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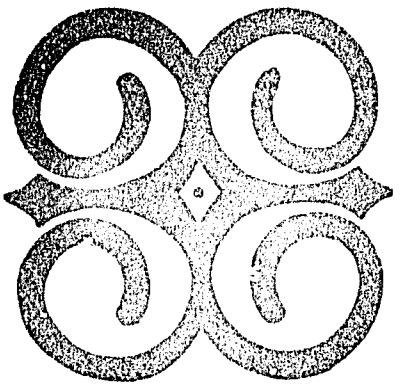

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ANNUAL PROGRESS REPORT

January - December 1976

DANFA COMPREHENSIVE RURAL HEALTH AND FAMILY PLANNING PROJECT, GHANA

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INTRODUCTION

This is the UCLA report to USAID of its Danfa Project related activities during calendar year 1976, as required by its contract with AID. There are between 80-90 full-time Ghanaian faculty and staff working on the Danfa Project and a like number working part-time. There was an average of 3½ UCLA faculty resident in Ghana during 1976 plus a back-up staff at UCLA. These figures are mentioned to put the UCLA contribution in perspective and to reinforce the point that this is primarily a Ghanaian project.

Purpose

The Project is now approaching the final phase-out years of UCLA assistance and fully reflecting assimilation of the revised goals and objectives developed in 1975. It seems appropriate to briefly review its overall purpose, highlights of achievements to date and plans for the future. Details will follow this introductory section.

The purpose of the Danfa Project, as stated in the original proposal is:

> "...to assist Ghana in initiating a demonstration comprehensive rural family care program which will help improve the health and welfare of the people. It will emphasize maternal and child health, nutrition, health education, and family planning...The Project will test and demonstrate methods and techniques for providing a comprehensive family health program, including family planning services, to the rural population..."

As a result of the extensive evaluation exercise of 1975, a new Project Paper was written and Project purposes, objectives and work plan were modified in light of Project experiences and changing needs in Ghana. These modifications, described later in this report, have since been implemented. There is a new emphasis on operational studies and a shift away from the testing of hypotheses concerning family planning. The Ministry of Health has accepted the principle of integration of Maternal and Child Health and Family Planning wherever possible. The need now is to indicate how this can be accomplished most expeditiously and at the most reasonable cost, given varying rural conditions. In addition, there is growing interest in using the Danfa experience in rural health service delivery and training in Ghana and elsewhere.

HIGHLIGHTS

1. Cooperation between Ghana-based UCLA staff members and their Ghanaian counterparts continued to be an important feature of 1976 Project work. Collaboration has intensified with the increased transfer of responsibilities originally allocated to UCLA by mutual agreement with Ghanaian colleagues to Ghanaian staff. In keeping with the phase-out of UCLA personnel, all categories of activity have been affected - field, clinic, data handling and analysis, fiscal, administrative and organizational. The assistance of returned Ghanaian Danfa participant trainees has been of great value with respect to these activities. (See Appendix section: Participant Trainees.)

2. A major activity in connection with the gradual phase-out of UCLA staff was the planning for the assumption by the Ghana Medical School (GMS) and especially the Department of Community Health (DCH), of some of the larger and more costly items of fiscal responsibility and management formerly under the UCLA/Ghana auspices. Most notably this included transfer of management of the Danfa field vehicle fleet to the GMS along with maintenance and a large inventory of supplies.

3. A significant development in 1976 has been the establishment of close functional links with the Planning Unit of the Ministry of Health. Selected Danfa team members in the capacity of advisory committee members to the Planning Unit, are helping to further develop information and idea sharing channels and a cooperative base with the Ministry of Health and the Ghana Medical School. Increasing recognition of the effectiveness and applicability of the Danfa models for more widespread rural implementation has been one of the most notable outcomes of the past year. An ever-widening body of health professionals and policy makers both from within Ghana and internationally are focusing attention on Danfa Project results.

4. Growing interest and involvement has led to extensive Project orientation for Ghanaian Ministry of Health and National Family Planning Program personnel. Many facets of Project activities are being followed with great interest by the Ministry, with particular attention to evaluation efforts including functional and cost analysis. The Ministry of Health has announced plans to integrate MCH and Family Planning (FP), a principle the utility of which has been demonstrated via Danfa model health service delivery systems. Danfa personnel have been approached to assist the Ministry with organization of in-service education programs and writing of related in-service training manuals as well as development of staff and teacher training manuals for training schools. This could constitute a major activity with possible far-reaching consequences.

5. Health and family planning education programs have continued with increased efforts to activate school health programs and Village Development Committee activities. An important outcome of expanded

family planning education efforts was a related increase in family planning acceptance rates in 1976, with striking differences in acceptor rates between the areas.

6. Patient records systems have evolved in 1976 to include the adoption of the Morley "Road to Health" chart as the child's sole clinic record, retained by the child's family. The development of a modified version of the Patient Encounter Card has also been of great importance. It is anticipated that a simplified version of this record may be introduced into health center/post operations of the Ministry of Health. Thereby, a more modern and efficient method of making health and disease assessments in rural areas may be established.

7. Preparation for the introduction of a village-based primary health care scheme constitutes a big step forward in 1976. The development of a preliminary training manual for volunteers from three villages in Area I was the first step. A subsequent six-week training program for the volunteers was carried out by Danfa Health Center staff.

8. Field logistic plans and methodology have undergone refinement and streamlining, the result of considerable planning for the challenging task ahead of the third and final round of surveys and the 1977 household census. The third and final round of the household health-related survey was begun in late 1976. Field interviewers and Health Education Assistants participated in a special training, pretesting and a problem-solving workshop before carrying out the survey in Areas I, II and III.

9. The vital events registration assistants have continued to perform excellently. Their consistent high-quality performance points to the value of full-time employees resident in the villages where the vital events information is being collected.

10. Perhaps more than any other facet of the Danfa Project, epidemiologic studies have attracted attention and participation by members of the Ghana Medical School and the Ministry of Health. For many faculty members this field research was their initial contact with rural health problems. In addition to the information provided to guide and evaluate programs, these studies offered research experience to many investigators. Important epidemiologic work undertaken in 1976 includes:

    a. Studies involving results of serologic tests of preschool children for previous infection with measles, pertussis, tetanus and polio

    b. Collection of data on infectious hepatitis, arbovirus infections and toxoplasmosis

    c. Study of prevalence for malnutrition and mortality - especially for preschool children

    d. Study of factors affecting participation in the Village Health Survey, the malaria prophylaxis program, and the 1974 mass immunization campaign

11. The analysis of data and preparation of technical papers reached a high point in 1976. Computer programming staff have provided an invaluable contribution by continuing to stay abreast and process the mounting body of data.

12. All work plans for 1976 which were outlined in the 1975 Annual Report have been accomplished or implemented as projected.

PLANS FOR 1977 AND BEYOND

1. During the first eight months of 1977, completion of the third and final field survey rounds, including the longitudinal survey, village health survey, family planning survey and the 1977 census.

2. Expansion of the village-based primary care program by training of village health workers.

3. Continuation of training programs in family planning for clinic nurses.

4. Further institutionalization of the follow-up on traditional birth attendants trained by the Project, by means of ongoing supervision by health center staff and health education assistants.

