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UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT  
USAID - BP 49 DAKAR, SENEGAL

August 6, 1991

Mr. Charles S. Finch III, M.D.  
Morehouse School of Medicine  
720, Westview Drive S.W.  
Atlanta, Georgia 30310-1495

Subject: Grant No. 685-0281-G-00-1254-00

Dear Mr. Finch:

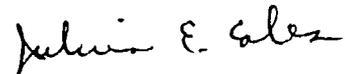
Pursuant to the authority contained in the Foreign Assistance Act of 1961, as amended, the Agency for International Development ("A.I.D." or "Grantor") hereby grants to Morehouse School of Medicine ("MSM" or "Grantee"), the sum of \$262,000 to provide support for financing a pilot study on traditional healers in the health care system of Senegal, as described in the Schedule of this grant and the Attachment 2, entitled "Program Description".

This grant is effective and obligation is made as of the date of this letter and shall apply to commitments made by the Grantee in furtherance of program objectives during the period beginning with the effective date and ending on September 30, 1992.

This grant is made to Morehouse School of Medicine on condition that the funds will be administered in accordance with the terms and conditions as set forth in Attachment 1, entitled the Schedule, Attachment 2, entitled "Program Description," and Attachment 3, entitled "Standard Provisions," which have been agreed to by your organization.

Please sign the original and seven (7) copies of this letter to acknowledge your receipt of the grant, and return the original and all but one copy to the USAID Mission in Senegal.

Sincerely,



Julius E. Coles  
Director/Grant Officer

Attachments:

1. Schedule
2. Program Description
  - (a) Summary
  - (b) Grantee's Application
3. Standard Provisions
4. Optional Standard Provisions

ACKNOWLEDGED:

Morehouse School of Medicine

BY : Walter W. Sullivan

Title: Vice President for Sponsored Programs

Date : \_\_\_\_\_

FISCAL DATA

Allocation:	
Appropriation:	72-11M1014
Budget Plan Code:	GSSA-88-21685-KG13
PIO/T No.:	685-0281-3-80126
Project No.:	685-0281
Total Estimated Amount	\$262,000.00
Total Obligated Amount	\$262,000.00
IRS Employer Identification Number:	158-143-8873/A
Funding Source:	Transfer of Technology Project (TT) Traditional Healers Sub-project
Technical Office:	USAID/Senegal

SCHEDULEA. Purpose of Grant

The purpose of this Grant is to provide support for researching and developing strategies for integrating traditional healers into the primary health care system of Senegal, as more specifically described in Attachment 2 to this Grant, "Program Description".

B. Period of Grant

The effective date of this Grant is the date of the cover letter. The expiration date of this Grant is September 30, 1992.

C. Amount of Grant and Payment

1. A.I.D hereby obligates the amount of \$262,000 for purposes of this Grant. This represents the total intended award and no further budget increase is anticipated.

2. Payment shall be made to the Grantee in accordance with procedures set forth in Attachment 3 - Standard Provision, "Payment Letter of Credit".

D. Financial Plan

The following is the Grant budget, including local cost financing items. Revisions to this budget shall be made in accordance with Standard Provision of this Grant, entitled "Revision of Grant Budget".

Illustrative Budget

	USAID	
<u>I--Personnel for Support Services</u>		
a) Principal Investigator		
\$285/day X 90 days	\$25,650	
b) Technical Advisor		
\$285/day X 30 days	8,550	
c) Chief Research Consultant		
\$285/day X 45 days	12,825	
d) IHD Coordination	7,000	
e) Training Consultant		
\$200/day X 14 days	2,800	
f) Data Collectors (2) - Healers		
\$22.06/day X 136 days X 2	6,000	
g) Data Collector - Villages		
\$22.06/day X 136 days	3,000	
h) Research Coordinator		
\$76.19/day X 168 days	<u>12,800</u>	
TOTAL SALARIES	<u>\$78,625</u>	
Benefits @ 20% of a) above	<u>5,130</u>	
TOTAL PERSONNEL		\$83,755

II--Travel

a) Airfare tickets (8 round trips)	\$16,000	
\$2,000/round trip X 8 trips		
4 for Principal Investigator		
3 for Technical Advisor		
1 for Training Consultant		\$16,000

III--Per Diem\*

a) Principal Investigator		
Dakar -- \$178/day X 23 days	\$4,094	
Other --- \$ 61/day X 52 days	3,172	
b) Training Consultant		
Dakar --- \$178/day X 3 days	534	
Other -- \$ 61/day X 9 days	549	

## ATTACHMENT 1 Page 3

c) Technical Advisor		
Dakar -- \$178/day X 13 days	2,314	
Other -- \$ 61/day X 17 days	1,037	
d) Research Coordinator/Data Collectors		
\$61/day X 125 days X 4 persons	\$30,500	
e) Healers (6)		
\$15/day X 4 days X 6 persons	360	
TOTAL PER DIEM		\$42,560

IV--Meetings/Seminars

a) Meetings with 400 healers for a a total of 8 days (incl. meals, transport, meeting space, pads, pencils, etc...)	\$11,250	
b) Mid-project Meeting (incl. space, meals, transport, audio-visual accessories, paper, etc...)	2,000	
TOTAL MEETINGS		\$13,250

V--Data Entry and Analysis Costs

\$15/hour X 450 hours	\$6,750	\$6,750
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VI--Equipment/Supplies

a) Purchase of survey vehicle	\$19,500	
b) Gas and Vehicle Repairs	6,000	
c) Car rental and Gas for Research Team	5,000	
d) Survey Supplies	2,000	
e) Tape Recorders (3), Tapes and Batteries	2,341	
f) Final Report Costs	4,000	
g) Communication/Correspondence	2,000	
TOTAL EQUIPMENT/SUPPLIES		\$40,841

TOTAL DIRECT COSTS \$203,156

VI--Indirect Costs at 32% off-campus

(minus \$19,500) \$58,770

GRANT AMOUNT \$261,926

ROUNDED OFF TO. . . . . \$262,000

\* The payment of per diem rates will be made in accordance with USAID standard rates, as provided for in the Standardized Regulations.

