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Collaborative Research Support Program (CRSP)

NUTRITION INTAKE AND FUNCTION

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TRIP REPORT

KENYA

January 6, 1986 - January 29, 1986

Charlotte G. Neumann, M.D.  
Principal Investigator - UCLA  
Kenya Nutrition CRSP

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#### Introduction

The main task was to plan and implement the wind-down of field activities in Embu District with a target date for the close-down of the field phase of the Nutrition CRSP Kenya Project of March 31, 1986. The major activity of data entry will go on for the remainder of the field phase. This consists mainly of checking computer forms prior to entry onto computer tape, making error corrections in the field after range checks have indicated possible errors, transfer food intake data to improved computer forms before final data entry, recoding 2 clusters of morbidity data for 1984, validation of SES indicators, childcare giving, sanitation, and hygiene and final testing of several remaining toddlers who reached six months of age in January. Also literacy testing of adults, the alcohol questionnaire, the anxiety/depression survey and time allocation are being completed. Disposition of equipment, preparation for the audit, culling of files, preparation of data for storage in Kenya and for shipment comprise the main activities. Final community meeting celebrations, farewells and planning for the intervention phase and a possible continuity study also took place.

The whole wind-down has evoked mixed emotions in all of the senior staff and field workers. They are happy and have a sense of accomplishment that they have successfully completed a complex and demanding task to the best of their ability but sad to see a cohesive, well-trained group of over a 180

field staff disperse and see an organization that has taken so much time, effort and resources to build up, now dismantled. Some 15% to 20% of the staff have now been placed in other jobs or are attending university or further education. A number will continue in the intervention program and any follow-up research activities. Saying farewell to the community where there have been very positive feelings generated toward the project, farewells and exchange of gifts has been a very emotional experience and all regret that Drs. Cattle and Carter could not be there to share what they have so painstakingly helped to built up.

#### Status of Data: Food Intake and Other Functional Areas

Food Intake. The food intake data is in the process of being transferred from old computer forms to revised forms 114 through 119 which will allow food to be reported in grams, type of ingredient and recipe. This will allow for simple computer analysis of nutrients. A database is being built up using USDA, Platt, FAO African food tables and values from actual analyses of selected foods by Medallion Laboratories. Forms are being checked after transfer from old to new forms. The target date for completion of the above activities is February 28, 1986. For the case study households, numbering 20, food intake data entry will be completed about March 7. These forms will all be entered on computer tape in Nairobi in the first two weeks of March. There will be range checks made and errors printed out for correction in the field or declared missing. The corrections are then reentered onto the tapes and these then will be sent to UCLA. To date, the last three tapes include mostly but not exclusively, food intake data. The remaining seven to eight tapes

will be largely food intake as well. Samples of some forty-five Kenyan foods have been sent and have already been analyzed by Medallion Laboratories. The last few samples to be analyzed are roast goat for which there seem to be no values and some home-brewed beer samples. Building of the Kenyan food dictionary consists of the above plus collecting standard recipes to be used for recall of dishes eaten away from home and not observed in the preparation.

Because Medallion Laboratories did not analyze the sample for available carbohydrate and fiber, the fiber content of foods will be taken from published values. A decision was made that if the USDA values were within 5% of values from other tables, the USDA values would be used because the methodology is stated clearly, the sample sizes are much bigger and quality control is known. The nutrients of particular interest aside from the proximate analyses are folic acid, the B vitamins, iron, iodine, zinc, vitamin A, calcium and fiber. No doubt others will be included. Water analyses are being done for fluoride, iodine, iron, calcium, phosphorus, magnesium, sodium and chloride, and pesticide. These analyses are being done free of charge by the Swedish Water Project. Two or three samples per cluster from such sources as rivers, ponds, piped water, wells, and rainwater will be analyzed from each of the study clusters.

Morbidity. Morbidity coding will be completed by the end of February. Samples of morbidity forms have been recoded "blindly" for purposes of quality control.

An anxiety/depression survey was carried out in a cross-sectional fashion. This is an instrument that was standardized in a Kenyan population and was developed through the efforts of WHO. It has always been felt that morbidity due to anxiety and depression, particularly in the adults was never adequately reported and this was an attempt to try and document the existence

of these conditions in the population which could certainly be a confounding variable in terms of activity, appetite, etc. Fortunately a psychiatrist in the Department of Psychiatry at the Medical School in Nairobi used this instrument that he standardized in the Kenyan population. The survey was carried out under Ms. DeSouza, the psychologist under Dr. Morquardt's supervision.