5. Continuation of the malaria prophylaxis program and implementation of the mass immunization program.

6. Completion of epidemiologic studies of preschool children on serologic evidence of previous infection with measles, pertussis, tetanus and polio.

7. Continued program evaluation in MCH and family planning and expansion of quality of care evaluation studies.

8. Preparation of raw data for analysis and continued analysis of data now in hand, including analysis of patient encounter data for the period 1972-1975, demographic analysis, particularly of vital events data as it relates to the family planning and family health program, child health and maternal health practices data.

9. Greater emphasis on operations research, including cost analysis and quality of care studies.

10. Accellerated production of procedure and training manuals and technical papers.

11. Greatly intensified information transfer from the Project to the Ministry of Health via the Planning Unit of the Ministry.

12. Increased transmission of responsibilities from UCLA staff to the University of Ghana Medical School Department of Community Health staff.

13. Preparations for the final report of the Danfa Project, to be submitted at the end of 1978, and planning for the final review meeting scheduled for November 1978.

SUMMARY OF ACHIEVEMENTS AND PRESENT STATUS

A major external evaluation of the Danfa Project in 1975 resulted in the decision to rewrite the Project Paper and modify Project goals. The purpose behind this was threefold:

1. to reflect the development of Project activities;
2. to reflect the evolution in thinking of Project staff, derived from 5 years of experience; and
3. to encorporate changes in policy of the government of Ghana with regard to the delivery of integrated health and family planning services.

The revised strategy emphasizes demonstration and evaluation of the Danfa health service system models, the strengthening of institutional infrastructure, including transfer of responsibilities from UCLA to Ghanaian staff and increased information transfer. Likewise, it entails a continuation and slight streamlining in field and demographic activities related to the investigation of the rural Ghanaian community, one of the primary original Project purposes.

The following Summary of Achievements adheres as closely as possible to the format of the new Project Paper (June 1976), using the four re-defined Project purposes as a broad organizational guide. The section covers a wider scope of topics in greater detail than the Summary of Highlights. The important material in the Appendices pertaining to training and publications, should be noted as they relate to the specific achievements covered in this section.

Project Purpose I: Investigation of the state of the rural Ghanaian community, concentrating on factors associated with health and family planning behavior.

A. Ongoing Field Surveys

1) Extensive preparations for the third and final round of longitudinal surveys have been made including:

a) Village Health Survey - logistical plans and refinement of the precoded examination form

b) Longitudinal Survey - review of the 1975 second-round survey outputs, questionnaire revision, elimination of the morbidity survey; and interviewer staff has undergone both didactic and field training

c) Family planning follow-up survey - application of a technique of contraceptive history which will allow the Project to determine continuation and use-effectiveness rates and also the impact of the program on fertility

d) 1977 Recensus - training and instrument refinement

2) The field phase of the 1976 census covered the period April to August, requiring approximately 115 man-months. Editing and coding of the material and assigning identification numbers to new residents in the Project area will continue into early 1977. Results of the 1975 census became available in early 1976 and preliminary examination of the data revealed the lowest percentage population increases of any Project year, and for the first time, a decrease in population in one of the areas.

3) A very important activity, the third and last round of the Household Health-Related Survey, was begun in late 1976. Six field interviewers and all health education assistants were specially trained for this exercise beforehand. The training was followed by a pretest exercise outside of the Project area - which was then followed by a workshop to discuss and resolve any difficulties discovered in the pretest village before the actual survey commenced in the Project area. Areas I, II and III were involved in the survey and all villages were covered except those with less than 50 inhabitants.

4) The work of the vital events registration assistants continues to be excellent and their rate of errors remains low. Their work demonstrates the value of having field workers who reside in villages where the work is being carried out.

B. Special Epidemiologic Studies

The Project's epidemiologic studies were designed to identify major health problems, detect age groups at special risk, and clarify factors affecting the distribution of diseases.

Epidemiologic work initiated or completed in 1976 includes studies involving:

1) Results of serologic tests of preschool children for previous infection with measles, pertussis, tetanus and polio

2) Investigation of infectious hepatitis, arbovirus infections and toxoplasmosis

3) Patterns of prevalence of malnutrition and mortality, especially for preschool children

4) Factors affecting attendance in the Village Health Survey, the malaria prophylaxis program, and the 1974 mass immunization campaign

The acquisition of competent programmers and the successful adaptation of a package computer program for Legon computer facilities has considerably enhanced the flow of epidemiological data output in 1976.

C. Analysis of Socio-economic Data

Staff at the Institute of Statistical, Social and Economic Research (ISSER) worked closely with Project staff in collecting, coding and analyzing socio-economic status (SES) data on income and wealth.

The UCLA Computer Center and UCLA Danfa Staff collaborated to analyze SES data from the baseline household register and the first round longitudinal surveys. This was done at UCLA due to the greater computer capability there.

The results of processing and analyzing the baseline and first round SES data have been encouraging and have laid the groundwork for the longitudinal SES studies.

Project Purpose II: Strengthening of the institutional capability at the Ghana Medical School to conduct research and train physicians and other health workers in the delivery of health and family planning services.

A. Research

While much of the Danfa Staff's consultant and advisory level research-related work is not directly reflected in Project results, the sharing of research experience can have a significant impact on the development and strengthening of analytical skills in Ghana.

1) Danfa Staff have advised and assisted University of Ghana and Ghana Medical School investigators in the design of health research studies and development of methodological instruments.

2) A meeting was held for Danfa staff and a Ministry of Health group to discuss and recommend a cost-analysis scheme modeled after the Danfa system for Ministry use. This development may have an impact on resource allocation in health facilities throughout Ghana.

3) The Project epidemiologist, acting as a consultant to the Church Hospital Association of Ghana, participated in a study of hospital staffing levels, replacement needs, and a projection of 1980 manpower requirements. This material will provide the Ministry of Health with its first estimate for long-term health manpower training needs for 50% of the rural hospitals in Ghana.

B. Teaching

1) Lectures and seminars on various health-related topics were given at the University of Ghana, including the Regional Institute for Population.

2) The UCLA staff continues to be involved in teaching Ghana Medical School students both in the classroom and in the field, in MCH, epidemiology, public health administration, research techniques, nutrition and health program management and planning.

3) The epidemiologyteaching approach at the Ghana Medical School (GMS) has been modified to reflect a broad health services model, including demography, health services, cost-analysis and evaluation. This is a departure from the traditional agent, host and environmental model.

4) Danfa Rural Health Centers continue to host 4-week clerkships for medical students. Staff evaluate the work of the students assigned to rural health facilities and identify gaps in their training.

5) A seminar regarding the integration of MCH and family planning was held at the Ghana Institute for Management and Public Administration, under Ministry of Health auspices.

6) Lectures on plans for mass immunization were given at a Ministry of Health upper region seminar at Bolgatanga by the Danfa MCH group.