## ATTACHMENT 1 Page 4

E. Reporting and Evaluation

MSM shall submit to the USAID Health, Population and Nutrition office (HPNO), the following documents and reports for review and approval.

<u>Documents/Reports</u>	<u>Approx Due Date</u>	<u># of Copies</u>	<u>Language</u>
- Updated annual workplan and budget and procurement plan.	Nov. 15, 1991	18	English (9) French (9)
- Healer survey instruments	Nov. 30, 1991	18	English (9) French (9)
- Quarterly Program Report	Dec. 31, 1991	18	English (9) French (9)
- Report from the assessment workshop	Feb. 15, 1992	18	English (9) French (9)
- Quarterly report	March 31, 1992	18	English (9) French (9)
- Preliminary report of the survey	June 15, 1992	18	English (9) French (9)
- Report from the planned four-day workshop	July 15, 1992	18	English (9) French (9)
- Draft final report sub-project	July 31, 1992	18	English (9) French (9)
- Final report of sub-project	Sept. 30, 1992	18	English (9) French (9)
- Copies of all diskettes	Sept. 30, 1992	-	

F. Standard Provisions

The Mandatory Standard Provisions for U.S. Non-Governmental Grantees (attached as Attachment 3) and the Optional Standard Provisions (attached as Attachment 4) constitute the Standard Provisions for this Grant.

G. Special Provisions

The Grantee will be responsible for the overall management, administration and coordination of the activities under the "Traditional Healers Sub-project" as detailed in Attachment 2 (a) and (b). MSM will further assume explicit direct responsibility for the following:

## ATTACHMENT 1 Page 5

1. Commodity and Services Acquisition: The Grantee will procure and deliver all the commodities, including office supplies and equipment, vehicle and survey materials, and services required for the execution of the activities as described in Attachment 2 (a) and (b).
2. Housing: The Grantee will assume full responsibility for locating, negotiating, leasing, furnishing, maintaining and terminating housing for its long-term and short-term staff. Responsibility may also include the provision of all guard services. After the activity completion date (ACD), all AID-procured commodities will become the property of the Traditional Healers' Association.
3. Logistical Support: The Grantee will provide for all logistical support including secretarial and translation services or any other services unanticipated, not explicitly described in this Grant. The Grantee will arrange for all travel and transportation, both international and in-country, including pick-ups to and from the airport.
4. Financial Management and Grant Monitoring: The Grantee will be responsible for the management of allocated financial resources in strict compliance with AID-approved financial and accounting management principles. MSM will be responsible for contracting and payment of services provided by third parties. The Grantee will also assume the responsibility for monitoring the performance of its contractors including individual consultants and institutions such as the Institute of Health and Development (IHD) and Tulane University for Public Health.
5. The USAID will assign a Coordinating Officer, the head of the office of Health, Population and Nutrition (HPNO) or the designee(s) thereof who will coordinate all the sub-project activities.
6. The USAID will provide all the supporting documents required to facilitate when applicable, access to such services as, opening of bank account, diplomatic pouch, commissary and health facilities, duty free entry and tax exemptions privileges.
7. The Cooperating Country officials, for this Grant are Dr. Ibrahima Wone, Director of IHD; Dr. Eric Gbodossou, Consultant and Mediator with the Traditional Healers' Association; and the Healers representatives.
8. Access to classified information will not be required under this Grant.
9. Duty Post is the Fatick Region.
10. Title to Property

At the expiration of this Grant, all property procured under the program will become the property of the Traditional Healers' Association.

11. Authorized Geographic Codes

The Authorized Geographic Codes for procurement of goods and services under this Grant are the following:

- a) The United States (000)
- b) Senegal (685)
- c) Special Free World (935)

ATTACHMENT 2

PROGRAM DESCRIPTION

(a) Summary of the Program Description

(b) MSM's Application

## I. SUMMARY OF THE PROGRAM DESCRIPTION

### A. Background

In late 1990, Morehouse School of Medicine (MSM) submitted an application for a grant to finance a pilot study on traditional healers in the health care system of Senegal. This pilot activity comes in the wake of the 1977 World Health Organization (WHO)'s Resolution calling for health care for all by the year 2000 and strongly recommending the inclusion of the traditional healers as an important component in the strategies for attaining this goal. Morehouse's planned research is to lay the foundation for an effective integration of traditional healers to improve the health coverage for Senegal. Successful attempts to build cooperation between the traditional and modern practitioners exist but are very limited and replication has proven a tall task. MSM intends to propose a methodological approach and an action-oriented strategy to increase the possibilities for replication. MSM has selected researchers experienced in public health strategy development and policy formulation, and with field experience working with traditional healers in Senegal, and with the GOS Health Ministry officials.

