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SCHOOL OF PUBLIC HEALTH
DEPARTMENT OF BIOMEDICAL AND
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BERKELEY, CALIFORNIA 94720

November 5, 1985

Dr. Stephen T. Jones
International Health Program Office
Centers for Disease Control
Atlanta, GA 30333

Dear Steve:

Enclosed is a copy of the report that I presented to the OR Review Committee for East and Southern Africa in Mbabane, Swaziland on October 28, 1985, an addendum to the report that I prepared after the meeting, and my review of the individual OR studies that I visited. As you can see, I was a lot more positive about regional CCCD OR activities than Frank Polk was. We both agreed that if this activity was to continue, and I strongly recommend that it does, the administrative management of this component of CCCD be strengthened by the development of additional staffing specifically for this purpose. We consider it poor use of a field epidemiologist's time to be running down administrative details and to be following up on all of the OR proposals, funded studies, plus making all of the arrangements for and communicating with all of the Research Review Committee members.

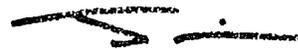
Of the three options which I listed in my report, the one I listed first was viewed with some reservations by many of the African Committee members, because of the track record of WHO-AFRO. However, I still believe that this should be the first option to explore since if it can be carried out by the CCCD liason officer to AFRO and kept somewhat independent of AFRO, then this would accomplish several things which would strengthen CCCD in the long run. First and foremost, it would provide for better continuity for CCCD funded regional OR studies since the assignment of Dave Heymann to Malawi may not continue for too many years. If and when Dave moves, there is no assurance that the CCCD regional field epidemiologist will be housed in Malawi. Second, assignment of the regional OR responsibilities to the CCCD liason officer to AFRO will provide for better coordination of CCCD funded OR studies with AFRO. One of these days, AFRO has to get moving in this area and it will help to have a good model like CCCD regional OR activities in their backyard. I do not envision that Dave Bassett will assume all of the regional OR responsibilities which Dave Heymann has shouldered up to now. Rather, I see Dave Bassett hiring a

local person to take care of the myriad of administrative details that only required clerical time and Dave Bassett would supervise this person and take care of all of the technical and policy matters. The consensus of all participants at the meeting in Mbabane (including Jack Slattery and John Khoering) was that all of the options which I listed should be explored as soon as possible, and that implementation of the most viable option should not wait until the March, 1986 CCCD review.

I thoroughly enjoyed all aspects of my consultancy. To see how CCCD is growing up and how well received it is by the host countries, AID missions and by REDSO/ESA is particularly gratifying. It was also great to visit with Dave Heymann and to see what a good job he is doing and also how well he is considered by the local AID staffs and by all the Africans I met. The countries that I visited were beautiful and they reminded me of northern California. Now I know why all of the CDCers and "consultants" all fight for a trip to East and Southern Africa.

I'll be available to discuss any aspect of my report and recommendations with anyone at CDC or AID if there is a need. Please keep me informed of the continued progress of the CCCD project.

Cordially,



James Chin, M.D., M.P.H.
Clinical Professor of Epidemiology

xc: Dr. David Heymann
JC:eac

REVIEW AND EVALUATION OF CCCD SUPPORTED
OPERATIONAL RESEARCH STUDIES IN
EAST AND SOUTHERN AFRICA

INTRODUCTION

The primary objective of CCCD, as stated in the original USAID project authorization paper, is to increase the ability of African governments to control childhood communicable diseases, within the context of Primary Health Care. It was the clear intent of the CCCD project, in addition to the control of childhood communicable diseases, that the strengthening of African institutions, as well as, increasing the capability of African professional staffs in public health, science and medicine was of the highest priority. It was also recognized that operational research (OR) had to be a key component of the CCCD project. Such OR was essential in order to effectively adapt the available intervention measures against the CCCD target diseases to the many different local epidemiologic, environmental and cultural situations, as well as, to the different health care systems and levels of available resources, which exists in Africa.

IMPLEMENTATION OF CCCD OR STUDIES

With the initial assignment of CCCD field staff in Africa beginning in 1983, OR activities began with some OR studies developed and carried out by CCCD staff in collaboration with national Ministries of Health. In addition, beginning in 1983, two African Research Review Committees were established by the CCCD project; one for West and Central Africa and one for East

and Southern Africa. These committees, made up of African researchers and representatives of the international medical/scientific community, meet periodically to evaluate OR research proposals which have been received by the CCCD project in order to determine their suitability for funding. Up to twenty new OR proposals by African investigators (approximately 10 for each committee) with budgets of up to U.S.\$10,000 each, can be funded by CCCD each year through 1987. In East and Southern Africa, eleven (11) OR studies were approved for funding during the first year (83-84) and an additional eight (8) proposals funded during the second year (84-85).

