of operations.

#### GROUP 5

Group 5 listed the following basic considerations:

1. The initiative must come from the countries now "the ball is in the BSL court."
2. The critical mass appears to be BSL/Malawi.
3. A School of Public Health is needed.
4. A master's program is most needed.
5. Nurses form the major group of health workers.
6. Resources from outside will be required initially (in addition to present resources).

The strategy should include use of existing structures (health institutes, universities, IDM), and reciprocal recognition of courses.

The steps to be taken include:

1. High level committment;
2. Application to African Foundation for a planning grant to keep up momentum;
3. Establish manpower units to do inventory of existing facilities, which groups to train, and career ladders.

4. Form a Board of Governors (Ministers, PS, Institution Reps, IDM Director).
5. Appoint a steering committee, study financial implications, and scrutinized curricula needs.
6. Consider new aspects, resource, research, service, and other aspects of the proposed School of Public Health. Are immediate consultancies needed?
7. Draw up an assistance proposal and submit it for funding.
8. Select some future staff for training.
9. Have the Board of Governors make formal negotiations for recognition degrees by Universities.
10. Study relationships of student intake in countries (how many, from where, when).
11. Determine recruitment budget and phasing of assistance from outside.

Group 5's recommendations are as follows:

1. That the recommendations be followed up officially to obtain commitment of the four countries (immediate).
2. That a plan of action with a time frame be drawn up, e.g.:
  - a. Board of Governors framed (3 months - May);
  - b. Planning Limit Steering Committee work up proposal (3 months-August);
  - c. Proposal\* Submitted for funding/support (August, September, October);
  - d. Proposal approved (October, December, January);
  - e. First Arrangements (January-March)
  - f. Selection of Students (April-May);
  - g. First Intake (August, 1986).

\* (The proposal for assistance should include at least: history of training, summary of needs assessment, curriculum/objective, student projection, faculty required, field courses, costs of facilities, management team, immediate and projected faculty training, external staff required.)

3. Consideration be given to starting with a bachelor's degree to allow intake from Post Basic Community Health Nursing and to prepare candidates for the next level, then go on to developing a master's program. (Methods of assessment could be worked out to allow for some to be admitted directly to the master's program.)

In reporting on its discussion of Objective 4, Group 5 listed educational resources, such as: The National Health Institutes and Universities; Medical Schools of Zambia/Zimbabwe/Mozambique; and other facilities, such as IDM (regional); Botswana B.E.A. Nursing Education. Also, WHO Regional Health Development Centre, Tropical Disease Research, Health Learning Materials; Blair Research, Nursing Association, and Medical Association.

Group 5's Recommended Ways and Means Pooling includes:

- \* Phasing technical cooperation, e.g. Strengthen within BSL;
- \* Start with an element already used, e.g. Nursing Education;
- \* Build on Intercountry exchanges, e.g. Evaluation PHC Accreditation Exams;
- \* Survey Existing Plans -- Manpower/Institutions/Conference;
- \* Periodic Workshops/Conferences to: Plan Exchanges, Staff Availability, Use of Sabbatical leaves, Self-learning Modules;
- \* Try to involve all SADCC countries; some have more needs than

others.

### FINAL RECOMMENDATIONS AND CONCLUSIONS:

The consensus of the five groups should be sent to Governments of the region by workshop participants.

That the Ministry of Health of Botswana send letters to its counterparts and the Manpower Development Coordinator of SADCC seeking: consultation, informing of commitment, endorsement, formation of High Level Steering Committee, and formation of a TASK FORCE of Technical Personnel.

That a time frame of two years be set to capitalize on the enthusiasm of the countries, donors, academic institutions and international agencies.

### SPECIFIC RECOMMENDATIONS:

1. Establishment of a Regional Public Health Training Program as soon as possible.
2. Establishment of an Inter-Country Steering Committee working with a TASK FORCE.
3. Invite other SADCC countries to participate.
4. Steering Committee should issue progress reports regularly and make reports available to donors.

Further, Dr. David Sebina, MOH Botswana, has requested Tulane to maintain its assistance, and to continue its catalytic role in all phases of the planning and implementation; also, to have a role in the drafting of agreements with different institutions and universities, and in deciding which ones will award the degree in the final phase of the implementation.

Further, the consensus at the workshop was that there should be continued cooperation and participation of the regional office of WHO. A working relationship similar to that between the Boston University SHDS project and the regional office of WHO would seem to be most appropriate, and this relationship should prevail throughout all phases of the planning process and continue after implementation. The relationship between Boston University SHDS and WHO was described in the discussion following Dr. Vivian Johnson's presentation, as follows: Funds coming from USAID are provided to Boston University. These funds also go directly to WHO Brazzaville, together with all funds from other bilateral and international agencies, for their part of the expenses.

CONFERENCE FOLLOW-UP RECOMMENDATIONS

From: Dan Matthews, Afritec, Inc.  
1346 Connecticut Ave. NW, Suite 905  
Washington, DC 20036  
202-223-1807

Official proceedings did not mandate Tulane to continue in its "catalyst" role of assisting development of national and regional training programs in Public Health. To accomplish this, Dr. Sebina should request, in writing, that Tulane continue in its liaison role to Botswana as an ex-officio member of his Task Force for the Development of the "new School of Public Health in Southern Africa." In short, he should request that Tulane provide administrative and consultative support for the group's planning meetings towards implementation of the program. Further, the follow-up activities toward achieving SADCC endorsement must show that the project is NOT entirely a U.S. effort; For example: Swaziland's Tim Zwane, should be invited to join the proposed Task Force, Working Group, etc.

Zwane's experience in launching Swaziland's SADCC manpower and training priority sector could be useful. Swaziland's SADCC priority could expedite the SADCC Council of Minister's endorsement of the program. Tim, his father-in-law, Dr. Absalom Villikazi, and I have worked together quite well on all projects undertaken.

I will design a step-by-step action plan for implementation of the project as requested. However, Tulane must obtain the necessary authority to serve as back-up either to the Task Force or, perhaps more importantly, to Dr. Sebina's Ministry to assist him in implementing the planning activities. This process will make obtaining some planning funds from USAID easier, while I work on Congress to have the program endorsed before USAID's appropriations are approved. I have a copy of the Zimbabwe Ministry of Education's letter (written by ADC) and requesting ADC's services; this could serve as a guide if Dr. Sebina is in agreement.