### B. Objectives of the Pilot Study

The pilot research program funded under this grant will help Morehouse School of Medicine (MSM) to research and recommend ways of integrating the traditional healers in the Senegalese health care system. The goal of the program is to improve the health conditions of the rural population, through access to improved, low-cost health services. The purpose is to research and develop strategies for the integration of the traditional healers in the Senegal primary health care system. The specific objectives are:

- (1) increase knowledge and understanding of the traditional healers community and their clients in the Fatick Region;
- (2) develop strategies to increase cooperation between the traditional and modern health practitioners and identify types of activities including training, which can promote mutual respect and meaningful cooperation between the two communities;
- (3) propose protocols and actions for inclusion of traditional healers in the health care system of Senegal.

### C. Description of Assistance

With funding under this activity, Morehouse School of Medicine will procure the commodities and services as described in Attachment 1, Budget of this Grant to:

- carry out a knowledge, attitudes and practices (KAP) survey of the number of the Traditional Healers Association and their clients in the Fatick Region;

## ATTACHMENT 2 Page 2

- process and analyze the data collected;
- organize and conduct workshops to reform data analysis;
- organize and conduct a final workshop on the research findings and post-study protocols and projects;
- prepare a final report in form and substance acceptable to USAID and the GOS. Report will include all findings from the KAP survey, recommendations from the workshops including the propositions for protocols and other follow-up activities for integrating the traditional healers in the Senegalese health system.

D. Level of Effort

Principal investigator	three months
Technical advisor	one month
Chief research consultant	one month and one half
GOS counterpart to PI	10 months
Training consultant	14 days
Data collection (3)	14 months total
Research coordinator	eight months.

E. Implementation ScheduleSeptember-October, 1991

- Principal investigator arrives Senegal.
- Begin pilot activities including preparing workplan and time line, identifying personnel.
- Complete and submit workplan and time line.
- Prepare data collection instruments and have them approved by USAID and GOS.

November-December 1991

- Prepare sampling for the village study.
- Pre-test questionnaires.
- Begin data collection.
- Submit quarterly report.
- Organize a workshop to review initial data collection.

January-April 1992

- Complete data collection.
- Process initial collected data.
- Submit quarterly report.

May-August 1992

- Begin and complete interpretation of data analysis.
- Submit preliminary report of KAP survey.
- Organize workshop to refine survey findings.

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ATTACHMENT 2 Page 3

- Develop protocols and action plans for follow-up activities.
- Submit draft final report for review.
- Demobilize.

September 30, 1992

- Submit final activity report.
- Submit diskettes containing survey data and the analysis. Diskettes to be compatible with USAID software.

TRADITIONAL HEALERS IN THE HEALTH CARE SYSTEM OF SENEGAL:  
A SURVEY OF THE KNOWLEDGE, ATTITUDES, AND PRACTICES OF  
HEALERS AND THEIR CLIENTS IN THE DISTRICT OF FATICK

In 1977, the World Health Organization (WHO) sponsored a resolution calling for health care for all by the year 2000. In a subtext of this resolution, WHO strongly recommended the inclusion of traditional healers in the attainment of this goal.<sup>1</sup> This recommendation implicitly recognized that traditional healers provide the bulk of primary care in many parts of the world, approaching 80% through most of sub-Saharan Africa.<sup>2</sup> It is therefore difficult to speak of primary care in Africa without reference to traditional healers.

Traditional healing methods in Africa and elsewhere have been developed and practiced over thousands of years, providing the milieu for the birth modern medical science.<sup>3</sup> Healers are influential members of their communities and would seem to have a vital place in the health care systems of developing countries without diminishing the importance of and commitment to the advances of modern medicine. China and India are examples of nations where venerable healing traditions work in harmonious parallel with modern medicine.

In recent years, traditional medicine has become a subject of research by a number of investigators in Africa.<sup>4</sup> Laboratory investigation into the pharmacological properties of medicinal plants has begun in countries such as Nigeria and Mali.<sup>5</sup> Dr. Henri Collomb in Senegal and Dr. A.T. Lambo in Nigeria, both psychia-

trists, pioneered the use of traditional healers to treat mental illness among native peoples. These experiences demonstrate that, in some areas at least, there is room for collaboration between traditional and modern medicine.

Increasing recognition of the important contribution that traditional healers make to primary care has led many African governments to accord official or quasi-official status to their organizations.<sup>6</sup> Parallel to this, there has emerged a growing appreciation for traditional medicine by health officials and modern practitioners. In Nigeria, one study revealed an unexpected level of interest by university-trained physicians in the "quantifiable and non-quantifiable aspects of traditional medicine."<sup>7</sup> This same study found general interest in "integrating" traditional healers into the Nigerian health care system, though consensus on implementation was lacking.<sup>8</sup> In Zaire, healers' associations have undergone considerable independent development, regulating the practices and ethics of their members, and ways are being sought to integrate them more fully into the medico-legal framework of the country.<sup>9</sup> We can summarize the reasons behind such high level re-evaluation of traditional medicine in African countries as follows:

1. The ratio of trained health personnel to population is very poor and high African birth rates are exacerbating the problem;
2. A general economic downturn in Africa has resulted in decreases in health ministry operating budgets;

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3. Traditional healers are the de facto primary health care providers in rural areas, working where educated Africans are reluctant to serve;
4. Traditional healers are culturally appropriate and acceptable to indigenous populations;
5. Many of their therapies are curative.<sup>10</sup>

It is interesting to note that throughout Africa, pervasive utilization of both traditional and modern medicine occurs where there is access to both systems.<sup>11</sup> In Ghana, this cross-utilization has led to studies investigating the training of traditional healers to promote modern health practices. One such study, the PRHETIH (Primary Health Training for Indigenous Healers) Study was designed to:

...augment the knowledge and skills of indigenous healers and to bring about closer co-operation and understanding between indigenous and Western-oriented health workers.<sup>12</sup>