ADMINISTRATION OF CCCD FUNDED OR STUDIES

Details regarding the administration and evaluation of the CCCD funded OR studies were not provided in the original CCCD project paper. Thus, the initial responsibility for the development, administration, supervision and evaluation of these studies fell almost totally upon the CCCD field epidemiologists. At the October, 1984 meeting of the East and Southern Africa Operational Research Review Committee, the following decisions were made to assist in the administration and management of CCCD funded OR studies. Committee members agreed to help potential investigators to develop better quality proposals. In addition, CCCD was requested, whenever possible, to assure that Committee members or consultants be made available to assist investigators when requested or needed for problem solving.

During a scheduled internal review of the CCCD project held in Atlanta in January, 1985, the issue of the administration, supervision and evaluation of these OR studies was raised. The

amount of time and effort to carry out these needed activities were fully discussed, and it was decided that an evaluation of this key component of the CCCD project be carried out by external consultants.

Accordingly, two external consultants were selected to review and evaluate the CCCD funded OR studies in East and Southern Africa. Dr. Frank Polk, Professor of Epidemiology from the John's Hopkins School of Hygiene and Public Health reviewed OR studies in Rwanda, Burundi and Kenya in July, 1985 and Dr. James Chin, Chief of the Infectious Disease Branch of the California Department of Health Services and Clinical Professor of Epidemiology at the University of California, School of Public Health (Berkeley) reviewed OR studies in Malawi, Zimbabwe, Lesotho and Swaziland in October, 1985. This report will primarily reflect the findings and recommendations of J. Chin. This review and evaluation applies only to CCCD funded studies in East and Southern Africa since no visits were made to any of the OR studies in West or Central Africa. Dr. F. Polk has submitted a separate and independent report of his findings to the CCCD project.

EVALUATION OF INDIVIDUAL OR STUDIES

This report will not go into any detail regarding the individual OR study reviews. These specific findings and recommendations by each of the external consultants have been provided to the CCCD project and these evaluations and comments will be communicated to the individual researchers by the CCCD staff.

Overall, the scientific quality of the studies was considered by both consultants to be mixed, with a few poorly carried out and some executed very well. The OR studies ranged from some fairly simple straightforward descriptive surveys to some fairly sophisticated epidemiologic studies. Most of the studies will yield valuable data for the development or improvement of local control programs directed to CCCD target diseases. In addition, some of the studies may well have wider application to other countries in the region. Of equal importance is that CCCD support of these OR studies has provided valuable, and in many instances the first experience in public health research for recipients of these funds. Of the completed studies reviewed more than half will likely be of sufficient quality and merit for submission to peer review journals for eventual publication.

MAJOR PROBLEM NOTED

The basic mechanism for review and awarding of the CCCD OR study funds appears to be a good one and does not require any change. The use of the Regional Research Review Committee and additional technical review by CCCD staff and Centers for Disease Control (CDC) staff in Atlanta, has assured African input to the selection process and has also resulted in technically sound proposals. The major problem arises in the administrative management, technical supervision and evaluation

and follow-up of these CCCD funded OR studies.

It was readily apparent to both external consultants that to adequately provide such management and follow up of approximately ten new OR studies per year would require at least half or more of the regional CCCD field epidemiologist's time. The CCCD field epidemiologist for East and Southern Africa (Dr. David Heymann) has done a commendable job in getting the Regional Research Review Committee established and functioning. His soliciation and assistance for the submission of many of the initial OR study proposals required considerable time and effort on his part. However, as his other CCCD program activities have developed and expanded, he has not been able to provide sufficient time to adequately manage and follow-up on all of these regional OR studies. This was the major problem which was recognized by both external consultants.