I will need an official or unofficial revision of the report. A version for Capitol Hill will have to be succinct and edited so that key portions will be read. I will review your report and make recommendations where necessary before it's published and disseminated. Interested parties (including the SADCC Secretariat) can be kept abreast of activities as they evolve through a newsletter, which is also useful in providing donor or potential donor agencies concise progress reports.

Perhaps the Kapnek Foundation could provide desk space and a staff person in Harare, plus travel for the program; this would be a big plus. The recommended USAID planning grant could take a while, but will definitely be needed concerning the two-year implementation plan recommended by the Workshop. I will assist you in submitting a specific proposal to the Foundation. It will be important to identify and hire an administrator in the region who can relate well to Dr. Sebina, SADCC, and donor agencies. It may be necessary to visit Harare, Gaborone, and Mbabane, to establish the necessary recruitment and administrative linkages needed. The Foundation auspices would be best for gaining maximum attention and support for this suggested plan

of action.

I also recommend that a panel on the program be sponsored by Tulane at the joint annual meeting of the ASA-Middle East Studies Association in New Orleans, at the Hyatt Regency Hotel, November 23-26. The ASA Program Chairperson is Prof. Edmond Keller, Political Science Dept., University of California, Santa Barbara, CA, 93106. (805-961-4719). Because of his famine relief efforts, which are relevant to Tulane's efforts, Dick Gregory would be extremely effective as guest speaker.

The newly incorporated Fund for Black Medical Education in South Africa has approached me for consulting assistance. This group was responsible for the New York Times article entitled "Anti-Apartheid Medicine," by Robert Coles. The fund is being initiated by Herbert Kaiser, former Foreign Service officer and specialist on Southern Africa, and his wife, Joy. I suggested that they also consult with you and Dr. Baumslag for technical assistance on their advisory board. Highly recommended, they are likely to receive U.S. government funds at some point. They are working in the private sector for aid now.

I am on the Executive Committee of the U.S.-South Africa Leadership Exchange, which has been interested in the medical field lately, and I think some possibilities for a cooperative approach exist.

POST-WORKSHOP ENDORSEMENTS

Prof. T.E.E. Watts, Head/Department of Community Medicine, School of Medicine, University of Zambia, PO Box 50110, Lusaka, Zambia

In his letter of July 29, 1985, Prof. Watts said:

After receiving your report (on the February Gaborone, Botswana, Workshop), I had a short discussion with the Dean and we are certainly interested in your project and would like to be kept informed. We had hoped to organize a Master's in Community Medicine in Zambia but we still have great difficulties in staffing and believe that it would not be appropriate to start our own unsupported program at this time.

Dr. David Sebina, Ministry of Health, Gaborone, Botswana.

In a telegram of August 30, 1985, Dr. Sebina reported:

BLS Countries have agreed to have a Task Force meeting for two days from October 21. As soon as the host country approval is formally received, I will contact you. A tentative agenda has been drafted.

Professor Sid Tickton, Academy for Educational Development, 1255 23rd St. N.W., Washington, D.C. 20237.

In a telephone conversation with Dr. James P. Carter, TSPHTM, October 1, 1985, Prof. Tickton said that his organization had also come to the conclusion that training in the region with technical assistance from abroad was the most appropriate, efficient, and cost-effective method for graduate school education for Africa. He endorsed the proposed Regional Public Health Training Program in Southern Africa.

Boston University SHDS Project (See description in Public Health Programs Reviewed at Botswana Workshop, Dr. Vivian Johnson, p. 53).

Dr. James P. Carter was informed that the new SHDS Project Implementation Documentation was being written to focus on the Regional Training in Public Health and Primary Health Care.

AID PROPOSAL TO ORGANIZE AN AFRICA-WIDE PROJECT FOR DEVELOPMENT OF PUBLIC HEALTH MANPOWER EDUCATION PROGRAMS, FROM AID, WASHINGTON, D.C.

Prepared by: Dr. James D. Shepperd, Regional Health Officer, Regional Economic Development Service Office, West and Central Africa, USAID.

PROJECT BACKGROUND

Introduction:

Health development in Africa faces many constraints; lack of adequate manpower is among the greatest. AID has made great strides in contributing toward making African populations reasonably healthy so that they can participate in the continent's economic development.

Early health manpower development efforts focused on physician and nurse training in hospitals, which produced very few trained nationals to provide leadership, manage health projects, teach, or perform research.

With the change in strategy toward health for all by the year 2000 through Primary Health Care, it's clear that Africans must be trained to conduct their own immunization programs, deal with the difficult problems of delivery of rural health services at the village level, manage multi-million dollar health projects, plan national health programs and strategies, teach their own health workers, and develop coherent and cohesive health policies and practices.

Most recent AID-funded health projects have invested heavily in participant training as well as in-country training in Africa, but these programs have been limited to short-term courses, seminars and workshops. There is insufficient capacity to train the cadre of Africans needed to manage health programs in public and private sectors, to serve as teachers in public health educational institutions, and to conduct research needed in public health and tropical diseases.

Background and Need for Health Manpower Training:

While no systematic health manpower development plan has been made for the African continent nor for most African countries, there are a few basics which outline the need for public health manpower training centers.

At the dawn of African independence, few, if any, countries were capable of training their own health manpower at any level except for nurses. Nearly all countries could produce nurses at the lower skill levels found in developed countries. Many programs required 10 years or less of secondary education for admission. A few countries had begun to train physician substitutes in the form of "dressers", medical assistants, etc. Almost all manpower training focused on preparing curative service health workers. The preventive services were provided by foreign-run mobile teams, as in the "Grandes Endemies" approach. There were no public health training programs in epidemiology, maternal and child health, environmental health and sanitation, nutrition, health planning and management, biostatistics, tropical diseases, etc. The few health workers interested in these topics were sent to European and American public health training institutions.

In 1976, the World Health Organization and AID joined forces to organize a project to strengthen health delivery systems in West and Central Africa. The project's goals included training health planners and managers, nurse supervisors and teachers, disease control program

managers, field epidemiologists, applied research investigators and trainers of village health workers, and information system development. This project functioned mainly through a series of short-term courses and seminars, consultations, teaching modules, and provision of teaching equipment. The institutions for management joined themselves together in a network relationship but still offered only a few short courses in public health management development. No new long-term public health programs were developed that could compare with a Diploma in Tropical Medicine from England or a Master of Public Health from the U.S.A. Programs in their respective countries serve as the basic training program to prepare health managers, technicians, and teachers.