Eleven instructors and four groups of seven healers were involved in a 14-week training program. Curriculum topics included hygienic preparation and storage of medicinal herbs, diarrhea and oral rehydration, vaccination, and basic family planning. Follow-up visits after the training revealed more than 60%

retention of information. Moreover, the course resulted in improved utilization of oral rehydration fluids against infant diarrhea, better and more sanitary storage of herbs, better utilization of high-protein diets against kwashiokor, and improved general hygienic measures.<sup>13</sup> At the end of the project, a number of important guidelines for replicating the PRHETIH program were developed:

1. There must be a relationship of mutual trust and respect between the indigenous and Western-oriented healers;
2. Any such project must be developed within the official and legal policies of the host government;
3. Pre-training surveys are essential for enabling proper evaluation of the impact of such programs on the knowledge and practice of the herbalists;
4. Such programs should start on a small scale at the grassroots level and expand slowly;
5. Programs should be based on the wants and needs of the healers;
6. Training materials should supplement existing knowledge and skills;

7. Content should be kept simple;
8. Regular follow-up should be conducted to evaluate what was learned.<sup>14</sup>

A program similar to PRIHETIH was successfully duplicated in Swaziland. Hoff and Shapiro, consultants to the USAID-sponsored Rural Water-Borne Disease Control Project in Swaziland, 1983-85, showed in their evaluation of a training workshop for traditional healers, that those who participated

exhibited an increased awareness of the importance of good nutrition, home sanitation, use of latrines, personal hygiene, and safe water in preventing disease.<sup>15</sup>

They noted that all the healers in the participant group had constructed toilets, compared to 26% in the non-participant group; nearly half of the participants had installed wash basins in their traditional clinics, compared to 4% of the non-participants. Hoff and Shapiro also noted:

There was a high degree of understanding about dehydration and the treatment and prevention of diarrhea...many healers had become aware of the harmful effects of strong purges and enemas in treating diarrhea, and

some were discontinuing their use.16

Hoff and Shapiro concluded:

A well-trained healer could have a tremendous impact upon the promotion of better nutrition, safe water and sanitation, immunization, and the control of diarrheal and other diseases in his or her community.17

These pilot studies in Ghana and Swaziland, in addition to experiences in Nigeria and Senegal, demonstrate that there is fertile ground for collaboration between traditional and modern medicine in Africa. There would seem to be tremendous potential for a two-way exchange of information between the traditional and modern sectors of health care. Traditional psychotherapeutics, using age-old ritual, have opened up new dimensions of "milieu" therapy in the treatment of mental illness; the traditional materia medica contains medicinal plants which could aid immeasurably in the perpetual war against disease. Traditional bonesetters seem to have developed techniques for the treatment of certain kinds of musculo-skeletal trauma that orthopedists could study with profit. In short, the traditional healer is an under-utilized resource in developing countries who could play a pivotal role as Africa strives for health care for all by the year 2000. However, all such programs would depend entirely on a spirit of collegiality between the traditional and modern physician, based on mutual

respect.

## II. THE RESEARCH PROBLEM

Many countries of Africa flounder in their policies (or non-policies) relating to traditional healers because they lack basic, good-quality information about healers. Indigenous or ethnomedical knowledge often is unknown to or overlooked by development workers seeking solutions to medical and rural problems. Solutions offered by a project may fail, because they do not fit in with local knowledge.<sup>18</sup>

The above quotation from a position paper by the WHO Ad Hoc Working Group on Traditional Medicine and Diarrheal Disease illustrates the scope of our research problem: the need for obtaining comprehensive background data about traditional healers, their milieu, and their clientele before any meaningful collaboration with them can be entertained. Moreover, guidelines from the PRHETIH project in Ghana categorically affirm the importance of obtaining pre-training or pre-project surveys among traditional healers for the critically important process of evaluation.<sup>19</sup> Therefore, a Knowledge, Attitudes, and Practices (KAP) survey is indispensable for laying the foundation for future interaction with traditional healers.

### III. THE PROJECT SITE

In 1975, Dr. Erick V. Gbodossou, then a medical officer in Senegal's Ministry of National Education, organized over 300 traditional healers in the Fatick district into Senegal's first and most active traditional healers' association. Today, the association numbers more than 400 members and in the summer of 1986, the association was approved by the President of Senegal, making it a quasi-official body.<sup>20</sup>

The presence of a well-established, well-organized traditional healers' association in the Fatick district makes in an ideal site for a KAP survey involving traditional healers. Affiliation with an association such as the one in Fatick is a prerequisite because: (1) it is difficult to communicate with healers--let alone involve them in a collaborative research and education program--without an association; (2) healers' associations perform the vital function of "quality control," i.e., weeding out unfit or poorly-trained healers.<sup>21</sup> Thus, the healers belonging to the association are the ones most likely to be genuine, commanding the respect of clients and peers.

Fatick lies nearly 90 miles southeast of Dakar, a largely rural and agrarian region with over 250,000 inhabitants. The city itself has a population of 30,000; the Serer are the predominant ethnic group in the region. The healers' association, to which Dr. Gbodossou still serves as advisor, is sub-divided by region and each constituent group has its own panel of officers. The association maintains its own regulations and standards of profes-

sional conduct. Research at the healing center has already begun; a clinic record study, under the auspices of the Institute for Health and Development was undertaken and the data processing completed. A final report is pending. This demonstrates the willingness of the healers' association to co-operate with sincere, qualified investigators.