RECOMMENDATIONS

1. CCCD should continue to fund OR study proposals (up to U.S\$10,000 each) from African investigators according to the guidelines adopted by the CCCD Ad Hoc Advisory Group for Operational Research (Nairobi, December, 1983).
2. The CCCD field epidemiologist with current responsibility for these Regional OR studies should continue to serve as a member of the Regional Research Review Committee,

but should be relieved of primary administrative and direct field supervision and evaluation of these studies as soon as an alternative administrative mechanism can be developed. The following alternative administrative arrangements should be explored:

- a) Assignment of primary administrative management of these Regional OR studies be turned over to the CCCD field officer assigned to WHO-AFRO.
 - b) Assignment of an additional CCCD technical-administrative position to manage all of these Regional OR studies.
 - c) Permit the CCCD field epidemiologist to locally hire or contract out to an established African research institution or Ministry of Health for the necessary administration and follow-up of all of the Regional CCCD funded OR studies.
3. Regardless of which option (including no change) is decided upon, African consultants, including those researchers who have successfully completed CCCD funded OR studies, should be used to the fullest extent possible, to provide supervision and follow-up of ongoing and future CCCD funded OR studies.
 4. To the extent possible, CCCD should expedite the procurement of materials which need to be imported to carry out the approved and funded CCCD OR study.

5. Applicants for CCCD OR study funds should be required to specify how much time they will devote to implementation or direct supervision of the proposed study. They should also be required to list all professional commitments and all other research funds they are receiving or have applied for.
6. Giving some priority to funding of OR study proposals from countries where bilateral CCCD agreements have been reached can be considered, but should not preclude the funding of sound OR proposals from applicants of non CCCD bilateral countries. Operational research and training were considered Regional activities in the original CCCD project paper and these major components of CCCD should continue to be prominent Regional activities.
7. Consideration should be given to convening an annual meeting of all CCCD OR grant recipients to present their work in progress or completed. Such an opportunity for interchange will be beneficial to all participants and will greatly facilitate future collaboration and /or consultation between African researchers. Whenever possible, this meeting should be scheduled to coincide with some other CCCD relevant technical meeting such as the Regional Research Review Committee or Regional EPI meetings, etc.
8. CCCD should consider the development of an OR training

course to be given in several different African countries. Such a course should emphasize the development and writing up of a technical research study. CCCD field staff and members of the Regional Research Review Committee should identify individuals who might benefit from such a workshop or training course on OR.

9. A separate evaluation of CCCD funded OR in West and Central Africa should be carried out by an external, French speaking consultant who has had international health experience in developing countries, especially Africa.
10. Requests for external consultants for CCCD funded OR studies should routinely be initiated only by CCCD field staff or by the Ministry of Health.
11. CCCD project funds should not (except for unusual situations) be used for support of any consultant who lacks experience in developing countries. CCCD should provide opportunities for training non African health professionals and provide them with experience in OR studies in developing countries, but the funding of such visits should not be charged to the CCCD project.

CONCLUSIONS

The CCCD funded OR studies carried out by local African researchers are meeting the primary objectives of the CCCD

project. Most of the funded studies will yield important data relevant to the development or improvement of intervention measures directed to CCCD target diseases. In addition, some young and relatively inexperienced African researchers are getting the needed support to enable them to develop and implement research studies. Some of these investigators will be able to provide consultation and assistance to ongoing and future CCCD funded OR studies. The CCCD field epidemiologist and the Research Review Committee members in East and Southern Africa have done a commendable job in setting up and initially implementing this major component of CCCD. Continuation of the administration, management and necessary follow-up of these OR studies requires more time than the field epidemiologist and Committee members can afford from their other program responsibilities and some alternative administrative arrangement needs to be developed as soon as possible.

James Chin, M.D., M.P.H.
CCCD External Consultant

Mbabane, Swaziland
October 28, 1985.

ADDENDUM

The following are the major recommendations which were formulated at the CCCD Operations Research Review Committee Meeting for East, Central, and Southern Africa, held on October 28-29, 1985 in Mbabane, Swaziland. During this meeting, I presented my report and had detailed discussions with all of the Committee members, as well as with CCCD and AID staff. I was greatly impressed with the professional expertise of the Committee members. They reviewed and evaluated the submitted OR proposals thoroughly and critically.