The following is an effort to estimate the need in Africa for persons trained to the level of MPH. For this purpose, we can use the planning figure Zaire calculated to justify its AID School of Public Health Project. Zaire stated that 750 MPHs were needed to manage its Ministry of Public Health programs over a 10-year period. They planned to use the MPH graduates as follows:

|   |            |
|---|------------|
| MPH Managers needed:                    |            |
| - Rural Health Zones                    | 300        |
| - Urban Health Zones                    | 300        |
| - Regional & Central Ministry Directors | 150        |
| Total                                   | <u>750</u> |

(e.g. Expanded Immunization Program - 3 MPH,  
Bureau for Water and Sanitation - 3 MPH,  
Schools of Medicine, Nursing - 2 each etc.)

The population of Zaire is 30,000,000. This estimate gives approximately 25 MPH/million population. If we apply half of this ratio, i.e., 12.5/1 million, to other countries, we get a need for MPHs that ranges from 12 in the Gambia to 1453 in Nigeria, with a total of 6,084 for 39 African countries.

Similarly, the number of nutrition, health education, environmental health, and population specialists needed can be estimated to be 943, at a ratio of approximately 1/500,000 population.

This rough planning figure is so high that training anywhere near this number in the U.S. or Europe is impractical, too costly, and not likely to happen in any case. Add to this figure the need for tropical disease workers, biostatisticians, water supply and sanitation technicians, public health nurses, etc., and it becomes clear that these workers must be trained in large measure on the African continent!

Why a regional project with a bilateral approach rather than a series of bilateral public health training projects?

1. It is well recognized that development of educational programs, their faculties, educational materials, etc., takes a long time -- 10 to 20 years. It would be unusual for a USAID mission to maintain its interest in a slow-dispensing, slow-implementing, low-visibility project like health training centers.

2. There is a need to: Coordinate and share educational resources among the institutions for economy of operation; arrange, finance and control student fellowship programs among the participating countries; standardize the quality of the product produced by the project and to collaborate on research work.

3. It will be far easier to work with major donors, such as World Bank, the African Development Bank, WHO and UNICEF on a regional basis targeted to national institutions.

4. There is an established pattern for African countries to share

national training resources.

### PROJECT DESCRIPTION

AID has proposed (1986 ABS) to organize an Africa-wide project for the development of public health manpower education programs. These programs are to be developed at African institutions found willing and able to serve as the site for such programs as Bachelors' degrees in Public Health Nursing, Health Education, Sanitary Engineering and Environmental Management; Masters' degrees in Public Health, Tropical Medicine, Tropical Disease Research, Nutrition, Maternal and Child Health, Population Studies, Health Education, Health Administration; and Diploma in Tropical Medicine.

These programs would be linked by a coordinating mechanism which would administer scholarships to participating countries, facilitate faculty exchanges and collaborative and cooperative research studies, and provide a mechanism for peer review of research proposals and general exchange of information. The coordinating activity would include the launching of technical resources to the institutions for program development. As currently envisioned, each institutional program would function as a bilateral project similar to the CCCD organizational arrangement with a full-time assigned project staff under contract. The persons assigned to the institutions would come together with their counterparts in periodic meetings at regional level to provide policy and program guidance and to make administrative decisions.

The final outcome of the project would be the development of 8-10 public health and tropical medicine training and research programs in African institutions. The programs would meet international standards for education so that much of the manpower needed to reach the goal of "health for all by the year 2000" could be trained in Africa. It should also result in more effective use of the personnel trained in U.S. institutions because they could return to national training and research institutes as teachers, investigators, managers, administrators, etc.

A field study is needed to determine how best to organize such a project which involves a number of institutions, countries and agencies, and, the feasibility of the proposed design concept. A field assessment team is needed to help AID determine which public health disciplines should receive priority attention, which institutions would provide the most likely sites for successful program implementation, what organization strategy will best serve to "regionalize" the training program, and how to bring the program managers into a regional decision-making process; also, how should USAIDs relate to the "regional" project, and what should be the nature and role of the "regional" coordinating and support effort.

Consequently, the assessment team's recommendations would be the appropriate institutional composition and the type of technical activities and cooperation needed to develop these programs and any complementary equipment which might be required. AID does not anticipate providing large amounts of capital assistance, e.g., for construction; such funds may be available from World Bank and African Development Bank. To be successful, the recommended activities need to be long-term and relatively substantial; the project needs to focus on eliminating constraints (health development, management, financial, technological, organizational, etc.) to augment African institutions capacities to produce the manpower they need.

This PIO/T describes the scope of work for a five-person team to seek the information requested. The team's report will be presented to and discussed by a multi-donor, multi-country meeting to decide the project's shape, scope and size. After the design meeting, a Project Identification Document (PID) will be written by the team for submission to AID/W review.

Level of Effort

- Public Health Education Specialist - 2 months
- Epidemiologist & Tropical Diseases Specialist - 1 month
- Nutrition Planning, Research & Education Specialist - 1 month
- Health Planning/Management Education Specialist - 2 months
- Conference Organizer - 10 days
- Research Assistant, Local Hire - 30 days

Schedule

|                          |         |
|--------------------------|---------|
| - U.S. orientation       | 3 days  |
| - Abidjan                | 2 days  |
| - Brazzaville            | 2 days  |
| - Field                  | 40 days |
| - Abidjan                | 10 days |
| - Washington             | 2 days  |
| - Presentation of Report | 1 day   |
| Total                    | 60 days |

STATEMENT OF WORK

Objective:

The objective of the contract is to produce a Project Identification Document (PID) acceptable to AID, participating African countries, and collaborating sponsor agencies. The study will identify a program of specific activities for AID financing which address the immediate and long-term needs for public health training in Africa.

The contractor will collect the information required from African institutions and present an oral and written document which will serve as a PID for AID, and statement for discussion with potential collaborators.