#### IV. THE STUDY

Dr. Charles S. Finch III, the P.I., will lead the research team (see Section VI) that designs and conducts a KAP survey of members of the traditional healers' association of Fatick and a sample of their clientele. The team will complete the KAP instrument by October 31, 1991 and will conduct the survey in the villages where the healers and their clients live and work. The just-completed record survey (See Section III) will facilitate inquiry into disease categories, treatment methods, referral patterns, etc.

The KAP survey will elicit basic demographic data such as age, birthplace, current residence, sex, ethnic affiliation, religious preference, marital status and family size, language capability, and literacy (in French, Wolof, or Arabic). The KNOWLEDGE section of the survey will contain questions on the length and method of training, names of all illnesses treated, and knowledge and nomenclature of anatomy, physiology, and pathology. The ATTITUDE section will investigate the philosophy of health and illness, attitudes toward modern medicine and the health care system,

willingness to learn selected modern techniques, and willingness to teach selected traditional techniques. The PRACTICES section will inquire about relations and referrals to and from other healers and modern health care clinics, descriptions of therapeutic methods (where feasible), and compensation patterns. The survey instrument will stratify this data by gender. We wish to determine how many of the healers in the association are women and what impact the gender of the healer has on diagnostic categories of diseases seen, therapies employed, fees received, frequency of utilization, and the sex and age of the clients seeking consultation.

The population survey will investigate, in addition to demographic data, motivation for choosing a healer, cross-utilization of traditional and modern medicine, and degrees of satisfaction with each system.

## V. METHODS AND DESIGN

The project is a descriptive KAP survey of traditional healers in the Fatick district. The work will be carried out through two institutions: the Institute of Health and Development of Cheikh Anta Diop University and the 400-member, government-sanctioned Fatick traditional healers' association. The project has as its task: (1) evaluating, to the extent possible, the healers' empirical knowledge of the health problems facing their communities; (2) assessing their attitudes toward the national health care system, modern practitioners and methods, and potential for

collaboration across sectors; (3) appraising their empirical methods of treating the primary diseases affecting their clients, patterns of referral, and methods of compensation.

The project will begin September 30 and in the first four weeks, during the study preparation phase, the Principal Investigator will, in concert with the Chief Research Consultant and the Technical Advisor, finalize the work plan and time line, identify and hire personnel, prepare the data collection instruments, and prepare sampling for the village study. In the following 2 1/2 weeks, a training consultant will assist in pre-testing the questionnaires and instructing the data collectors in their effective use. There are two pools of data collectors or enqueteurs that have been contacted. On the one hand there is a group of 10 Senegalese enqueteurs operating out of Guediawaye near Dakar who belong to L'Association Senegalaise des Enqueteurs Professionels (ASEP). All of these enqueteurs have been thoroughly trained in data collection techniques, all have at least 15 years experience conducting surveys among urban and rural populations, and all are bilingual in French and Wolof. Most of the healers in Fatick speak Wolof and in any case, this group has Serer-speakers available if the occasion demands. On the other hand there is another group of trained enqueteurs working out of Le Bureau National de Recensement (BNR) who not only have participated in national census surveys but also field studies for ISTI and USAID-Senegal.

We envision utilizing three enqueteurs--drawn from the pools

mentioned above--and one Research Co-ordinator, responsible for the day-to-day supervision of the survey activities in the field. A Senegalese qualified to perform this function has been identified and he expects to be available during the study period. In addition to his supervisory activities, this research co-ordinator will have input into the questionnaire design, buy supplies, transport enqueteurs, ensure timely completion of data bases, help coordinate data entry, and monitor problems.

During the planning phase, two healers from the association will be asked to review the healer survey instrument to help the research team add, subtract, or modify items depending upon their applicability. Two enqueteurs will be assigned to healer interviews and in pre-survey workshops, they will pre-test the questionnaire by interviewing three selected healers each. This will enable them to hone their proficiency, work out difficulties of terminology, and draw further upon the healers' input to refine the questionnaire. Aside from familiarizing the enqueteurs with the questionnaire, these exercises will test the questionnaire for validity and reliability. The final instrument will be written in Wolof and then back-translated into French to ensure consistency of information transmission between languages.

The third enqueteur will conduct the village survey. For the same reasons as above, this person will be involved in pre-survey interviewing with selected clientele. These persons will also be encouraged to contribute suggestions for improving the instrument. Once the survey begins, there will be no attempt to

interview all inhabitants of a selected villages; the enqueteur will, instead, interview smaller groups representative of the village. In the training phase, this enqueteur will work in a village to test the efficacy of: (1) focus group interviews, (2) key informant interviews, (3) in-depth interviews, and (4) semi-quantitative rapid surveys. Based on this pre-survey experience, the research team will select two methods. Traditional quantitative survey techniques with broad statistical sampling will not be used at this time because: (1) this type of data is not required until the trial phase of a project is reached; (2) qualitative methods have been found to be more useful in hypothesis generation and in exploratory population-based studies; (3) a formal epidemiological study is beyond the present scope of this proposal.

Each interview in the healer and village surveys will be tape-recorded. It has been found that much valuable information emerges in the course of an interview that cannot be recorded on a questionnaire; keeping tapes of interviews preserves this information.<sup>22</sup>

A two-day meeting with the traditional healers will be convened just prior to the onset of the survey. This will allow the research team to be introduced, the aims of the study discussed, the questionnaire explained, the plan of operation described, input and suggestions solicited, and concerns addressed.