1. It was consensus of all participants that the CCCD funded OR studies for African investigators were of immense value for the development of research capability in Africa and should be continued as a regional CCCD activity.
2. It was also the consensus of all participants that the administrative management of this essential component of the CCCD project needs to be strengthened. Most, if not all of the recognized inadequate technical review and follow-up of OR proposals and funded studies would be resolved with additional staffing for administrative management. Various options were discussed and it was agreed that Mr. John Koehring, Director, REDSO/ESA and Dr. David Heymann, Regional Epidemiologist for CCCD should explore the feasibility of all of the options listed in my report as soon as possible.
3. It was recommended that implementation of what is determined to be the most viable option for strengthening the administrative management of regional OR studies should not wait until the March, 1986 CCCD project review. The March, 1986 review team should be asked to evaluate the progress made for strengthening this regional component of the CCCD project.
4. It was recognized that this Committee has, de facto, been receiving and reviewing OR proposals from English speaking countries in West Africa. It was agreed that this should continue and that additional Committee members be identified from these West African countries.
5. CCCD funded OR studies must continue to be focused on CCCD target diseases and programs. There has been an understandable increase in the number of research proposals from African investigators which are not operations research and which are not directly relevant to CCCD target diseases or programs. The Committee reaffirmed the guidelines for CCCD funded OR adopted by the CCCD Ad Hoc Advisory Group for Operational Research (Nairobi, 1983).
6. Even with the reaffirmation of these guidelines, some confusion may still persist regarding what specific research studies may be eligible for support by CCCD funds. One solution which I proposed and which was well received by several members of the Committee is that the Committee and CCCD staff develop specific requests for proposals (RFPs) and circulate these RFPs to African research institutions, Ministries of Health, etc. This would eliminate the uncertainty of what research studies might be eligible for CCCD support and would also result in more directed OR to meet CCCD objectives. Proposals submitted in response to these RFPs can still be reviewed and evaluated by this Committee. Consideration should be given to allocating a specific proportion, such as 60 to 80 percent of available funds to such directed OR and to be flexible with the remaining funds for unsolicited OR proposals which are relevant to CCCD target diseases and programs.

SUMMARY IMPRESSIONS OF THE INDIVIDUAL OR STUDIES
REVIEWED IN EAST AND SOUTHERN AFRICA

James Chin, M.D.

I was asked to visit and evaluate seven CCCD funded OR studies; two in Malawi, three in Zimbabwe, and one each in Lesotho and Swaziland. All of these OR studies were in my opinion directly relevant to the specific objectives of the CCCD project except for the study of positive deviance in nutrition (Lesotho). This latter study may yield important information bearing on infant nutrition, but the information collected on CCCD target diseases will be of limited value.

There were, as expect, some administrative problems and delays in the start up of many of these studies, but none of these problems were serious enough to preclude successful completion. One study had as of my visit in mid-October, not been started because of difficulties in procuring laboratory reagents and supplies which have to be imported. This is a general and frequent problem which CCCD staff should try to resolve in the initial awarding of CCCD funds.

The two studies in Malawi had sufficient supervision and follow-up from the CCCD regional field epidemiologist, but he may need to give the PI of the KAP study on infant diarrhea some assistance to get a final report completed on a timely basis. The three studies in Zimbabwe were all submitted by staff of the Blair Research Laboratory. All of the studies were well designed, and support and technical supervision of these studies were, and are available from the University of Zimbabwe, the ministry of health and from all of the professional staff of the Blair Research Laboratory. The study in Lesotho was not closely supervised by CCCD staff, but the investigator was doing this field study as part of her Ph.D. thesis and received guidance from her doctoral committee chairman. The study in Swaziland was essentially designed and carried out by CCCD staff and an African consultant who had successfully completed a similar CCCD funded OR study.

Of the six studies which have been started or completed, I expect that at least three will yield a paper for publication in a peer review journal. All six studies have given African investigators opportunities to develop their research capabilities and all of them will yield information that will be useful to improve the health of African infants and children. The primary objectives of this component of the CCCD project, i.e., to provide data which will help in the implementation of CCCD relevant programs and to provide African investigators opportunities to develop their research capabilities, are being achieved by the CCCD funded OR studies which I had an opportunity to review.

Title: A STUDY OF THE RELATIONSHIP BETWEEN WEANING FOODS AND DRINKING WATER AND THE TRANSMISSION OF DIARRHEA IN ZIMBAWE

PI: Clifford Simango, Research Officer,
Blair Research Laboratory, Zimbabwe

Timing

Scheduled for implementation from July 1985 to November 1986. However, as of mid-October, 1985, this study has not been started.