Approach to Work:

The work will be undertaken in two phases; the first phase tasks (review and evaluation) are to be completed before the second phase tasks (strategy and program) begin. In assessing the health sciences education and training sector, the consultant will rely on available data as well as generate additional data through site visits to develop and confirm institution profiles. The consultant would note further when reviewing and evaluating the sector that the Phase II prospective strategy should be based on the principles of the efficient use of resources and, to the extent possible, balanced regional developments and support to national institutions.

1. Phase I - Review and Evaluation

A. Review of Literature:

The team will review all available documents on the institutions, such as inventories of institutions, prospectus, calendars or catalogs, and relevant reports, that describe their curricula, faculty and facilities, entrance requirements, degrees/diplomas awarded, size

and distribution of enrollment, as well as any reports evaluating their programs or institutions. For example, review of a report on Francophone Health Training Institutions in West Africa (1985) reveals that 50% of the institutions have a substantial foreign student enrollment, ranging from 31-92%. ( From draft, Survey of Francophone Sahelian Educational Institutions, Jeffalyn Johnson Associates, March, 1985.)

Research Assistant - To review English and French documents on the subject of health manpower development to be used by the visiting team of education experts. Documents will be obtained from AID, OMS, UNICEF, World Bank, ADB, MOH, GOIC and other organizations as deemed appropriate. He will prepare an Annotated Bibliography of the references to be submitted to the RHO.

A list of sites to be visited will be submitted to the Project Officer for a decision before starting field work.

### B. Field Work:

The PID assessment team will travel to the selected institutions to collect information needed by AID and other potential project participants to make decisions regarding project development. The team will be divided into smaller units to appropriately use the personnel available to visit the ministries of health in selected countries and the institutions (approximately 4 locales per team) agreed upon with the project officer and USAID Missions.

At each location, the team member will determine the following:

1. For the Governments - Describe national health care policies regarding primary health care and training for all levels of public health workers.
  - a. Will they send students - project supported and government supported, to regional training programs?
  - b. Will they support any additional cost at the institution of an expanded program in their country.
  - c. Will they accept students from other countries if tuition is paid by project?
  - d. What are their priority manpower needs?

### 2. For USAID Missions

- a. Determine Missions' willingness to have a bilateral health training center program in the country, in an arrangement similar to that of the CCCD bilateral projects.
- b. Willingness to participate in project management activities at the regional level.
- c. Mission's assessment of the need for health manpower and the government's ability to use more and better trained people.
- d. USAID perspective of the institution(s) to be studied. Existing or planned potentially complementary projects.

3. For Donors (African Development Bank, WHO, UNESCO, Bilaterals) - Summarize the activities and strategies of the above potential donors, including a discussion of:

- a. Their level of interest in manpower training centers.
- b. Funds available for type of support -- training, buildings and equipment, educational materials.
- c. Timing of collaboration between AID and other donors in project design and implementation.
- d. Describe existing training programs supported.

#### 4. For Institutions - General

- a. What are current programs? Description of admission and graduation levels, size of enrollment, faculty/student ratio, general adequacy of facilities.
- b. Is institution willing to start or enlarge public health training program available to residents of other countries?
- c. What is tuition charge for non-nationals, nationals, and level of subsidization?
- d. Determine what inputs would be needed to strengthen or start a training center program with international standards.
- e. What libraries and laboratories now exist?
- f. What are field work facilities? Is there collaboration with government or NGO services in providing field experience?
- g. Are there collaboration or links with other local and overseas institutions? Does your institution or program now participate in an interstate student or faculty exchange activity, such as CILSS, AFRO Management Network, etc.?
- h. What is the enrollment forecast? Is the enrollment coordinated with the country planners? What would be the maximum enrollment size that can be supported?
- i. Will Master's or Doctoral graduates increase the resou pool of teachers?
- j. Where do present graduates obtain post-graduate training? What would be the advantages/disadvantages for localizing this training?
- k. How are the institution's operational costs financed?

#### 5. For Institutions Identified for Specific Programs

##### General Master of Public Health

- a. Would a U.S. model Master of Public Health (MPH) training program meet national needs for managers, teachers, leaders, research investigators in your country?
- b. Would an MPH program match your institutional programs, goals and philosophy?
- c. Is there currently a program offered similar to an MPH? It would contain at least core courses in Biostatistics, Epidemiology, Public Health Administration, Environment and, have as options, MCH, Nutrition, Health Education, Public Health Nursing, Microbiology, Parasitology, etc.?
- d. What steps would need to be taken to convert your existing educational program into a U.S. MODEL BSPH or MPH?
- e. What educational level (Bachelor's, Master's) would seem most appropriate to meet the need for middle level and senior level public health managers, teachers, etc?
- f. Are there linkages to other health science training and research institutions?
- g. Is it feasible to train physicians, dentists, veterinarians, and senior nurses in the same academic program?

##### Nutrition Program

- a. What is present nutrition program emphasis: clinical, metabolic research, nutrition planning, social/community nutrition, or food and agriculture in nutrition?
- b. In the program emphasis identified, does it provide adequate background for advanced or Master's degree studies, e.g. in a program

with clinical nutrition emphasis, are there sufficient background courses in physiology, biochemistry as well as human nutrition; and, with nutrition planning emphasis, courses in statistics, economics, etc.?

c. Do other programs such as agriculture, medicine, public health, food science, home economics, education, etc., include nutrition?

e. Are the courses set in the national or regional context?

f. Is institution interested in expanding existing program to reach Master's level? What would be program emphasis, i.e. clinical nutrition, metabolic research, etc.?

g. If it is, what inputs are needed in terms of staffing, facilities, student accommodation, and other support?

h. Does institution see a local/regional need for this program? In which area(s)?

i. What role does the institution foresee for M.Sc. graduates in the public/private service sectors? What would be the employment prospects of graduates? Should students be seconded by their employers/governments?

j. What research is being conducted or planned -- applied, clinical, biochemical, etc.?

#### Health Management Training Program

a. Would the institution be interested in presenting a long-term administration, planning and management educational program for the health sector?

b. What health management training does the institution now offer on: Routine basis; periodic basis; ad hoc upon request basis?

c. Would links to other institutions or programs in health management help develop your institutional program?

d. What management and planning programs and courses are now being offered?

e. Are there opportunities for field training or "stage" -- existing or planned?

f. Is applied (operational) research being conducted?