Data collection will begin around November 15 because the healers in Fatick are agriculturalists whose planting and growing season stretches from the latter part of April to the middle of November. The five months between November 15 and April 15 are a

period of relative inactivity, making it the most propitious time for a field study of this kind. The research co-ordinator will be engaged for a period of eight months (September 30, '91 - May 30, '92) since his input will be important in the planning and immediate post-project stages. The enqueteurs will <sup>be</sup> engaged for a total of 27 weeks (November 1, '91 - May 12, '92), that includes two weeks of the pre-project training phase.

The co-ordinator and the three enqueteurs will each work a five-day week, living in Fatick during the work-week. Using the inventory of traditional healers gleaned from the record survey and the sampling framework of the study, appropriate villages with healers and/or villagers to be interviewed will be grouped geographically. Each day, the two healer interviewers will be driven by the supervisor to their designated villages in the morning, picked up at mid-day, driven to a second village, and then picked up again at the end of the day. It is expected that the typical data collection will occupy no more than three hours. With delays, no-shows, and re-interviews, it is estimated that 16 healer interviews can be accomplished each week, so that the actual survey should run about 25 weeks for 400 interviews.

For the population-based survey, a random sample of 20 villages with a traditional healer and a random sample of 20 villages without one will be selected. The village interviewer will conduct this survey using two pre-tested qualitative survey methods. Under this format, the village interviewer can be expected to complete one collection per day so that it should take

no more than 11 weeks to complete the village survey allowing for delays, postponements, and re-interviews. The remaining time of this third enqueteur will be divided between (1) helping complete the healer survey and (2) interviewing health workers in clinics in the region to assess their knowledge of and attitudes toward traditional healers and toward prospects for collaboration.

The research co-ordinator will review all the data collection forms prior to leaving each village to assure proper completion of each form. In addition, the chief consultant will review and approve each instrument submitted by the co-ordinator, as a "double-check" before final data entry. For at least the first three weeks of the survey, the research consultant will monitor the interviewing style of each enqueteur once weekly. After that, the co-ordinator will continue to visit each survey village to monitor the interaction between the enqueteurs and their interview subjects. At the end of each week, the questionnaire will be submitted to the Institute of Health and Development where data entry will begin immediately so that there is no more than a week's lag behind data collection. Toward the end of the survey, the technical advisor will supervise the preliminary analysis of the collected data. The software program to be used in this analysis will be the Statistical Package for Social Sciences from which several types of analyses will be performed: (1) uni-variate analysis, including a frequency distribution of all variables; (2) calculation of means and medians on continuous variables; (3) bi-variate analysis on appropriate variables looking for important

associations; (4) logistic regression and other multi-variate analyses to be used as needed.

In the first week of February, 1992, a 3-day review and assessment meeting will be convened at the Mbour training center, involving the entire research team. At this meeting, data will be reviewed, field problems analyzed, mid-course corrections assessed, and the initial discussions on post-project workshops and other collaborative projects launched. Any necessary modification of the project will be undertaken at this time.

Data analysis and interpretation will begin around May 15 and continue for two months; in this period, data entry will be completed and a comprehensive evaluation of the data undertaken. The results will be subjected to an intensive, in-depth discussion, a final interpretation arrived at, and preliminary report written. This process will be primarily the responsibility of the P.I. and the research consultant with input from the technical advisor and the research co-ordinator. In the month of July, 1992, follow-up projects will be designed and implemented (See Section VII).

#### VI. THE RESEARCH TEAM

In March and April of 1987, a series of meetings was convened at, respectively, the Tulane School of Public Health and Tropical Medicine in New Orleans, USAID headquarters in Washington, D.C., and the Morehouse School of Medicine in Atlanta under the auspices of the USAID-sponsored Morehouse/Tulane Joint Memorandum of

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on four previous occasions, and has published several articles on the history of medicine in Africa.<sup>23</sup> The P.I. will be responsible for the final research design, implementation of the project, and coordination of the research team. With the team, he will finalize the time line, supervise the hiring of personnel, oversee the development and pre-testing of the data collection instruments, and co-ordinate the sampling for the village survey. He will spend 75 days in Senegal on four visits to work with the research team inaugurating the planning and protocol, monitoring the progress of the survey, handling problems that arise, overseeing mid-course corrections, presiding over the mid-project meeting, supervising the tabulation of data and drafting of the final report, and co-ordinating initiatives for post-project activities and follow-up protocols.

The proposed technical advisor is Dr. Robert Franklin, Associate Professor of Biostatistics and Epidemiology at the Tulane School of Public Health and Tropical Medicine, currently on sabbatical in Senegal. Dr. Franklin is an epidemiologist with considerable experience in Francophone Africa designing, directing, and analyzing population-based surveys. Dr. Franklin has been a key person in the launching of the C.E.S. program of the Institute of Health and Development through the Interinstitutional Linkages grant funded by USAID-Senegal and therefore has worked closely for nearly three years with many of the principals involved in this proposed survey. He was instrumental in inaugurating the first record survey at the Traditional Healers' Center in Fatick and

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through his own research, has already established a working relationship with some of the traditional healers who will be involved in this project. His expert knowledge will be of capital importance for 17 days (October 14-31, 1991) in the planning phase when the research team begins sampling the study population, designing the questionnaire, and testing it. In addition, he will participate in the 3-day mid-project meeting, and finally for 10 days (May 21-31, 1992) in the post-study phase when data analysis and interpretation will be critical.

The training consultant has not yet been identified but the responsibility of this person will be to train data collectors in the use of the questionnaire and test and refine it. This person will be engaged for two weeks for this purpose in the period immediately preceding the onset of the survey (November 1-15, 1991).