Evaluation

This study had not been started primarily because the investigator is having difficulties in procuring (i.e., importing) the necessary reagents and supplies he needs for the laboratory testing of foods and water which he will collect. This will be his first research study. He will have supervision and support from other staff at the Blair Research Laboratory. He plans to collect for microbiological testing, samples of weaning foods and water from 100 households where a case of acute diarrhea in a child less than 5 years of age has occurred in the preceeding 24 hours. Control samples will be collected from 100 households with children who have other illnesses. In addition, information will be collected on the method of food and water storage and duration of storage using questionnaires which will be completed by the investigator or a technician. Stool specimens will be collected from the infant/child with acute diarrhea and from the control infant/child, and these specimens will be tested for bacterial, protozoan, and viral agents.

I discussed this study design with Mr. Simango to indicate my concern whether any meaningful results will be obtained from his findings which will lead to specific recommendations which will reduce childhood diarrhea. My concerns stem from the multiplicity of factors which are associated with infant and child diarrhea. I seriously doubt that any significant difference will be found in the overall microbiological content of weaning foods and drinking water of cases of acute diarrhea compared to other children in the same general community. Other factors such as the general environmental and personal hygiene of preschool children may well overshadow any possible differential found in weaning foods and drinking water. In any event, the results of this study would not be needed to recommend better hygiene in preparing and storing weaning foods or to improve the quality of drinking water. Nevertheless, I believe that this study will give Mr. Simango valuable experience in the design and implementation of a field-laboratory OR study. The laboratory aspects of this study are extensive and very ambitious. Even if the results will not show any significant difference between cases and controls, the increased capability and experience in laboratory testing for enteric pathogens which Mr. Simango will gain from this study, will be of future value in the control of infant diarrhea in Zimbabwe.

Future CCCD Involvement

Since this study has not yet been started, it is premature to discuss Mr. Simango's possible future involvement with the CCCD project. However, my impression is that he will be a competent researcher and that he will have sufficient support from his institution to successfully complete his study.

Title: ASPECTS OF DRUG AVAILABILITY AND UTILIZATION IN
RELATION TO MALARIA IN ZIMBAWE

PI: Dr. Paul Taylor, Director
Blair Research Laboratory

Timing

This proposal was approved for funding in late 1983, but funding of the revised protocol was not available until April, 1984. For this reason, implementation of this protocol was delayed until the following malaria season (1984-85). This study has been completed and a draft manuscript has been prepared for submission to an African medical journal.

Evaluation

This was a straightforward questionnaire survey of malaria chemoprophylaxis programs, policies, and practices supplemented by collection of urine specimens in selected situations to confirm the history of taking sulphonamides or chloroquine. The study was carried out by an experienced research team. The results confirm that compliance with malaria chemoprophylaxis is far from universal and, at most, only about half or less of the target populations avail themselves of this malaria prevention.

A review of their laboratory findings on urine testing to check the accuracy of the history of drug use did not yield results which were easy to interpret. Factors which make interpretation of these results difficult include: accuracy of the tests per se, timing of urine collection in relation to when drugs were taken, and how well the tests were actually performed. In retrospect, these laboratory data added very little to their general findings. These latter findings could easily have been predicted without this study. However, this documentation of the relative non-compliance with malaria chemoprophylaxis programs was needed to define the specific extent of the problem among different population groups.

A draft manuscript reporting the results of this study was provided and this manuscript is in the process of being submitted for publication in an African medical journal. The specific findings of this study will be of value in the design of future malaria prevention programs in Zimbabwe and are also helpful in efforts to improve ongoing programs.

This was a successfully completed CCCD funded OR study.

Future CCCD Involvement

Dr. Taylor has recently received a couple of research grants for studies of schistosomiasis and malaria. His time will be fully committed to these studies and he will not be able to consider applying for any new CCCD support for the next year or two. However, he will be encouraging his staff to develop OR study proposals for submission to the CCCD OR Review Committee.

Title: ASSESSMENT OF KNOWLEDGE, ATTITUDES AND PRACTICES (KAP)
IN THE PREVENTION AND MANAGEMENT OF DIARRHEA

PI: Shungu Mtero, Research Officer
Blair Research Laboratory

Timing

This study was carried out in June-July, 1984. A completed report was submitted to CCCD staff in July 1985. Consideration is being given to preparing a paper for publication in an African medical journal.