#### Tropical Medicine Training and Research Program

a. What training is now being carried out in tropical diseases?

b. What research is being conducted by the institution? Funding Sources? Location? Collaboration and cooperation with other institutions/countries?

c. What intra-state link does the institution have for training and research (WHO-TDR program, OCCGE, etc.)?

d. What is the capacity of the various training and research programs to accept additional students or investigators?

e. What are major strengths, barriers and constraints faced by the tropical diseases program?

#### 6. Institutions that may be considered:

a. University Centers for Health Services

|          |             |
|----------|-------------|
| Dakar    | Accra       |
| Yaounde  | Ibadan      |
| Abidjan  | Brazzaville |
| Kinshasa |             |

b. Public Administration Institutions

|       |        |
|-------|--------|
| PHD   | Douala |
| GIMPA | Accra  |

- |  |              |
|--|--------------|
| INADES                                       | Benin City   |
| ENAM   | Brazzaville  |
| ENA  | Abidjan      |
| Others                                       |              |
| c. Health Development Institutes             |              |
| Cotonou                                      |              |
| Harare                                       |              |
| d. Public Health Institutes                  |              |
| INSP   | Abidjan      |
| INRSP  | Bamako       |
| e. Tropical Medicine Institutes              |              |
| OEAC   | Yaounde      |
| OCCGE  | Bobodialasso |
| Inst. of Tropical Medicine                   | Liberia      |
| Lusaka                                       | Zambia       |
| OCCGE  | Niamey       |
| f. Nutrition Institutes                      |              |
| ORANA  |              |
| g. Population and Family Planning Institutes |              |
| Harare                                       |              |
| CAFS   | Nairobi      |

## II. Phase II - Strategy and Activities

Based on the Review and Evaluation findings, the consultant should make the following recommendations:

### A. Strategy

The consultant should develop a 5 to 10-year strategy for support to 8-10 health training institutions throughout Africa.

### B. Activities

The consultant should propose (and recommend location for) a program of specific activities for AID financing which will implement the strategy. This program should complement, to the extent possible, other activities financed by AID (e.g. SHDS and CCCD) and other donors. Recommendations for activities should be described in sufficient detail to be included in an AID PID in accordance with AID Handbook 3, Chapter 2, requirements.

### C. Conference for Project Design

The contractor will organize a conference no later than 12 weeks after the effective date of the contract at which the findings of the Assessment Team will be discussed with representatives of 10 institutions visited, and AID and WHO officials. The purpose of the conference is to reach some consensus on the direction, relevance and need for AID assistance in health manpower development. WHO/AFRO will be asked to convene the conference as they have done for earlier regional projects.

The contractor will assist the REDSO/WCA Health Officer to conduct the conference in Abidjan or at a site to be chosen, and to organize the logistical support for the above conference. This will include the following:

1. Make arrangements for meeting rooms, recording devices, sound amplifying, duplicating, projection equipment and other supplies and equipment needed for a conference of 15-20 people.
2. Have the program prepared by REDSO/WCA, duplicated and ready for distribution as well as prepare other conference documents and reference materials.
3. Arrange all other logistical support, including at least:
  - a. airport and local transport;
  - b. hotel accommodations;
  - c. financial management - per diem for participants;
  - d. travel arrangements;
  - e. clerical support; and
  - f. provide information about Abidjan and the Ivory Coast.
4. Arrange a small, informal social affair for the participants and guests.
5. Coordinate with the meeting site management and the Ivory Coast Bureau of Tourism.
6. Maintain a daily log of events of the meeting, collect documents submitted, and prepare a summary of the proceedings.
7. Responsible to carry out the procedures to obtain goods and services listed in the budget.
8. Interpreting and translation services.

## REPORTS

The consultant shall prepare and submit draft and then final reports, each with the following three sections:

1. Review and Evaluation -- Which will describe and analyze the health education and training sector in Africa.
2. Strategy -- Which will describe the proposed strategy for intervention for foreign donor financing and will be based on the review and evaluation findings.
3. Activities -- Which will identify potential projects described in AID Handbook 3, PID Format, which will implement the recommended strategy.

The draft report will be submitted within 8 weeks of the effective date of the contract in 10 copies (5 in English and 5 in French) to REDSO/WCA for review and comment. The final report will be submitted in the same manner within 13 weeks of the effective date of the contract, following the conference on project design and incorporating those conference recommendations supported by REDSO. The contractor will also prepare a report of the meeting held to discuss the PID with participating African countries and other potential collaborators. Thirty copies of the conference report will be submitted (15 in English and 15 in French).

The contractor will make an oral report of assessment findings to the conference planning meeting, the REDSO/WCA project officer, and to AID, AFR/RA and TR/H in Washington.

Although the review and evaluation, strategy, and activities will be submitted in a single report, it is expected that the consultant will advise and consult with REDSO as the proposed strategy and activities are developed.

## QUALIFICATIONS OF ASSESSORS

### 1. Education Specialist in Public Health - Team Leader

Education: Ph.D, Dr. PH in a health discipline or M.D., M.P.H. with educational institution experience.

Experience: As team leader must be able to effectively organize a group of skilled educators into a team of Public Health Institutional assessors, this person should have 3-5 years experience with educational institutions in developing countries, preferably Africa. Team leader should have some familiarity with AID and United Nations agencies working in the health sector, including World Bank, WHO, UNICEF. Experience with U.S. public health accreditation of schools and programs would be useful. Experience with establishing, implementing and evaluating Master's level public health training program required. Must have background in basic environment, MCH, nutrition, health education, and administration.

### 2. Health Administration Educator

Education: Master's or Doctorate in Administration Management in health sector.

Experience: 3-5 years in training health management workers of various levels, Bachelors' Masters', and supervisors. Work in developing management training programs in less-developed countries is preferred. Experience with WHO and/or other networks of health

management training programs would be useful. Background in applied/operational research is required. Must have 2-3 years experience as practitioner of health administration.

### 3. Tropical Disease Training and Research Specialist

Education: At least a Master's degree, Ph.D. or M.D. with DTM or equivalent in tropical diseases.

Experience: 3-5 years as trainer and/or research investigator in tropical medicine, preferable with African or Asian experience with regional or national institutions. Previous work with AID, WHO, or African disease control organizations such as OCCGE, OCEAC, etc., would be useful. Experience with establishing laboratory and field (applied or clinical) research programs is important.