On the Senegalese side, the project will operate through two organizations: (1) the traditional healers' association of Fatick and (2) the Institute for Health and Development (IHD) of Cheikh. Anta Diop University. As noted, the IHD is the prime public health institute of Senegal, well-involved in training health officers and other medical personnel in preventive medicine and epidemiology. It is under the direction of Dr. Ibrahima Wone and, among other things, the IHD would provide clerical and computer back-up for the project. It possesses a GOUPil system C40 computer that is IBM-compatible and this would be used for data processing during the study, scheduled to begin within 10-14 days after the beginning of

the field work. Moreover, the IHD's training center in Mbour will be utilized for certain project activities such as the mid-project meeting. Dr. Wone has fully committed the resources of the IHD to this project and would serve a necessary liaison function between the project and the Ministry of Health. We have every intention of keeping the Ministry of Health abreast of developments with up-to-date information on the progress of the project. We feel that this will enhance its overall acceptability and create a more favorable climate for long-term utilization of its results. Dr. Wone will be pivotal in this liaison function. In the budget for this project is earmarked \$7,000 to support the various functions the IHD will be performing, especially managerial and clerical. These funds will be paid out to the IHD by the prime contractor (Dr. Charles Finch & the Morehouse School of Medicine) on a cost reimbursement basis, payable on the submission of the appropriate invoices and receipts.

Dr. Erick Gbodossou will be the Chief Research Consultant. He has been named "chargé de mission" to the IHD, re-establishing his previous linkage with the Institute. He will perform a liaison function between the healers' association and the the IHD. Dr. Gbodossou is the person most responsible for organizing the healers' association. By virtue of his long association with the healers and his continuing advisory position, he is uniquely suited to facilitating the collaboration between the healers and the research team, helping design the questionnaire, assisting in training of the enqueteurs, familiarizing the team with the social

33

and cultural environment in which it will be working, and serving as an advocate and ombudsman for the healers. Dr. Gbodossou already spends one day of almost every week in Fatick at the healers' center working with the association. We expect that Dr. Gbodossou's effective participation will begin September 30, 1991 of the project and continue at least once weekly for ten months, encompassing the planning, the survey, and interpretive phases of the project. In the planning and training phase, Dr. Gbodossou's input will especially strategic, requiring his participation two additional days; he will be consulting 45 out of 300 project days.

#### VII. POST-PROJECT PRODUCTS AND PROTOCOLS

It is anticipated that most of the survey will have been completed by April 30, 1992 though scattered interviewing or re-interviewing may continue until May 15. The onset of the planting season will mean that few healers will be available after the latter half of April. It is expected that data entry will be completed by the end of May. June and July will be dedicated to tabulation of the data, statistical analyses, preliminary interpretation of the results, and overall evaluation of the project.

A preliminary report will be made available by June 15, 1992 based on the data tabulated at that time. This report will delineate how well the research protocol proceeded, problems encountered, and some preliminary observations.

In the latter part of July, a 4-day workshop is planned

involving the healers, the research team, USAID representatives, representatives from the IHD and the Ministry of Health, and other Senegalese health professionals. During this workshop, the results and interpretation of the study will be thoroughly disseminated, discussed, and critically analyzed. A short report of the workshop will be made available by the middle of August.

A final report, incorporating all the survey data, its analysis and interpretation, and the outcome of the 4-day workshop will be submitted by September 15, 1992. The report will conclude with detailed proposals for follow-up protocols that might include:

1. Regional meetings throughout the country among traditional and modern health care workers to discuss the outcome of the survey;
2. Publication of the data for wider international circulation in the form of monographs and journal articles;
3. Development of a position paper outlining further collaborative protocols of research, training, and technical assistance between the traditional healers' association and the modern health care sector in the areas of primary health care and preventive medicine;
4. Development of a policy recommendation concerning a possible feasibility study investigating the gradual

incorporation of traditional medicine into a wider national health care network, based on the continued study and research outlined in no. 3 (above).

Finally, diskettes compatible with USAID software, will be made available for the archives and research files of USAID-Senegal.

NOTES

THS A-11

p 32

1. See "African Traditional Medicine," Afro Technical Report Series No. 1, Brazzaville, Regional WHO Office, 1976; see also, "Traditional Medicine," W.H.O. Magazine, November, 1977.
2. See Lantum, D.N., and Massi, B., "Co-operation With Traditional Medicine Men in Primary Health Care," presented at the National Seminar on Primary Health Care, Bamenda, December 4-9, 1978; also Lantum, D.N., Traditional Medicine Problems of Practice and Communication in Cameroon, Public Health Unit, UCHS, University of Yaounde, October 1977.
3. Finch, C.S., "The African Background of Medical Science," Blacks in Science, I. Van Sertima, editor, New Brunswick: Transaction Books, pp. 140-56, 1983.
4. See Sofowara, A., Medicinal Plants and Traditional Medicine in Africa, New York: Wiley & Sons Ltd., 1982; also Durodola, J.I., "Contribution of traditional medicine to the chemotherapy of cancer," Nigerian Medical Journal, 9(5-6): 613-8, 5-6/79; also Farnsworth, N., Akerele, O., et al, "Medicinal plants in therapy," Bulletin of the World Health Organization, 63(6): 965-81, 1985.
5. See Sofowara, op. cit., pp. 98-103; also Durodola, op. cit.
6. Ghodossou, F., rapporteur, Rapport: Comment Revaloriser la Medecine Traditionell - Rencontre Medecins-Guerisseurs-Chercheurs, Fatick: Project ICP-RFD-002, 6/14-15, 1986. In an unpublished report by F.C. Green, B. Pedersen and D.M. Warren, the WHO Ad Hoc working group on Traditional medicine, the authors state there are 23 recognized healer associations in Africa (See Note 10).
7. Pearce, T.O., "Integrating Western orthodox medicine and indigenous medicine: professional interests and attitudes among university-trained Nigerian physicians," Soc Sci Med, (16): 1611-17, 1982.
8. Ibid., pp. 1615-6.
9. Dibeau, G., "New legal rules for an old art of healing: the case of Zairian healers' associations," Soc Sci Med. (16): 1043-9, 1982.