Evaluation

This was a straightforward questionnaire survey of mothers/childminders and health workers regarding diarrhea in children under 5 years of age. A total of 480 households were selected from 8 rural areas of Zimbabwe. The study was designed and implemented by a young research officer of the Blair Research Laboratory in Harare. Information was collected on the respondents' perception of diarrhea, its causes, its consequences, and actions taken for prevention and management. She found that the majority of health care workers interviewed had fairly accurate knowledge about the etiology of acute diarrhea, but about a quarter of them did not know the correct formulation of the sugar-salt solution (SSS) recommended nationally for home use. In contrast to health care workers, mothers/childminders had wide ranging beliefs in the etiology of diarrhea and most did not know how to correctly mix the SSS. My only critique of her data was that some of her questions were not mutually exclusive and this resulted in some confusing answers.

This was her first research study and she actively sought the assistance of the dean of students, University of Zimbabwe in the design of the questionnaire, in the selection of the field survey staff and in the pretesting of her methodology. She obtained statistical support from a statistician at the Ministry of Health. She did not use a computer for the tabulation or analysis of her data, but she plans to in the future. She has written a very detailed and comprehensive final report and she plans to submit for publication selected aspects of this study.

This was a very successful CCCD funded OR study which gave valuable research experience to a young African investigator and obtained data which will be helpful in the development of programs in Zimbabwe to manage acute diarrhea in infants and children.

Future CCCD Involvement

Miss Mtero is planning to submit additional proposals for CCCD OR support. She would very much like to follow-up on some of her findings from this completed study. She would like to find out the basis for some of the local beliefs regarding the etiology of diarrhea since the understanding of such beliefs may be of help in the education of mothers in the home management of acute diarrhea.

Title: A STUDY OF KNOWLEDGE, ATTITUDES AND PRACTICES (KAP) CONCERNING CHILDHOOD DIARRHEA AND DEHYDRATION IN MULANJE DISTRICT, MALAWI

PI: Dr. Grace Malenga, Staff Pediatrician (Pediatric Specialist)
Mulanje Hospital, Box 3, Mulanje

Timing

This proposal was initiated around mid to late 1984 it was approved and finalized in early 1985. All of the field work and data collection were completed in July, 1985. A final report has not yet been prepared.

Evaluation

This was a questionnaire-KAP survey of almost 900 mothers in the Malanje district of Malawi, concerning childhood diarrhea and dehydration. All of the field work was completed in July 1985, and all of the data were prepared for computer analysis. I visited Dr. Malenga on October 16, 1985, at which time she had just received a completed computer print out of all of her collected data. She had not had an opportunity to adequately analyze her data, but some interesting findings were noted.

Salt is available in most homes (>80%), but sugar is not (only about 20%). Containers found in the home are all of different sizes and the only uniform size containers are Sprite or Fanta bottles. Most mothers (about 70%) do not know how to correctly make up the simple sugar-salt solution which is recommended nationally. Also her preliminary data indicate that less than half of the mothers interviewed own a radio, and close to half of all mothers either never listen to a radio or do so infrequently. This latter finding has significant implications for the development of national health education campaigns which plan to utilize radio messages. I doubt whether Dr. Malenga will try to prepare her eventual report for publication. However, the data which will be available from this OR study should be of value in the development of home management strategies for acute diarrhea in infants and children in Malawi.

This is as yet an unfinished OR study, but all of the data have been collected and only the final report needs to be prepared. She may need some supervision and assistance to complete her report.

Future CCCD Involvement

Dr. Malenga is a very busy clinician and this was the first field research effort she has undertaken. She admittedly does not have the time to consider any additional field studies, and in fact she estimated that it may take her up to 6 months to analyze and write up her collected data into a final report. She did express an interest in clinical collaboration for studies such as evaluating alternative drugs for malaria chemoprophylaxis or treatment, if laboratory support could be provided.

Title: A STUDY OF POSITIVE DEVIANCE IN NUTRITION

PI: Mokuba Petlane, Chief Health Educator, Ministry of Health, Lesotho and
Thabisile Hlatshwayo, Ph.D. candidate in international nutrition

Timing

This study was started in November, 1984 and the collection of field data is expected to be completed by November, 1985.

Evaluation

This study is being carried out by a Ph.D. candidate to fulfill her thesis requirement. The study design has changed many times since it was originally approved. She had wanted a completely random sample of infants for this study, but quickly found out that this was virtually impossible since considerations such as physical accessibility to some of the villages selected, plus the lack of cooperation occasionally encountered precluded any hope of being able to study a totally random sample. Since her study basically involved internal controls, she shifted her study population to one which was both reachable and where good cooperation from village chiefs could be obtained. All of her protocol changes were discussed and approved by her doctoral committee chairman.