C. Training

1) Two Ghanaian physicians completed the Master of Public Health (MPH) program at UCLA in 1976. Upon completion of formal course work they attended an internationally oriented epidemiology

workshop at the Center for Disease Control in Atlanta, Georgia. Following the workshop they visited facilities in Puerto Rico and Jamaica where they were able to observe and analyze approaches to major health problems in developing country settings unlike those of Ghana. They continue to be seconded by the Ministry of Health and to the GMS Department of Community Health (DCH) where their work is helping to further institutionalize the Danfa Project as part of DCH activities. They are now carrying out teaching and field responsibilities with respect to the Project.

2) One Ghanaian physician began MPH work at UCLA following 6 months of work with the Project in Ghana. He has assisted with the quality of care operational research study and will contribute to the subsequent studies being planned. Presently he is being thoroughly trained in MCH, family planning, nutrition and health planning and management.

3) A research analyst for the Project has begun study toward a Master's degree in Public Administration at the University of Southern California. He will return to Ghana, immediately following the completion of his coursework in June 1977, to assume some of the responsibilities of the systems analyst who will be leaving at that time. He will complete his degree after a period of internship work on the Project supervised jointly by USC and the GMS.

4) An in-service training program in family planning for health center personnel has been instituted, using a task-oriented approach. This scheme has now been adopted by the Ministry of Health.

5) Other training programs either initiated or continuing in 1976 include:

   a) training for various categories of paramedical workers

   b) retraining of the field interviewer staff for the 1977 surveys

   c) training of computer programmers and data handling staff

   d) continued training in administrative, fiscal and budget management for the Ghana Medical School Project-funded accountant/administrative assistant

   e) co-direction by Danfa staff in the Ministry of Health's first Track II training program for family planning nurses

D. Development of Training Manuals

Production of training manuals has been a key activity during the continuing technical assistance phase-out period. Manuals are viewed as an invaluable product of the experience gained via the Project and provide a substantive vehicle for effecting information transfer and reinforcing institutional infrastructure.

1) A newly established Manual Writing Committee, coordinated jointly by the Ghanaian Co-Director and the UCLA Chief of Party, has given high priority to preparing a Family Planning Training Manual for trainees as well as teachers in cooperation with the Ministry of Health. This manual will be used by the Ministry as a Track IV training device for all categories of paramedical workers.

2) Work is proceeding on a Village Health Survey Manual. It is concerned with the rationale and uses of a village health survey and the procedures required for initiating one.

3) The UCLA MCH/Family Planning advisor cooperated with members of the Department of Community Health in preparing a preliminary training manual for village health workers. The first such course was given over a period of six weeks in late 1976.

E. Transfer of Responsibilities

1) Via an agreement with USAID, responsibility for aspects of participant training has been transferred from USAID/Ghana to the Ghana Medical School, including interviewing and preparing candidates for U.S. training. USAID is then responsible for placement, arranging field programs and trainee subsistence.

2) Responsibility for certain budget items was transferred in connection with the transmittal of approximately $80,000 of UCLA contract funds to the Ghana Medical School to be paid against field vehicle maintenance and fuel, and for the mechanic's salary. These funds will also cover the cost of stationary supplies for field operations and offices

Project Purpose III: Demonstration of several cost-effective health care system models to include family planning as an integrated component suitable to the Ghanaian context.

A. Health Service Delivery Programs - New and Ongoing

1) Cooperative planning efforts between two DCH physicians (recently returned subsequent to MPH training in the USA) and

the MCH/Family Planning UCLA advisor in:

a) Developing a village-based primary health care program

b) Planning the mass immunization program

c) Planning for a commercial Family Planning distribution program

d) Developing a scheme for village volunteers to distribute contraceptives

e) Planning regarding implementation of a district health program for Areas I, II and III

2) Continuation of ongoing programs including provision of family health and family planning services, mass immunization program, malaria prophylaxis program.

B. Health Education

1) Intensification of the child weighing program and use of Morley cards as the child's growth and health record

2) Environmental health education efforts including improvement of home and village sanitation and programs to prevent guinea worm infestation

3) Ongoing family planning education program with notable increases in acceptor rates in 1976

4) Efforts to revive the interest of education authorities in developing or expanding health education programs

5) Nutrition and food preparation classes in the villages are continuing. This program has been linked to the Agricultural Extension Officer's demonstration program on use of fertilizers and improved seeds to obtain greater crop yields.

6) Continuation of efforts to establish Village Development Committees or revive the work of such Committees where they have become inactive

C. Program Evaluation

1) Use of the new electronic data processing (EDP) patient encounter card simplifies record keeping and makes possible new evaluative studies. The format allows both adult and child general case visits to be recorded on the same form. The card eliminates certain redundant and low utility data and permits study of staff work patterns.

2) Work continues on the data of the first two rounds of the longitudinal survey in order to produce a single file of these rounds to permit a study of the successive responses to any one single instrument and to study relationships between responses on different instruments. It will then be possible to subsequently include in this same file the information from the last round of the longitudinal survey.

3) The computer software, particularly the package programs which the Danfa staff have helped to develop for analysis and evaluation work are proving to be most useful to the University of Ghana staff as a whole.

4) Continued application of cost analysis techniques to the operations of the Danfa Rural Health Center and satellites showed a 14.6% increase in costs over 1975 - with 46% of these costs attached to personnel and 41% to drugs and medical supplies. Non-medical supplies consumed only 6%, and transport only 7%. The Ministry of Health is following the Danfa cost-analysis scheme for potential wider application in Ghana.

5) A review of medications dispensed in 1975 showed excessive use of chloroquine, resulting in a staff plan to reduce use of this drug. The outcome in 1976 was a substantial drop in the use of chloroquine.

6) An operational research study of health center function was carried out, comprising the first of a series of operations research/quality of care studies to be continued in 1977.

Project Purpose IV: Transfer of information derived from Project activities to relevant Government of Ghana agencies (and other international agencies) on an ongoing basis.

A. Writing and Publications

1) The amount of data on tape continued to grow in 1976, and more of this data was analyzed for the production of technical papers and reports. Senior Ghanaian/UCLA staff produced or published a number of Project reports and papers on subjects such as: family planning, training of traditional birth attendants, integration of family planning and MCH, the mass immunization campaign, attitudes towards family size and family planning in the rural population, polio, the 1973 Village Health Survey and its findings, etc. (See Appendix entitled: Danfa Project Manuscripts).

2) The Ghana-based Danfa Publications and Writing Unit has been chiefly involved in manual writing in 1976 along with some editing of technical papers. Outlines have been prepared for the Village Health Survey manual. The top priority has been

given to the family planning training manual, being produced in cooperation with the Ministry of Health.

3) As the Project draws to an end, the demand for accelerated data processing and analysis precludes the need for even greater production of reports and papers. Numerous reports must be prepared for the 1978 final Project Review Meeting and in preparation for the final Project Report.

4) A series of meetings were held to discuss the development of the final report to be presented in November 1978. Senior staff of both the Department of Community Health and UCLA met to develop a prospective outline for the report and assign tasks for preliminary drafting which will be undertaken in 1977.

B. Information Sharing

1) Via the National Health Planning Unit (NHPU), Project staff have begun to provide inputs which will assist the Ministry in the development of national health services, based on the Danfa experience. During 1976, data on age-specific mortality rates, morbidity rates, birth rates, health services utilization and costs of health services has been turned over to the Planning Unit. Additional requests are pending and it is anticipated that data will continue to flow regularly into NHPU. In addition, on numerous occasions in the past year, senior Project staff were requested to offer advice to the Planning Unit with regard to national health matters.