### 4. Nutrition Specialist

Education: Should have advanced degree in Nutrition (minimum Master's or equivalent) with nutrition planning as relevant to LDC's, or research in human nutrition as areas of specialization.

Experience: Should have at least 5 years' working experience in LDC's in the areas of nutrition planning on a national level, and in nutrition training institutions. Experience in working with international development assistance agencies would be useful.

### 5. Research Assistant

Education and Experience: Bachelor's level in Health Sciences from an African University. Must be able to read and write English (F.S. 3 level) and French (F.S. 4 level) and be generally familiar with health education programs in Africa.

### 6. Qualifications of Conference Organizer:

Experience: Experience with managing and conducting small to medium-sized meetings of a business nature; also, with preparation of proceedings from such meetings.

Languages: Fluent English and French.

(Note: The AID proposal endorses the regional public health training concept and incorporates recommendations and conclusions made at the February Botswana Workshop "Towards a Regional Public Health Training Program in Southern Africa".)

ESTIMATED BUDGETREGIONAL PUBLIC HEALTH TRAINING PROGRAM IN SOUTHERN AFRICA

PHASE I, II, III to be funded by USAID Botswana with CIK from WHO and MOH Botswana

PHASE I -- INITIAL START-UP (3 months)

|  |                 |
|--|-----------------|
| A. Personnel -----                               | \$9,250         |
| 1. Project Administrator 100% time -- \$6,250    |                 |
| 2. Administrative Assistant 100% time -- \$3,000 |                 |
| B. Fringe Benefits -----                         | \$1,850         |
| C. Consultants -----                             | \$ -0-          |
| D. Travel -----                                  | \$7,000         |
| 14 trips within Southern Africa Region           |                 |
| @ est. \$500/trip.                               |                 |
| E. Per Diem -----                                | \$3,920         |
| 56 days per diem @ est. \$70/day                 |                 |
| F. Supplies & Other Direct -----                 | \$4,380         |
| 1. Phone & Telex @ \$500/mo. ----- \$1,500       |                 |
| 2. Postage @ \$200/mo. ----- \$600               |                 |
| 3. Reproduction @ \$200/mo. ----- \$600          |                 |
| 4. Office Supplies @ \$200/mo.                   |                 |
| & equipment (\$1,000 typewriter,                 |                 |
| \$80 calculator) ----- \$1,680                   |                 |
| G. Office Space, Utilities, Furniture -----      | C.I.K.          |
| (Contribution In Kind WHO or MOH Botswana)       |                 |
| <u>SUBTOTAL PHASE I -----</u>                    | <u>\$26,400</u> |

PHASE II -- LIAISON (4 months)

|  |          |
|--|----------|
| A. Personnel (WHO pay scale) -----               | \$12,334 |
| 1. Project Administrator 100% time -- \$8,334    |          |
| 2. Administrative Assistant 100% time -- \$4,000 |          |
| B. Fringe Benefits (WHO scale) -----             | \$2,467  |
| C. Consultants -----                             | \$4,800  |
| 6 persons for 4 days each @ \$200/day            |          |
| D. Travel -----                                  | \$35,000 |
| 1. 6 persons from U.S.A. and/or Europe and/or    |          |
| Africa @ \$2,500/each round trip ---- \$15,000   |          |
| 2. 18 persons for each of 2 meetings             |          |
| @ est. \$500 per trip ----- \$18,000             |          |
| 3. 4 trips for Project Administrator             |          |
| within Southern Africa Region                    |          |
| @ \$500 per trip ----- \$2,000                   |          |

|   |         |                 |
|---|---------|-----------------|
| E. Per Diem -----   |         | \$12,880        |
| 184 days @ \$70/day (consultants 24 days,<br>participants 18 X 2 X 4 days = 144 days,<br>project administrator 16 days) |         |                 |
| F. Supplies & Other Direct -----  |         | \$9,200         |
| 1. Phone & Telex @ \$500/mo. -----  | \$2,000 |                 |
| 2. Postage @ \$200/mo. -----  | \$800   |                 |
| 3. Reproduction @ \$400/mo -----  | \$1,600 |                 |
| 4. Office Supplies @ \$200/mo -----   | \$800   |                 |
| 5. Printing -----   | \$1,000 |                 |
| 6. Conference Support -----   | \$3,000 |                 |
| G. Office Space, Utilities -----  |         | C.I.K.          |
| (Contribution In Kind WHO or MOH Botswana)  |         |                 |
| <u>SUBTOTAL PHASE II</u> -----  |         | <u>\$76,681</u> |

PHASE III -- COORDINATION AND RECRUITMENT (5 months)

|   |          |                 |
|---|----------|-----------------|
| A. Personnel -----  |          | \$15,417        |
| 1. Project Administrator 100 % ----                                 | \$10,417 |                 |
| 2. Administrative Assistant 100% ----                               | \$5,000  |                 |
| B. Fringe Benefits -----  |          | \$3,084         |
| C. Consultants, 28 days @ \$200/day -----                           |          | \$5,600         |
| D. Travel -----   |          | \$9,500         |
| 1. 2 persons from U.S.A.<br>@ \$2,500/trip -----                    | \$5,000  |                 |
| 2. 9 person trips w/in Southern Africa Region<br>@ \$500/trip ----- | \$4,500  |                 |
| E. Per Diem -----   |          | \$4,480         |
| 1. Consultants, 28 days @ \$70/day ---                              | \$1,960  |                 |
| 2. Project Administrator<br>36 days @ \$70/day -----                | \$2,520  |                 |
| F. Supplies & Other Direct -----                                    |          | \$8,500         |
| 1. Phone & Telex @ \$500/mo. -----                                  | \$2,500  |                 |
| 2. Postage @ \$200/mo. -----  | \$1,000  |                 |
| 3. Reproduction @ \$400/mo. -----                                   | \$2,000  |                 |
| 4. Office Supplies @ \$200/mo. -----                                | \$1,000  |                 |
| 5. Printing -----   | \$2,000  |                 |
| G. Office Space & Utilities -----                                   |          | C.I.K.          |
| (Contribution In Kind WHO or MOH Botswana)                          |          |                 |
| <u>SUBTOTAL PHASE III</u> -----                                     |          | <u>\$46,581</u> |

Phase IV and V to be funded by USAID, NORAD, The Netherlands, World Bank (Student Stipends Only) and Local Governments

-- All In-Region Personnel, Students Travel, Per Diem, Supplies, Funds are to go to WHO.