Alcohol Consumption Survey. A questionnaire was carried out by one of the most trusted senior field supervisors to try and ascertain how much alcohol consumption goes on. This was felt to be a very sensitive and under-reported item and it was felt, as above, that a cross-sectional survey might help estimate how much is being consumed. (Please see attached questionnaire). It would appear that mainly the men are drinking commercial and homemade brew, particularly on weekends. Serious thought should be given to a correction factor for energy intake in the lead males reporting very heavy intake.

Time allocation. Time allocation observations are being coded with no difficulty. The definitive list of activity codes is now complete and the coding is entered onto computerized forms with no difficulty. A descriptive analysis of the first batch of data has shown that time allocation can be presented by major categories in percentage time spent in selected categories.

Community validation of child care-giving socio-economic status and sanitation and hygiene is being completed.

Child-care giving. Dr. Paolisso and I met with several supervisors and enumerators from the activity observation staff, some of whom are mothers, to try and consider what is considered good and bad child care-giving according to local standards. Also the households were ranked according to the impressions of the field staff, which will be checked against the objective reports of child care-giving activities. For example, bad child care was

considered poor when children were left dirty on awakening from sleep, wore dirty clothes, were left alone while crying and not consoled, not fed at least three times a day, who did not receive adequate number of shots, who were left to play with dangerous objects, and who were left undisciplined and not punished or corrected when they did something considered disobedient. Also, Dr. Paolisso, with the help of the field staff, has been collecting stories and fables and games for children that shed some light on child care-giving values. The ranking will be compared to any scores that we devised using the variable collected.

Sanitation and Hygiene. A similar exercise of having the local field staff rank households as to whether they are or not considered hygienic or clean and what the standard for sanitation is locally is also in progress, and this too will be compared to actual scores obtained.

Socio-economic status. Considerable work was done in this area. Several meetings were held with the chief and sub-chiefs to try and have them evaluate the items that were asked in the socio-economic status questionnaires. They listed what they felt were important indicators and parameters of socio-economic status. Using these parameters, they were then asked in each of their sub-locations to rank the households on a five-point scale. Appended to this is the set of criteria that they used. Their rankings will be compared to the scores that we obtained through a factor analysis. The final scoring method for SES will be modified or changed accordingly after completion of the above work.

Review of Methodology and Manuals. All directors of each of the functional areas have been reviewing the manuals and the methods and indicating any changes or modifications that have been introduced into the study. Also, each senior staff member who is in charge of a functional area

is writing a subjective narrative about the methods and questionnaires, trying to evaluate which parts of the instrument they felt was valuable and which they felt was not as valuable as the others. Final description of all quality control methods is also underway. The above activities will help in writing up the final methodology section.

#### Data Flow

Dr. Neumann carried tape 22 which covers October 1985 data and a new copy of tape 17 was sent which apparently had caused some difficulty originally. To date, about 75% of the data is now at Berkeley. Tape 23 was sent shortly after leaving Kenya, and Professor Bwibo hand-carried tape 24. These will be checked and processed at UCLA, then sent to Berkeley according to a schedule. The plan is to have all data arrive at Comprite, Nairobi for computer entry, the latest in early March--corrections entered and all tapes with corrections included or indicated sent to UCLA by April 30, 1986. Depending on the number that have to be dealt with at one time, these will be processed and copied at UCLA, then sent to Management Entity at Berkeley according to schedule worked out reaching Berkeley any time from now through the middle of June.

#### Officials and Agencies Visited

##### USAID Kenya Mission, Nairobi

Mr. B. Riley, Assistant Mission Director who represented the Mission Director, Mr. Gladson.

Mrs. Linda Landenau and Mr. Gary Merritt, both of Population and Health.

Discussions centered around the clarification of the proposed USAID funded follow-up of the CRSP which will not take place under USAID auspices. Also discussed was the possibility that the USAID Kenya Mission might fund a formal

Nutrition CRSP Kenya Project review meeting. The purpose of the meeting would be for information transfer and sharing of data in about 10 months time after the data analysis has been in progress. Also requested were funds for the non-reimbursed portion of funds contributed by the project for famine relief. No definite answer was given during my stay.