Her study involves the collection of anthropometric and morbidity data on approximately 1500 infants every 4 months. These 1500 infants are then grouped according to best growth (BG) or growth faltering (GF) patterns. A sample of 30 BG and 30 GF infants are then selected for intensive study which involves additional measurements and data collection focusing on infant-mother interactions. This procedure is repeated every 4 months, i.e. rescreening of the 1500 infants and regrouping into BG and GF patterns and selection of 30 BG and 30 FG infants for detailed study. From the collection of such data, from 4 groupings, the investigator hopes to identify factors which are associated with or promote BG. No preliminary data are yet available but she has found that her BG and FG groups do not always contain the same infants/children from the previous BG and FG groups. It appears that there is more consistency in the FG group, but that infants/children seem to fall out of the BG group more. I suggested that it may be of some value to focus additional study on those infants who shift from either FG or BG to see if she can identify factors associated with these changes.

Miss Hlatshwayo plans to finish all of the field work before November and then return to Cornell to prepare her data for computer analysis. She expects to finish her thesis by August, 1986.

Future CCCD Involvement

It is unlikely that this investigator will have future CCCD involvement. This study is well designed and appears to be well executed, but it is not in my opinion directly relevant to the CCCD project.

Title: ASSESSMENT OF MALARIA THERAPY EFFICACY FOR THE MALAWI CCCD PROGRAM

PI: Charles O. Khoromana

Timing

This study was started in July, 1984 and completed in January 1985. A final report has been submitted to CCCD and a paper based on the findings has been prepared, submitted, and accepted for publication in Lancet.

Evaluation

This CCCD funded OR study was instrumental in training several Malawian technicians in the laboratory diagnosis of malaria. This was a collaborative effort involving staff from the CDC's Malaria Division. Additional support and supervision to this study was provided by Dr. CC (Kent) Campbell from CDC, Atlanta. The study found that 7 day in vivo study was adequate to provide essential data on the response of malarial parasites to chloroquine therapy. Compared to the 21 day method this 7 day method saves time and reduces program staff needs. In addition, this study showed that larger doses of chloroquine are needed for the effective treatment of malaria in Malawi. These findings have been utilized to develop the most recent national guidelines for the treatment of malaria.

This was a highly successful CCCD funded OR study in that it provided for the training of many Malawian health workers, especially the principal investigator, and resulted in the collection of important malaria treatment data.

Future CCCD Involvement

Mr. Khoromana is very interested in continuing his malaria studies. He is an active consultant and collaborator on a similar CCCD funded OR study in Swaziland. In fact, this latter study could not be implemented without his participation in the training of laboratory technicians in Swaziland. He has developed an impressive syllabus for such malaria training. In addition, he has been instrumental in the development of a 5 year plan for the control of malaria in Malawi. Part of this plan includes additional training for the national malaria coordinator, a position for which Mr. Khoromana is a leading candidate as a result of the experience he has had with this CCCD funded OR study.

Title: EVALUATION OF CHLOROQUINE THERAPY IN SWAZILAND

PI: Dr. Ruth Tshabalala, Ministry of Health, Swaziland

Timing

February-June 1985, (First phase)

Evaluation

This study began with a short training course on laboratory aspects of malaria diagnosis for field staff in May, 1985. Then in May and June, field testing was carried out to evaluate a single 10 mg/kg dose of chloroquine compared to a 3 dose (25 mg/kg) regimen. Further testing in the field of the 25 regimen is planned during the 1985-86 malaria season.

This study is virtually identical to the CCCD funded OR study on malaria treatment in Malawi carried out last year by Mr. Charles Khoromana. In fact, Mr. Khoromana has been providing virtually all of the technical expertise for the implementation of this study. When completed, it should yield the necessary data upon which the Ministry of Health in Swaziland can formulate revised recommendations for malaria treatment.

Further CCCD Involvement

I was not impressed with the involvement of the principal investigators of this study. The study design and implementation have primarily come from CCCD staff and an African CCCD consultant who successfully completed a similar study in Malawi. I can foresee additional involvement of this African CCCD consultant in future CCCD OR studies on malaria, but I believe that it is unlikely that the principal investigators of this study in Swaziland will be capable of developing other OR studies without similar assistance.