-- All Consultants U.S., African, & European; Travel, Per Diem, Supplies. Funds are to go to Tulane/Morehouse.

| <u>PHASE IV -- IMPLEMENTATION (12 months)</u>   |         |                  |                  |
|---|---------|------------------|------------------|
|   | WHO     | Tulane/Morehouse | TOTAL            |
| A. Personnel -----  |         |                  | 74,000           |
| 1. Project Administrators 100% -  | 25,000  | 25,000           |                  |
| 2. Administrative Assistants 100% -   | 12,000  | 12,000           |                  |
| B. Fringe Benefits -----  | 7,400   | 7,400            | 14,800           |
| C. Consultants from USA and/or Europe<br>& Africa/Faculty -- 2 mo. X 4 persons<br>@ \$2,500/mo. ----- |         | 20,000           | 20,000           |
| D. Travel -----   |         |                  |                  |
| 1. Faculty, 4 from USA and/or Europe<br>& Africa @ \$2,500/trip -----                                 |         | 10,000           | 10,000           |
| 2. Students, 30 @ \$500/trip -----  | 15,000  |                  | 15,000           |
| 3. Project Administrator Travel,<br>8 trips @ \$500/trip -----  | 4,000   |                  | 4,000            |
| E. Per Diem -----   |         |                  | 79,600           |
| 1. Faculty, from USA, Europe & Africa<br>240 days @ \$70/day -----                                    |         | 16,800           |                  |
| 2. Students, 30 X 2 mo.<br>@ \$1,000/mo. -----  | 60,000  |                  |                  |
| 3. Project Administrator, 8 trips,<br>5 days/trip @ \$70/day -----                                    | 2,800   |                  |                  |
| F. Supplies & Other Direct -----  |         |                  | 16,800           |
| 1. Phone @ \$500/mo. -----  | 3,000   | 3,000            |                  |
| 2. Postage @ \$200/mo. -----  | 1,200   | 1,200            |                  |
| 3. Reproduction @ \$200/mo. -----   | 1,200   | 1,200            |                  |
| 4. Office & Instructional Supplies<br>@ \$500/mo. -----   | 3,000   | 3,000            |                  |
| G. Office Space & Utilities -----<br>(Contribution In Kind WHO or MOH Botswana)                       |         | C.I.K.           |                  |
| H. Classroom Space, Furniture, Utilities --<br>(Local Government and Universities)                    |         | C.I.K.           |                  |
| <u>SUBTOTAL PHASE IV</u> -----  | 134,600 | 99,600           | 234,200          |
| A. Indirect cost for Tulane/Morehouse<br>@ 27% (Off Campus Rate)                                      |         | 37,980*          |                  |
| B. 15% indirect cost for WHO  | 20,190  |                  |                  |
| Total Indirect Cost -----   |         |                  | 292,370          |
| <u>GRAND TOTAL (All IV Phases)</u> -----  |         |                  | <u>\$442,032</u> |

\*Off campus 46,800 X 27% = 12,636  
 On campus 52,800 X 48% = 25,344  
 37,980

## BUDGET JUSTIFICATION

Phases I, II, and III are a continuation of the planning process. It is envisioned that funding in these three phases will be by USAID, Botswana.

Office and classroom space, utilities, and furniture are CIK from WHO and MOH Botswana for all phases.

In all phases, personnel will include a full-time Project Administrator and an Administrative Assistant/Secretary, based in the Southern Africa Region and working under the direction of Dr. David Sebina, Permanent Secretary of the Botswana MOH and Chairperson of the In-Region MPH Steering Committee. The budget includes salaries and fringe benefits at WHO scales, travel, per diem, supplies, teaching materials and costs for organizational meetings.

### PHASE I, INITIAL START-UP (3 months):

Salaries and Wages: Full-time project administrator (\$6,250) and administrative assistant (\$3,000).

Travel and Per Diem: A total of 14 trips @ est. \$500 each within the Southern Africa Region by the Project Administrator; per diem @\$70 per day.

Supplies and Other Direct: phone, telex, postage, reproduction, etc.

### PHASE II, LIAISON (4 months):

This phase includes two meetings in which the administrator, administrative assistant, and consultants meet with representatives of the countries who attended the Botswana workshop -- Botswana, Lesotho, Malawi, Swaziland, Zimbabwe -- and Angola, which has also expressed its interest in the project. The first meeting will be held to organize and decide upon strategies for obtaining national level support which can then be communicated through the countries' SADCC representatives; the second meeting will be a follow-up session.

Salaries and Wages: Full-time administrator (\$8,334) and administrative assistant (\$4,000).

Consultants: Six consultants for four days each at \$200 per day.

Travel and Per Diem:

Consultants travel from U.S.A. and/or Europe and/or Africa @ and average of \$2,500 for each round trip;

Additional 18 persons for each of the two meetings @ \$500 per trip;

Administrator's four trips within the Southern Arica Region @\$500 per trip.

Consultants and participants per diem is est. \$70 per day.

Supplies and Other Direct: Same as in Phase I plus printing and conference support.

### PHASE III, COORDINATION AND RECRUITMENT (5 months):

This phase includes making the final organizational arrangements with the universities and health science training institutes in the region. The In-Region MPH Steering Committee will also determine which courses will be held in which countries, e.g. Zimbabwe, at the university, or at the Institute for Development Management in Botswana. A mosaic pattern of curricula will be drawn up and memorandums of agreement signed by WHO, the MPH Steering Committee, and universities and other institutions. The program can be publicized to recruit students.

Salaries and Wages: Full-time administrator (\$10,417) and administrative assistant (\$5,000).

Consultants: Services for 28 days @ \$200 per day.

Travel and Per Diem: Travel for two persons from abroad @ \$2,500 per trip and for 9 person trips within the Southern Africa Region @ \$500 per trip. Per diem for consultants and administrator is \$70 per day.

Supplies and Other Direct: Same as Phase II.

#### PHASE IV, IMPLEMENTATION (12 months):

In this phase, students report for the first instructional sessions.

Salaries and Wages: Full-time administrators (WHO \$25,000; Tulane/Morehouse \$25,000) and administrative assistants (WHO \$12,000; Tulane/Morehouse \$12,000).