2) The Board of Ghana Medical School has selected the Chief of Party to serve on the Danfa Project Committee. The terms of reference of this Committee have not been made known as yet.

3) A Danfa Joint Executive Committee has been formed and is actively working to resolve policy issues and operational difficulties related to the Project and to establish coordination of Project activities .

4) A number of liaison meetings were held with Ghana National Family Planning Program senior staff and regional coordinators to give them an indepth orientation to the Danfa Project, its operation and purposes, with the anticipation that they utilize more of the results of the Danfa Project research.

C. Relationships/Public Relations

This report has thus far made numerous references to the growing relationships based on cooperation and information-sharing, which the Danfa Project has established with institutions both within and outside of Ghana. Those relationships thus previously detailed in this report will be mentioned only in brief in this section and cooperative efforts listed.

1) Department of Community Health

Returned medical officers (from MPH program at UCLA) given more responsibility in Project operations; UCLA team continued teaching at DCH; cooperative efforts in manual development; Danfa/DCH program development; Danfa Joint Executive Committee.

2) Ministry of Health

Cooperation with Epidemiology Division and Health Education Division in Project activities of mutual interest; Ministry adoption of Danfa training program in family planning; cooperative development of Track IV family planning training manual for trainers and teachers; information sharing via the National Health Planning Unit.

3) Ghana National Family Planning Program

Joint Meetings with Danfa staff held stressing orientation to the Danfa Project.

4) Institute of Statistical, Social and Economic Research (ISSER)

Assistance in collecting, coding and analyzing socio-economic data; space provided by ISSER in their facility for field staff, coders and editors.

5) Ghana Medical School

Good working relationships continue to exist and are being further strengthened via efforts to further the development of institutional infrastructure (See Project Purpose II, page 7).

6) University of Ghana

Good cooperation, with respect in particular to the University Computer Center where Project data processing staff are allotted time. An important administrative item being considered is how and by whom the tapedrive installed in 1975 (a gift to the University from Project funds) will be maintained.

7) USAID/Ghana

Excellent relationships continue; cooperative activities of 1976 included assisting with the final revisions on the Project Paper and with various administrative problems and the auditor's report. USAID/G contributed much to encouraging the Ministry of Health to activate the Planning Unit. The Medical Officer of USAID/G Health Population and Nutrition program retired at the end of the year and Project staff are grateful for his years of effort, support and constructive

criticism on behalf of the Project.

8) World Health Organization (WHO)

Contact has been maintained with the WHO group in the Brong-Ahafo region where an investigation along similar lines of the Danfa Project is being conducted.

D. Project Visitors

The Danfa Project continued to attract a growing number of visitors in 1976 from Ghana, as well as various other countries. Between two and ten person-days of time are required per visitor and primarily senior staff are involved in escorting and orienting visitors. The following international visitors bear special mention:

1) A United Nations Family Planning Association group, including Dr. Sam Wishik

2) The Association of Medical Schools of Africa

3) The new Director of USAID/Ghana, Mr. Irvin D. Coker

4) Mr. George Daniels, a writer from the Public Relations Section of USAID/Washington

5) Professor and Mrs. D. Jelliffe of the UCLA School of Public Health, Division of Population, Family and International Health

6) Representatives from the British Medical Research Council

7) Researchers from the Universtiy of Sussex in the United Kingdom

8) Congressman Scheuer of New York State

9) Representatives from WHO

PROBLEMS

Many of the difficulties which the Project has experienced in 1976 have been predictable, some even inevitable as consequences of the final phases of a major international technical assistance project.

1. Project Personnel: Presently Project personnel comprise three groups: a capable core with permanent staff positions; a temporary staff who have been with the Project up to several years and who are seeking permanent jobs; and a group of newly-hired staff. The last stage of the Project is characterized by an ever-increasing workload, much of which must be completed by a large temporary staff whose mounting concern is securing employment when the Project ends. The future employment uncertainty on the part of some and a sense of fatigue on the part of field staff has led to some lowering of staff morale, and contributed to staff attrition in 1976.

2. Field Activities: Another predictable phenomenon associated with the end of a long-term longitudinal study is the growing unwillingness of villagers in Project areas to respond to survey interviewers. A task force has been formed to develop means of dealing with this situation.

3. Project Equipment: Problems with the functioning of the Legon computer tapedrive have pointed up the importance of maintenance of the computer.

GENERAL ADMINISTRATION

Administration of the Danfa Project involves a great deal of fiscal, personnel, logistical, communication and organizational activity. The smooth operation of such an extensive, complex and long-term Project is dependent upon an optimum of coordinated effort between the Los Angeles-based Danfa support operation and the joint UCLA-Ghanaian effort in Ghana. A high degree of cooperation has been achieved and continues to be a very positive force for the production of good work. Many of the activities of 1976 have been detailed elsewhere in this report. Among the most notable administrative concerns of 1976 have been: transfer of considerable logistic responsibilities from UCLA to Ghanaian jurisdiction (See Project Purpose II (e), page 10), the audit completed by USAID auditors for West Africa and the Annual Review Meeting.

1. USAID Audit

   A thorough audit of Project records and activities was carried out in Ghana by AID auditors. Contractual work commitments were met and records were found to be in order. Questions were

raised by the auditors which challenged procedural agreements carefully worked out by UCLA with AID/Ghana concerning:

a) The method for transfer of property from Project auspices to the Ghana Medical School

b) Payment of fuel tax for Project vehicles

c) Communications between UCLA and the USAID/Ghana controller regarding invoices and purchases

These issues were raised by UCLA in the early stages of the Project via meetings with USAID/Ghana key staff. Procedures thought to be satisfactory by AID were developed and have been scrupulously followed by UCLA. The issues raised by the auditors are now being resolved.

2. Project Vehicles

Maintenance costs remained at a reduced level in 1976 as compared to the early years of the Project due mainly to the work being carried out by the Project's own mechanic. The concommitant reduction of downtime of the vehicles has been essential to the smooth operation of the fieldwork. Six replacement vehicles arrived during the first quarter of 1976 and a number of used vehicles were transferred to the Ghana Medical School. The last four replacement vehicles have been purchased and are en route. Costs for spare parts and for fuel again rose sharply in 1976.

3. Project Review Meeting 1976

The Annual Review Meeting which was held at the Ghana Medical School on February 12, 1976, was reportorial in character. It included a review of the previous year's activities, a review of the independent evaluation team's report and a presentation on how the new directions defined in the Project Paper were to be carried out. The meeting was closed with an address by the Director of Medical Services of Ghana in which he paid tribute to the Danfa Project for "promoting research, undertaking in-service training and giving service to the community; of this the Ministry of Health is very appreciative."

With respect to administration and the current phase-out, he commented:

> "It is gratifying to learn that the technical assistance to the Project is being phased out. This is a creditable reflection of the efficiency with which the Project has been carried out, and it is for us to maintain this level of efficiency. It is also gratifying to note that the training programmes for Ghanaians abroad will continue after the initial phasing out period. "

The publication, "Proceedings of the Seventh Annual Review Meeting" was produced as a joint effort of the Ghanaian/ UCLA senior staff, with final editing and publication at UCLA.