Secretariat on the Environment. A workshop on famine and drought intervention and activities will be held in conjunction with the Office of the President at the end of March or beginning of April, 1986. The Kenya Nutrition CRSP Project was invited to present three papers: 1) On the community response to the famine; 2) The nutritional and health impact on the population; and 3) Methods of assessing crop yields as worked out by Drs. Paolisso and Baksh. Three short papers will be presented and the matter was presented to SCB for clearance.

Possible CRSP Follow-up study. There is a strong likelihood that through the Applied Nutrition Program under Dr. A.A. Kielmann and possibly through some other sources of local funding, there will be a small targeted follow-up of the CRSP toddlers, the pregnancies subsequent to those occurring at the time of the famine and of the infants born into the Nutrition CRSP Project to follow their subsequent growth and development. Coping strategies of the households will be examined in terms of the previous famine and any changes that they have instituted. Data will be reviewed from the CRSP to select out indicators that could serve as possible early warning signs.

Since AIDS has reached near epidemic proportions in some parts of East Africa, there is great interest in the distribution of AIDS antibody in East African populations. Through the Kenya Medical Research Institute (Dr. D. Koech\*), there may be some examination of left over serum samples for antibody

\*Collaborating immunologist

studies. Professor Bwibo has concurred with this and there would be no cost to the Nutrition CRSP Project.

Post-Research Intervention. The Meals for Millions/Freedom from Hunger Foundation will definitely start activities in Embu District in the study area and in the contiguous semi-arid areas starting April 1, 1986. The local community, the chief, the District Officer, the District Commissioner, and the Provincial Medical Officer have all given this Applied Nutrition Program their enthusiastic permission to proceed. A small but definite number of Nutrition CRSP staff will be employed almost immediately by the Meals for Millions group. Also, the Meals for Millions Program will take advantage of the preliminary survey data on Anthropometry, Nutritional Status, and other information that would be of help in their understanding the community. This background information will have nothing to do with hypothesis testing but serves rather as baseline information. Also, there is the possibility that AMREF (The African Medical Research Education Foundation) will become involved in community-based primary health care, working out of the Kararumo Rural Health Training Center. They will be able to take advantage of some of the morbidity-trained enumerators and the infrastructure and morbidity information about the area.

Further Training for Kenyan Staff. We are pleased to announce that Mr. E.K. Njeru, the data manager, and Mr. Duncan Ngare, the social scientist, have both been awarded United Nations University (UNU) fellowships to do graduate work in the U.S.A. Accordingly, Mr. Njeru will study Biostatistics at the UCLA School of Public Health; Mr. Duncan Ngare will study Behavioral Science at the UCLA School of Public Health. Both would be in MPH programs for a two-year period, assuming that they will be accepted with no difficulty. They both

will be available to participate in data analysis, interpretation and write-up. Needless to say, we are delighted as this will go a long way toward institution building. The talent of a statistician is badly needed in Kenya. Mr. Njeru will probably work with the University when he returns, and Mr. Ngare has a position with the Kenyan Medical Research Institute as a medical sociologist. Also the fact that they will be working with the data tapes at UCLA, particularly Mr. Njeru, will ensure the ability of Kenya to be able to analyze the data tapes that will be left in Kenya.

The remainder of the stay was spent in going through files, sorting papers for shipment back to UCLA, arranging for storage of hard data in the University of Nairobi, arranging for shipment of copies of data to the U.S., handing over equipment to the University of Nairobi, clearing out the offices and laboratories, and reviewing records in preparation for the audit that will be coming up in February. Dr. Mike Baksh, the field director, and Mr. Bill Martin will remain through March 31 doing the final close down. Miss Susan Weinberg will remain in Embu for another year for personal reasons. She, Dr. Jansen and Dr. Bwibo and some other staff will be involved in any of the follow-up research activities.

We are hopeful that we will be able to find funding for a proper review meeting in about ten months. The first annual review meetings was so well-received with well over 35 organizations and agencies represented from government and NGO's. A promise was made to hold another meeting when findings were known. This, we feel, is a moral obligation to the host country. We are very earnest in seeking funds for this meeting so that this can materialize. Information sharing, discussion of findings, and finding out what the host country and international agencies feel are important in terms of the research findings is surely the first step in any policy formation

based on the research findings. Policy cannot be made in a vacuum. The findings must be presented and discussed and reflected upon, most of all by the people who are affected by such policies.

Submitted by,

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