Consultants: Four faculty from USA and/or Europe and/or Africa @ \$2,500 per month.

Travel and Per Diem:

Faculty -- four faculty @ \$2,500 per trip, plus \$240 days per diem at \$70 per day;

Students -- 30 students @ \$500 per trip, plus \$1,000 per month for two months;

Project Administrator -- 2 trips @ \$500 each, plus 10 days per diem at \$70 per day.

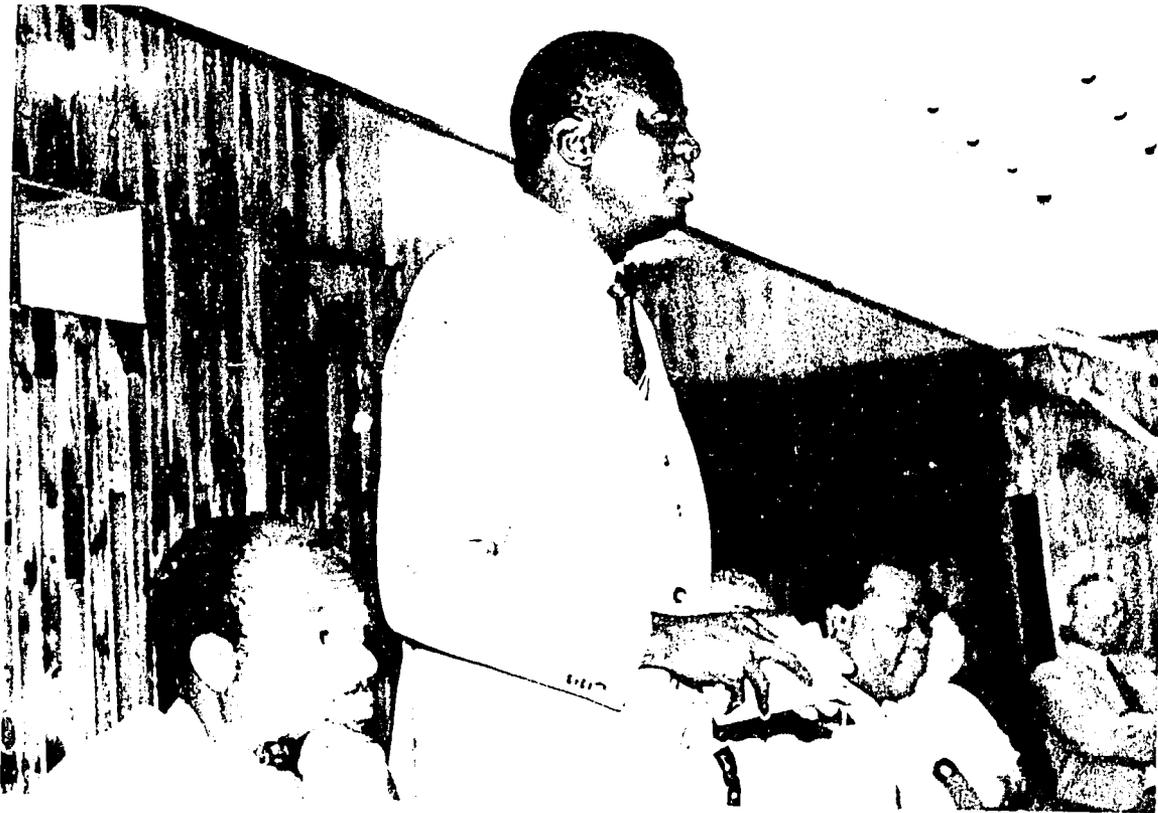
Supplies and Other Direct: Same as Phase I, except that office and instructional supplies are @ \$500 per month.

In the Implementation Phase IV, it is envisioned that the Regional Office of WHO Africa would receive funds from donor agencies -- USAID, SIDA, NORAD, WHO, World Bank (student stipends only), the Netherlands, and UNICEF. Proposed is a relationship between the Tulane/Morehouse consortium and WHO Africa that is similar to the relationship between the Boston University SHDS project and WHO Africa, although the two projects differ in purpose -- this is a Regional Public Health Training program and Boston SHDS is a program for direct strengthening of health delivery systems. In the SHDS program, USAID gives monies to Boston University and also to WHO Brazzaville. WHO handles all in-region projects -- payment of African administrative (non-faculty) personnel, travel and per diem, liaison with MOH, etc.; Boston University handles all faculty and consultants, many of whom are expatriates.

In Phase IV, Indirect cost for Tulane/Morehouse is 27% (Off Campus rate) and WHO indirect costs are 15%.

The Tulane/Morehouse consortium would only receive funds from USAID and these funds would be used to provide faculty (US, European, African) to teach in the program at host institutions. The Tulane and Morehouse consortium has been formed to take advantage of special U.S. monies available for Black Universities and Colleges in the Health Sciences (Gray Amendment -- 10% of USAID's grants and contracts are set aside by law for minority institutions). Each minority institution is paired with a sister institution; Dr. Walter Sullivan of Morehouse requested pairing with Tulane, hence, the Tulane/Morehouse consortium.

PHASE V, IN-REGION RESEARCH CAPABILITY will be developed later in the program.



1

## PICTURES 1-6

1. The HON. Mr. P.K. Balopi - Minister of Health of Botswana, welcomes participants to the Workshop. From left to right, Dr. D. Tembo of WHO, Minister Balopi, and Dr. David B. Sebina.
2. Dean James E. Banta, Tulane School of Public Health and Tropical Medicine, addresses Workshop. To his left, Dr. David B. Sebina, Permanent Secretary, Ministry of Health, Botswana.
3. Dr. Walter Sullivan, Vice-President for Sponsored Programs, Morehouse School of Medicine, Atlanta, Georgia, addresses Workshop. From left to right, Dr. John Bennett, UNICEF, Dr. Vivian Johnson, Boston University, Dr. Sullivan, Mr. Helge Stange, NORAD, Professor Herman Folmer, Institute for Tropical Medicine, the Netherlands, Professor John Martin, Nordic School of Public Health.
4. Dr. Walter Comm, Loma Linda School of Health, leads a small working discussion group.
5. Dr. John Bennett, UNICEF, addresses Workshop.
6. Professor David Morley, Institute of Child Health, Great Ormond Street Medical Center, London, illustrates new and practical spring device for weighing infants.





4



5



6