4. Personnel

A. R & R or Annual Leave

1) Dr. Irvin M. Lourie, Chief of Party, and Mrs. Harriet S. Lourie, Administrative Assistant - on leave from 30 April to 8 June, including two weeks of UCLA approved official duty at UCLA, USAID/W and WHO Geneva. They personally extended their R & R to the USA so that the official duties could be carried out.

2) Dr. David D. Nicholas, MCH and Family Planning Advisor - on leave with his family and personally extended to the USA from 15 July to 27 August. This included six days of official duty for the preparation of Project technical publications.

3) Dr. Stewart N. Blumenfeld - on leave with his family and personally extended to the USA from 21 July to 3 September. This included one week of official duty at UCLA.

B. Departure from Project

1) Dr. Donald W. Belcher - completed his tour of duty with the Project in Ghana and departed with his family on 13 June for the USA. This was the second of at one time five Ghana-based UCLA team members to depart under the term of the accelerated phase-out suggested by UCLA in November 1975. Dr. Belcher and his family left behind many good friends and colleagues who will miss them. His high quality work with the Project was deeply appreciated. We all wish him well in his new post as Associate Professor of Medicine at the University of Washington in Seattle. He will continue as a part-time consultant to the Danfa Project to help mainly with the monumental data analysis task.

C. Dr. Alfred K. Neumann, UCLA Co-Director of the Danfa Project, made three visits to Ghana in 1976:

1) 8 to 19 February; in connection with the 1976 Annual Project Review Meeting and for consultations with GMS officials USAID/G, the Ghanaian Co-Director and the UCLA/Ghana team.

2) 28 May to 11 July; for consultations with Ghanaian Project officials and senior staff, USAID/G and to work with Ghanaian colleagues in designing and carrying out a new operations research study as specified by the Project work plan.

3) 10 to 29 November; for consultations with the Ghanaian Co-Director, Project staff and USAID/G, and to followup on the operations research study

5. Commodities and Shipments

The system whereby commodities are purchased and transported to Ghana can be long and complicated and may be beset with difficulties before the eventual arrival of the goods in Ghana. Original requests with the exception of standing orders, are initiated through the Chief of Party and forwarded to the Co-Director at UCLA. The order is taken by the Principal Clerk who handles it or refers it to the Office of the Coordinator of Overseas Programs (OCOP) for ordering. The mode of shipping is decided according to content, size and time factors via air freight, ocean freight, air pouch or surface pouch. In the past, shipping delays and miscommunications have often been the norm rather than the exception. The procedures have been greatly improved however, with the addition of OCOP, which acts as a liaison between the Co-Director's office, the UCLA Purchasing Department, the vendors, the packers, the shipping agents and the transporters.

A. Mail delays between UCLA and Accra continued during 1976. The international mail routing, as distinct from the Department of State pouch routing, became increasingly erratic during the second quarter of 1976 and has continued to be so. Similarly the Department of State pouch is frequently delayed. Letters or small, first class packets have taken an average of three weeks, with a range of 12 days to three months.

B. The Project has continued to experience delays and various difficulties with air freight shipments in 1976. Almost none went through as scheduled. The airlines find it virtually impossible to guarantee scheduling and delivery of air freight shipments.

C. Seaports continue to be backlogged and there are delays in shipping and clearing freight. Steamer schedules are subject to last minute change.

D. In accordance with the agreement to accelerate the phaseout of UCLA responsibilities, arrangements were made in late 1976 to have all future freight shipments sent directly to the Ghana Medical School for the attention of the Ghanaian Co-Director.

E. The Ghana Medical School provided a secure storeroom in 1976 for Project commodities such as vehicle parts, data processing paper and field supplies. All of these, with a US wholesale value of several tens of thousands of dollars, have been transferred over into Ghanaian safekeeping and administration.

Major Commodities Purchased in 1976 Via UCLA and Shipped to Ghana for Danfa Project Use:

4 Chevrolet Suburban C-10's
Spare parts for the six 1976 Chevrolet Surburban C-10's
(more than 25% of the cost of the C-10's was spent to purchase these)
Spare parts for the 1974 Valiants (Administrative vehicles whose malfunctioning is unfortunately an ongoing problem.)
Spare parts for refrigerators, freezers and air conditioners
1 Kodak Moviedeck 475 projector
300,000 IBM cards
50 cartons of printout paper (Total weight of 2,600 lbs.)
1 Leroy Scriber Set
Plastic covers for ID cards
Black ink for Gestetner duplicating machine
Intrauterine devices
Oral contraceptives
Additional Village Health Survey equipment and supplies

Shipment Statistics - Number and Weight:

7 Ocean Freight Shipments	-	17,830 lbs.
2 Air Freight Shipments	-	360 lbs.
4 Surface Pouch Shipments*	-	90 lbs.
118 Air Pouch Shipments*	-	2,580 lbs.

* Note: Through the kindness of USAID the Project has been able to use the State Department Pouch for the shipment of official Danfa Project supplies, small equipment, small repair items, small replacement items, manuscripts, reprints and similar items. This has meant a great financial saving to the Project and no losses of these pouch shipments thus far.

APPENDIX I

DANFA PROJECT MANUSCRIPTS

Danfa Project Manuscripts

CONTENTS

A. Published Papers

B. Papers in Press

C. Papers Submitted

D. Monographs

E. Papers Presented

F. Annual or Semi-Annual Progress Reports

G. Proceedings of the Annual Review Meetings

H. Papers in Progress

DANFA PROJECT MANUSCRIPTS

A. Published Papers

1. Wurapa, F. K. "Rapid Population Growth and Rural Development." Published in The Teaching and Practice of Family Health - Proceedings of the Conference sponsored by the Association of Medical Schools in Africa; Kampala, Uganda, November 29 - December 3, 1971.

2. Wurapa, F.K., Lourie, I.M. "The Danfa Rural Health and Family Planning Project" Published in The Proceedings of the African Regional Population Conference, sponsored by the IUSSP and ECA; held in Accra, Ghana, December, 13-17, 1971.

3. Sai, F.T., Wurapa, F.K., Quartey-Papafio, E. "The Danfa/Ghana Comprehensive Rural Health and Family Planning Project - A Community Approach" Ghana Medical Journal, Vol. 11, No. 1, March 1972.

4. Neumann, A.K., Prince, J., Gilbert, E.F., Lourie, I.M. "The Danfa/Ghana Comprehensive Rural Health and Family Planning Project -Preliminary Report.' Ghana Medical Journal. Vol. 11, No. 1, March 1972.

5. Sai, F.T. "A Rural Health Model: Danfa, Ghana." In Health Care for Remote Areas, An International Conference, sponsored by Kaiser Foundation International, Bellagio, Italy, May 1972. (James Hughes, editor)

6. Ashitey, G.A., Wurapa, F.K., Belcher, D.W. "Danfa Rural Health Centre: Its Patients and Services 1970-71." Ghana Medical Journal, Vol. 11, No. 3, September 1972.