- 31 -

10. Green EC, Pedersen B. Warren DM, "Strategies for the establishment of Co-operative Programs involving African Traditional Healers in the control of diarrheal diseases in children," unpublished report of the WHO AD HOC Working Group on Traditional Medicine and Diarrheal Disease, September 27, 1989, pp. 1-43.
11. See Yoder PS, " Biomedical and ethnomedical practice in rural Zaire," *Soc Sci Med*, (16): 1051-7, 1982; also Warren D.M., Nova, G.S., et al, Ghanaian national policy toward indigenous healers, "*Soc Sci Med*, (16): 1073-81, 1982.
12. Warren, op. cit., p. 1076
13. Ibid., p. 1077
14. Ibid., pp. 1078-9.
15. Hoff, N. and Shapiro, G., "Traditional healers in Swaziland," *Parasitology Today*, 2(12): 361, 1986.
16. Ibid.
17. Ibid.
18. Green, Pedersen, and Warren, op. cit., pp. 15, 24.
19. Warren, op. cit., pp. 1073-81.
20. Gbodossou, op. cit.
21. Green, Pedersen, Warren, op. cit., p.7
22. Franklin A. unpublished thesis.
23. See Note #3 See also Finch CS, in Science and Symbol in Egyptian medicine: Commentaries on the Edwin with Papyrus, " *Egypt Revisited* edited by Ivan Van Sertima, *Journal of African Civilization*, Ltd., 1989.

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BUDGET SUMMARY OF GRANT

A. Direct costs

1. Salary/Stipends/Benefits (K)	OK	\$83,755	90,505
2. Travel B.C.	OK	\$16,000	
3. Per diem C.C.		\$49,310	1,2,560
4. Commodities/Supplies (D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z)	OK	\$54,091	
Total (A)		\$203,156	

B. Indirect Costs at 32% off-campus AID-approved rate on all costs except commodities under \$500.

\$203,156 - \$19,500 X 32% \$58,770

C. TOTAL GRANT FUNDING (A + B) \$261,926

ROUNDED TO \$262,000

VIII. BUDGET (10 Months)

<u>Item</u>	<u>Amount</u>
1. Direct Costs	
A. Salaries/Stipends	
a. Principal Investigator.....	\$ 25,650
Justification: in charge of research design, project implementation, co-ordination of research team; oversees follow-up protocols-- \$285/day x 90 days (75 days in-country; 15 days administrative duties in USA)	
b. Fringe Benefits.....	5,130
Justification: includes health & life insurance @ 20% of salary	
c. Technical Advisor.....	8,550
Justification: to assist in sampling, questionnaire design, data analysis & interpretation, and final report @ \$285 x 30 days	
d. Chief Research Consultant.....	12,825
Justification: to assist in study design, help co-ordinate data collection w/healers, serve as liaison with IHD, help analyze and interpret data, contribute to final report @ \$285/day x 45 days (Dr. Gbodossou, an unpaid "adjunct" with the IHD, maintains a private practice earning the equivalent of \$340/day)	
e. Institute of Health & Development (IHD)..	7,000
Justification: oversee project operations when PI is absent, co-ordinate with other ministries, manage and distribute ground expenses, process data, liaison with Ministry of Health, co-ordinate Research Consultant's activities, secretarial time	
e. Training Consultant.....	2,800
Justification: train interviewers and pre-test instrument @ \$200/day x 14 days	
f. Data Collectors (2)--Healers.....	6,000
Justification: to plan and participate in interviewing 400 healers @ \$22.06/day x 136 days x 2	
g. Data collector--Villages/Health Workers/Healers.....	3,000
Justification: to plan and participate in	

<u>Item</u>	<u>Amount</u>
data collection using 2 qualitative methods involving 40 villages, local health workers and healers @ \$22.06/day x 136 days.	
h. Research Coordinator (8 months).....	\$ 12,800 ✓
Justification: work full-time overseeing the day-to-day operations of the project; buy supplies, transport interviewers, ensure timely completion of data bases, help co-ordinate data entry, monitor problems @ \$76.19/day x 168 days.	
 B. Travel	
a. Overseas: Round-trips USA-Senegal.....	16,000 ✓
Justification: 4 trips for P.I., 1 trip for training consultant, 3 trips for technical advisor @ \$2,000/trip	
b. Vehicle.....	19,500 ✓
Justification: daily transport of (3) data collectors to survey sites; auto will remain the property of the traditional healers' association after project terminates	
c. Gas and repairs for survey vehicle.....	6,000 ✓
Justification: see VIII.B.b.	
d. Car rental and gas for research team...	5,000 ✓
Justification: PI & consultants will travel between Dakar and Fatick during survey period	
 C. Per Diem	
a. Principal Investigator.....	7,266 ✓
Justification: --23 days in Dakar @ \$178/day (\$4,094) --52 days outside Dakar @ \$61/day (\$3,172)	
b. Training Consultant.....	1,083 ✓
Justification: --3 days in Dakar @ \$178/day (\$534) --9 days outside Dakar @ \$61/day (\$549)	
c. Technical Advisor.....	3,351 ✓
Justification: --13 days in Dakar @ \$178/day (\$2,314)	