7. Kpedekpo, G.M.K. "The Planning and Design of Sampling Surveys with Particular Reference to the Epidemiological Survey of the Danfa Project in Ghana." Ghana Medical Journal, Vol. 11, No. 4, December 1972.

8. Kwansa, E.V.G., Cannon, J.A., Belcher, D.W., Hosu-Porbley, M. "Perception and Comprehension of Health Education Visual Aids by Rural Ghanaian Villagers." Ghana Medical Journal, Vol. 11, No. 4, December 1972.

9. Neumann, A.K., Sai, F.T., Lourie, I.M., Wurapa, F.K. "A New Trend in International Health Work: The Danfa Project." International Development Review, 1973/2.

10. Wurapa, F.K., Lourie, I.M. "Population Growth and Rural Health" Presented at the West African Regional Seminar on Population Studies, December 1-4, 1972. Published in the Proceedings of the Seminar.

11. Wurapa, F.K., Lourie, I.M. "Focusing on Family Health in the Rural Communities." Published in The Teaching and Practice of Family Health - The Proceedings of a Regional Seminar; Sponsored by the Association of Medical Schools in Africa; Accra, Ghana, January 8-12, 1973.

12. Wurapa, F.K. "Community Approach to the Organization of a Comprehensive Rural Health Care System - the Danfa Experience." Paper presented at the Conference on Health of the Family Unit, University of Sierra Leone, September 1973, Published in the Proceedings.

13. Neumann, A.K., Ampofo, D.A., Nicholas, D.D., Ofosu-Amaah, S., Wurapa, F.K. "Traditional Birth Attendants - A Key to Rural Maternal and Child Health and Family Planning Services." Journal of Tropical Pediatrics and Environmental Child Health, February, 1974.

14. Neumann, A.K., Sai, F.T., Dodu, S.R.A. "Danfa Comprehensive Rural Health and Family Planning Project: Ghana, Research Design." Journal of Tropical Pediatrics and Environmental Child Health, February, 1974.

15. Neumann, A.K. "Management Issues in the Organization and Delivery of Family Health/Family Planning Services," Paper presented at the Second Interuniversity Workshop in Family Planning Administration, March 1974, Published in the Proceedings.

16. Neumann, A.K., Dodu, S.R.A. "Danfa Project" Letter to Lancet March 30, 1974.

17. Wurapa, F.K., Belcher, D.W., Neumann, A.K. "Mobidity in Rural Communities - The Questionnaire Interview Approach to Providing Useful Data for Health Planning." Paper presented to the Inaugural Conference of the Population Association of Africa, University of Ibadan, May 1974, Published in the Proceedings.

18. Britt, P.M., Blumenfeld, S.N., Wurapa, F.K., Kpedekpo, G.M.K., Neumann, A.K. "A Case Study in Computer Applications for Developing Countries -- The Danfa Comprehensive Rural Health and Family Planning Project, Ghana." Paper presented at the Second Jerusalem Conference on Information Technology, July-August, 1974, Published in the Proceedings.

19. Wurapa, F.K., Belcher, D.W., Neumann, A.K., Lourie, I.M. "An Approach to Illness Measurement in a Rural Community." Ghana Medical Journal, June, 1974.

20. Belcher, D.W., Wurapa, F.K., Ward, W.B., Lourie, I.M. "Guinea Worm in Southern Ghana." American Journal of Tropical Medicine and Hygiene. Vol. 24, No. 2, March 1975.

21. Wurapa, F.K., Belcher, D.W., Ward, W.B. "A Clinical Picture of Guinea Worm Disease in Southern Ghana." Ghana Medical Journal, Vol. 14, March, 1975.

22. Belcher, D.W., Wurapa, F.K., Ward, W.B. "Failure of Thiabendazole and Metronidazole in the Treatment and Suppression of Guinea Worm Disease" American Journal of Tropical Medicine and Hygiene, Vol. 24, No. 3, May 1975.

23. Belcher, D.W., Nicholas, D.D., Ofosu-Amaah, S., Wurapa, F.K., Blumenfeld, S.N. "Factors Influencing Utilization of a Malaria Prophylaxis Programme in Ghana." Social Science Medicine, Vol. 9, pp. 241-248, May 1975.

24. Belcher, D.W., Neumann, A.K., Wurapa, F.K., Nicholas, D.D., Ofosu-Amaah, S. "The Role of Health Survey Research in Maternal and Child Health/Family Planning Programs: Danfa Project, Ghana." Journal of Tropical Pediatrics and Environmental Child Health. Vol. 21, No. 4, August 1975.

25. Belcher, D.W., Afoakwa, S.N., Osei-Tutu, E., Wurapa, F.K., Osei, L. "Non-Group-A Streptococci in Ghanaian Patients with Pyoderma." Lancet. November 22, 1975.

26. Wurapa, F.K., Derban, L.K.A., Belcher, D.W., Chinery, W.A., Asante, R.O. "A Survey of Parasitic Infections in Rural Ghana." Ghana Medical Journal. Vol. 14, No. 4, December 1975.

27. Kpedekpo, G.M.K., Wurapa, F.K., Lourie, I.M., Belcher, D.W., Neumann, A.K. "A Modified Myburgh's Formula for Estimating the Expectation of Life at Birth from Survival Data Derived from Vital Registration Records." Sankhya: The Indian Journal of Statistics, Volume 37, Series B, Pt. 1, pp. 106-113. 1975.

28. Johnson, O.G., Neumann, A.K., Ofosu-Amaah, S. "Health Information System Installation -- Principles and Problems." Medical Care. Vol. 14, No. 3, pp. 210-222, March 1976.

29. Neumann, A.K., Ofosu-Amaah, S., Ampofo, D.A., Nicholas, D.D., Asante, R.O. "Integration of Family Planning and MCH in Rural West Africa." Journal of Biosocial Science. Vol. 8, pp. 161-173, April, 1976.

30. Belcher, D.W., Wurapa, F.K., Neumann, A.K., Lourie, I.M. "A Household Morbidity Survey in Rural Africa." International Journal of Epidemiology. Vol. 5, No. 2, June 1976.

31. Belcher, D.W., Neumann, A.K., Wurapa, F.K., Lourie, I.M. "Comparison of Morbidity Interviews with Health Examination Survey in Rural Africa." American Journal of Tropical Medicine and Hygiene. Vol. 25, No. 5, pp. 751-758. September 1976.

32. Belcher, D.W., Pobee, J.O.M., Larbi, E.O., Occran, K., Wurapa, F.K. "Non-Response Factors in a Rural Health Examination Survey in Ghana." Public Health Reports. Vol. 91, No. 4, July-August 1976.

33. Belcher, D.W., Wurapa, F.K., Atuora, D. "Endemic Rabies in Ghana." American Journal of Tropical Medicine and Hygiene. Vol. 25, No. 5, pp. 724-729. September 1976.

34. Neumann, A.K., Ward, W.B., Pappoe, M., Boyd, D. "Education and Evaluation in an Integrated MCH/FP Project in Rural Ghana: the Danfa Project." International Journal of Health Education. Vol. 18, No. 4, 1976.

35. Ampofo, D., Nicholas, D., Ofosu-Amaah, S., Neumann, A.K. "The Danfa Family Planning Program in Rural Ghana." Studies in Family Planning. Vol. 7, No. 10, pp. 266-274. October 1976.

B. Papers in Press

1. Pobee, J.O.M., Larbi, E.B., Belcher, D.W., Wurapa, F.K., Dodu, S.R.A. "Blood Pressure Distribution in a Rural Ghanaian Population." To be published in the Transactions of the Royal Society of Tropical Medicine & Hygiene. (Accepted in May 1976).

2. Wurapa, F.K., Belcher, D.W. "A Tuberculin Skin Test Survey in a Rural Ghanaian Population." To be published in Tropical & Geographical Medicine. (Accepted in May 1976).

3. Belcher, D.W., Afoakwa, S.N., Osei-Tutu, E., Wurapa, F.K., Osei, L. "Endemic Pyoderma in Ghana: A Survey in Rural Villages." To be published in Transactions of the Royal Society of Tropical Medicine & Hygiene. (Accepted in June 1976).

4. Ampofo, D.W., Nicholas, D.D., Amonoo-Acquah, M.B., Ofosu-Amaah, S., Neumann, A.K. "The Training of Traditional Birth Attendants in Ghana: Experience of the Danfa Rural Health Project." To be published in the Tropical & Geographical Medicine. (Accepted in September 1976).

5. Nicholas, D.D., Ampofo, D.A., Ofosu-Amaah, S., Asante, R.O., Neumann, A.K. "Attitudes and Practices of Traditional Birth Attendants in Rural Ghana: Implications for Training in Africa." To be published in WHO Bulletin. (Accepted in December 1976).

C. Papers Submitted

1. Bruce-Tagoe, A., Belcher, D.W., Wurapa, F.K., Turkson, P., Nicholas, D., Ofosu-Amaah, S. "Haematological Values in a Rural Ghanaian Population." Submitted to the Journal of Tropical and Geographical Medicine in June 1976. Revisions sent in by senior author.

2. Belcher, D.W., Nicholas, D.D., Ofosu-Amaah, S., Wurapa, F.K. "Factors Affecting Participation in a Mass Immunization Campaign in Rural Ghana." Submitted to Public Health Reports in March 1976.

3. Belcher, D.W., Wurapa, F.K., Nicholas, D.D., Ofosu-Amaah, S. "The Role of Health Examination Surveys in Planning Rural Medical Services. I. Planning and Conducting Rural Health Surveys." Submitted to the Ghana Medical Journal in May 1976.

4. Belcher, D.W., Neumann, A.K., Ofosu-Amaah, S., Nicholas, D.D., Blumenfeld, S.N. "Attitudes Toward Family Size and Family Planning in Rural Ghana Danfa Project: 1972 Survey Findings." Submitted to the Journal of Biosocial Science in October 1976.

5. Nicholas, D.D, Kratzer, J.H., Ofosu-Amaah, S., Belcher, D.W. "Is Poliomyelitis a serious problem in developing countries? 1. The Danfa Experience." Submitted to the British Medical Journal in October 1976. (This is a companion paper to #7).

6. Ofosu-Amaah, S., Kratzer, J.H., Nicholas, D.D. "Is poliomyelitis a serious problem in developing countries? 2. Lameness in Ghanaian Schools. Submitted to the British Medical Journal in October 1976. (This is a companion paper to #6.) (For both #6 and #7, revisions have been suggested by the British Medical Journal in December 1976.)

D. Monographs

1. Kpedekpo. G.M.K., Belcher, D.W., Wurapa, F.K., Neumann, A.K., Lourie, I.M. "Results of the Analysis and Evaluation of Vital Registration Data from the Four Project Areas." (Vital Events 1 - Monograph Series, Number 1.) 1975.

2. Kpedekpo, G.M.K., Wurapa, F.K., Lourie, I.M., Belcher, D.W., Neumann, A.K. "Estimates of Indices of Mortality from Registration Data." (Vital Events 2 - Monograph Series, Number 2.) 1975.

3. Kpedekpo, G.M.K., Nicholas, D.D., Ofosu-Amaah, S., Wurapa, F.K., Belcher, D.W. "Estimates of Indices of Fertility from Registration Data." (Vital Events 3 - Monograph Series, Number 3.) 1975.

4. Kpedekpo, G.M.K., Wurapa, F.K., Lourie, I.M., Neumann, A.K., Belcher, D.W. "Some Results and Problems on the Estimation of Vital Rates in a Rural African Setting via Multiple Methods." (Vital Events 4 - Monograph Series, Number 4.) 1975.

5. Kpedekpo, G.M.K., Wurapa, F.K., Lourie, I.M., Neumann, A.K., Blecher, D.W. "Migration Patterns, Population Growth and Change in the Project Areas of Danfa." (Vital Events 5 - Monograph Series, Number 5.) 1975.

6. Kpedekpo, G.M.K., Lourie, I.M., Wurapa, F.K., Belcher, D.W., Neumann, A.K. "The Basic Demographic Characteriestics of the Danfa Project Areas -- An Analysis of the Population Size, Age/Sex Distribution." (Demography 1 -- Monograph Series, Number 6.) 1975.

7. Kpedekpo, G.M.K., Wurapa, F.K., Belcher, D.W., Neumann, A.K., Lourie, I.M. "The Basic Demographic Characteristics of the Danfa Project Areas -- An Analysis of Marital Status, Education, Ethnic, Religious and Occupational Composition." (Demography 2 - Monograph Series, Number 7.) 1975.

8. Kpedekpo, G.M.K., Asuming, K., Blumenfeld, S.N., Wurapa, F.K., Belcher, D.W. "The Basic Characteristics of Households, Household Size, Household Heads and the Relationship within the Households." (Demography 3 - Monograph Series, Number 8.) 1975.

9. Belcher, D.W., Wurapa, F.K., Nicholas, D.D., Kpedekpo, G.M.K., Ofosu-Amaah, S., Derban, L.K., Asante, R.O. "Conducting a Rural Health Survey: Experience from the Village Health Survey, Danfa Project, Ghana." 1975. (Monograph Series, Number 9.)

10. Belcher, D.W., Kpedekpo, G.M.K., Wurapa, F.K., Lourie, I.M. "Mapping and House Numbering Methods in a Rural Health Project." (Monograph Series, Number 10.) 1976.

11. Belcher, D.W., Wurapa, F.K., Lourie, I.M., Kwabia, K., Avle, S. "Experience in Selecting, Training and Supervising Interviewers in a Rural Health Project." (Monograph Series, Number 11) 1976.

E. Papers Presented

1. Belcher, D.W., Wurapa, F.K., Nicholas, D.D. "Health Care and Family Planning." Presented at the International Health - Family Health Conference, Washington, D.C., October 1974.

2. Ward, W.B., Enberg, R., Belcher, D.W. "A Preliminary Report of Efforts to Develop Social Indicators to Guide and Assess Rural Development." University of Ghana, May 1974.

3. Neumann, A.K., Neumann, C.G., Ward, W.B. "The Design and Implementation of an Integrated Nutrition, Health and Family Planning Program in Rural African Villages." Presented to the 19th Annual Meeting of the African Studies Association, November 3-6, 1976.

F. Annual or Semi-Annual Progress Reports

1. Annual Progress Report - January-December 1975.
2. Annual Progress Report - January-December 1974.
3. Annual Progress Report - January-December 1973.
4. Semi-Annual Progress Report - July-December 1972.
5. Semi-Annual Progress Report - January-June 1972.
6. Semi-Annual Progress Report - July-December 1971.
7. Semi-Annual Progress Report - January-June 1971.

G. Proceedings of the Annual Review Meetings

1. Proceedings of the Seventh Annual Review Meeting. February 12, 1976. Accra, Ghana.

2. Proceedings of the Sixth Annual Review Meeting. March 17-18, 1975. Accra, Ghana.

3. Proceedings of the Fifth Annual Review Meeting. February 26-28, 1974. Accra, Ghana.

H. Papers in Progress

1. Nicholas, et al., "A Mass Multiple Antigen Immunization Program in Southern Ghana."

2. Wurapa, F.K., et al., "Gastro-Intestinal Infections in Pre-School Children in the Danfa Project Area."

3. Ampofo, et al., "Traditional Birth Practices."

4. Neumann, et al., "Utilization of Traditional Birth Attendants -- Danfa Project Progress Report and Evaluation Plans."

5. Neumann, A.K., Dodu, S.R.A. "Institutionalising Technical Assistance Programmes."

6. Nicholas, D., Ofosu-Amaah, S. "Current Concepts of Immunization for Ghana."

7. Ofosu-Amaah, et al., "Relationship of Acceptance to Accessibility of Family Planning."

8. Nicholas, et al., "Malaria Prophylaxis Program and Impact on Malaria Prevalence."

9. Nicholas, et al., "A Serological Survey of Children in the Danfa Project Area."

10. Ofosu-Amaah, et al., "Nutritional Status of Children in the Danfa Areas of Rural Ghana."

11. Nicholas, et al., "Follow-up Survey of Family Planning Acceptors in Rural Ghana."

12. Belcher, et al., "Methods of Acquiring Informaiton About the Incidence of Poliomyelitis."

13. Nicholas, et al., "Prevalence of Seizure Disorders in Danfa Areas of Rural Ghana."

14. Ofosu-Amaah, et al., "Planning a District MCH Program for Rural Ghana."

15. Ofosu-Amaah, et al., "Status of MCH in Danfa Area of Rural Ghana."

16. Belcher, et al., "Analysis and Reorganization of a Rural Health District."

17. Blumenfeld, et al., "Service Costs in a Rural Health Care Program."

18. Blumenfeld, et al., "The Effect of Spatial Distribution on Utilization of Rural Health Services."

19. Ward, et al., "Perception and Management of Guinea Worm Disease Among Ghanaian Villagers: A Framework for Differential Health Planning."

II. Papers in Progress

20. Ward, et al., "Extending Preventive Health Services to Under-Fives in Rural Ghana." (formerly "The Use of the Road to Health Card...")

21. Pappoe, et al., "The Health Education Assistant -- A New Approach to Extending Health Services in Rural Ghana."

22. Ward, et al., "The Health Education Assistant -- An Evaluation of Efforts and Accomplishments 1973-1975."

23. Ward, et al., "Family Planning Education at a Ghanaian Rural Health Post."

24. Ward, et al., "The Role of Supervisors in a Community Health Program in Ghana."

25. Pappoe, M., Ward, W. "The Role of Health Education in a Ghanaian Comprehensive Rural Health Family Planning Project."

26. Belcher, et al., "The Prevalence of Inguinal Hernia in Adult Ghanaian Males."

APPENDIX II

PARTICIPANT TRAINEES

Table I

AID/Danfa Project Participant Trainees: Training Outside of Ghana

Name	University Training Field & Degree	Date Initiated	Termination Date	Present Status
1. Odai, Joshua K.	Data Processing and records Non-degree certificate	March, 1970	June, 1970	Staff - I.S.S.E.R.
2. Ashitey, Gilford A.	Field Experience - Communicable Disease Control Non-degree certificate	June, 1970	October, 1970	Faculty, Dept. of Community Health, Ghana Medical School
3. Dovlo, Daniel K.	Data Processing and Records Non-degree student	January, 1971	August, 1971	Substantial portion of the time devoted to DRHP Staff I.S.S.E.R.
4. Asuming, K.	Data Processing and Records MPH degree (UCLA)	October, 1971	June, 1972	Was Statistician Programmer for the Danfa Project. Resigne late 1973 to obtain more education.
5. Asante, Dr. R.	MCH-MPH degree (UCLA)	October, 1971	September, 1972	Supervising physician Danfa HC & Ghana Ministry of Health, Accra Regional Office.
6. Pappoe, Mrs. M.	Health Education - MPH degree (UC Berkeley)	September, 1971	October, 1972	Health Educator in Dept. of Community Health, Ghana Medical School & Health Educato for Danfa Project
7. Gadzekpo, J.	Cytotechnology Non-degree certificate Johns Hopkins University	September, 1971	September, 1973	Technologist, Korle Bu Teaching Hospital

Table I (continued)

Name	University Training Field & Degree	Date Initiated	Termination Date	Present Status
8. Quartey-Papafio, E.	Health Education/Behavioral Sciences - B.A. (San Fernando Valley State College, Ca.)	Fall, 1971	June, 1973	
	Community Organization - M.S. University of Missouri, Columbia, Missouri	Fall, 1973	March, 1975	
9. Abedi, Oscar	Data Processing & Records Non-degree student	Fall, 1972	January, 1973	Research Analyst (Assistant Statistician Resigned September 1974 to enroll in Univ. of Ghana Programming course
0, Kwabia, K.	Data Processing & Records Non-degree student	January, 1973	April, 1973	Research Analyst
	Health Services Management & Data Management - MPA degree (University of Southern California)	January, 1976	December 1977	
1. Addy, Dr. H.	MCH/Nutrition - MPH degree (UCLA)	September, 1973	November, 1974	Ministry of Health Advisor in MCH/FP/ Nutrition
2. Lamptey, Dr. P.	MCH/FP/Nutrition - MPH (UCLA)	September, 1974	November, 1975	Medical Officer Danfa Project, Area I
3. Mensah, Dr. E.	Epidemiology - MPH (UCLA)	September, 1974	November, 1975	Medical Officer Danfa Project, Areas II and III.

Table I (continued)

	Name	University Training Field & Degree	Date Initiated	Termination Date	Present Status
14.	Avle, S.	Health Records/Biostatistics/ Data Management (UCLA)	March, 1975	August, 1975	Assistant Research Analyst
15.	Osei-Tutu, Dr. E.	MCH/FP/Nutrition - MPH degree (UCLA)	July, 1975	October, 1976	Returned to Ministry of Health
16.	Osei, Dr. L.	MCH/FP/Nutrition - MPH degree (UCLA)	July, 1975	October, 1976	Returned to Ministry of Health
17.	Amonoo-Lartson, Dr. R.	MCH/FP/Nutrition/Management - MPH degree (UCLA)	August 1976	December 1977	