AFRICA CHILD SURVIVAL INITIATIVE
COMBATTING CHILDHOOD COMMUNICABLE DISEASES
(ACSI-CCCD)

ASSIGNING TECHNICAL OFFICERS TO MINISTRIES OF HEALTH: A MANAGEMENT STUDY

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
Africa Regional Project (698-0421)

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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CENTERS FOR DISEASE CONTROL AND PREVENTION

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"The TO's responsibility is to facilitate project implementation. On one hand is the donor (USAID) with its own objectives and necessary funds; on the other hand is the national government (MOH) also with its own objectives but no funds. The role of the TO is to try to bring the two agencies together so that both can work jointly in conformity with the objectives of the country"

(Côte d'Ivoire MOH interview respondent, 1992).

Executive Summary

The Africa Child Survival Initiative-Combatting Childhood Communicable Diseases (ACSI-CCCD) Project, which ends in September 1993, worked with 13 sub-Saharan countries in providing child survival services in immunization, diarrheal disease control, and malaria control. Achievements of the African countries during the 12-year project (increased immunization coverage, use of oral rehydration therapy, preventing and treating malaria in children and pregnant women) have been well documented. However, less documented are the management aspects of the ACSI-CCCD Project.

This report presents the results of a case study that investigated the primary strategy for in-country management of the ACSI-CCCD Project: the assignment of long-term Technical Officers (TOs) to Ministries of Health (MOHs). Data were gathered from multiple sources:

- documents from the ACSI-CCCD project
- interviews with individuals in the MOH, CDC, A.I.D., and other organizations who were affiliated with the project in Burundi, Central African Republic, and Côte d'Ivoire
- responses from a self-administered mail survey of MOH, CDC, and A.I.D. staff affiliated with the project

The objectives of the study were:

- to identify TO skills that were important for the successful implementation of the project
- to document the effect of assigning TOs to Ministries of Health in the implementation of the ACSI-CCCD Project
- to identify country-specific characteristics that would help enhance the ability of TOs to successfully implement the project

Key Findings

1. Assigning TOs to MOHs was considered an important strategy for the implementation of the ACSI-CCCD Project. The comments from interview and survey respondents were predominantly positive and supportive of the strategy.

2. Planning was considered by both interview and survey respondents as the most important of nine management knowledge and skills for TOs to have. The order of importance of the other eight knowledge and skills differed among the three countries and by employer group (MOH, A.I.D., CDC) in the survey; however, information management, communication, and evaluation were consistently listed among the top most important.

Interpersonal skills were considered to be very important by MOH staff, but these were not included as requirements in the TO's position description. Other knowledge and skills considered important by the respondents were knowledge of host government and A.I.D. regulations and procedures, knowledge of training, and French language skills.

3. Although planning was consistently cited as the most important management knowledge and skill that TOs should have, the management and technical functions of TOs seem to have been compromised because of the large amount of time they spent on project administration. TOs spent, on average, more than 50% of their time on project administration.

4. Management problems faced by the project could be traced to the three principal implementing agencies (A.I.D., CDC, MOH). The primary reasons given for the focus on administration were the cumbersome procedures and requirements of the donor agency (A.I.D.) and limited administrative assistance either from hired staff or the USAID Mission. CDC was unable to send TOs to their posts in a timely fashion and did not view management issues as a priority. The MOHs were unable to comply with A.I.D. accounting procedures and the highly centralized systems of government in their own countries slowed the decision-making process and negatively affected the ability of TOs and National Counterparts (NCs) to implement their projects.

5. The roles of the TO were described by most interview and survey respondents as strengthening the management of the MOH and training country nationals. In Burundi primarily, there were differences regarding the responsibility of the TO for financial management of the project. These differences resulted from conflicting expectations on the part of A.I.D., CDC, and the MOH.

6. MOH and CDC survey respondents differed in their perception that knowledge and skills had been transferred. CDC respondents had a higher perception that knowledge and skills had been transferred than did MOH respondents. However, both interview and survey respondents frequently cited planning, information management, evaluation, and supplies management as the knowledge and skills that were transferred from TOs to NCs. Supplies management was said to have been transferred as well even though it was not considered among the most important knowledge and skills for TOs to have.

7. Although some transfer of knowledge and skills through on-the-job training was reported to have taken place from TOs to NCs, it was not apparent that the NCs had sufficient opportunity to use what they had learned.

8. The ACSI-CCCD Project's opportunity to significantly add to and develop a core of well trained MOH managers who could subsequently assume full management of project activities was not fully realized because of lack of understanding and

agreement about who constituted middle- and senior-level management and the lack of formal training for senior managers.

9. Interview and survey respondents indicated that the ACSI-CCCD Project manpower and funds could have been more efficiently used if more nationals had been trained. More training should have occurred at all levels—from senior level to provincial staff—in financial management, epidemiology, use of data, and evaluation. This could have been accomplished through various means: in-country, on-the-job, short- and long-term training; continuing education institutions; and work and study tours.

10. The country's infrastructure, organization of government services, health services delivery, and traditional systems played an important role in the TO's ability to implement the ACSI-CCCD Project. However, there were other more important factors cited. For example, in CAR, a good management strategy, teamwork between the TOs and NCs, resourceful National ACSI-CCCD Project Coordinators, good interpersonal relations, and support from the A.I.D. representatives were reported to be the most important factors in the success of the project.

11. Interview and survey respondents recommended that, for future development projects to be more successful, they should be multi-sectoral, should not be designed at the donor's headquarters office and imposed on the country, should include nationals in project development and management, and should be more flexible in their implementation.

12. The ability of countries to sustain the ACSI-CCCD Project activities was a major concern of MOH respondents and an issue raised by donor agency respondents.

Key Recommendations

1. As part of A.I.D.'s current move to restructure and reorganize its operations, the Agency should examine its administrative procedures for areas of modification and streamlining.

2. Local project administrative staff should be hired to relieve the administrative burden placed on long-term technical advisors in order to facilitate the efficient and effective implementation of future development projects.

3. Helfenbein's (1986) definition of "senior managers" as 1) national program managers for ACSI-CCCD interventions; 2) regional health officers or their equivalents; and 3) "top-level" personnel in MOHs, such as directors of health and chief medical officers, should be considered in designing future development projects.

4. Training for senior managers should de-emphasize specific technical knowledge and skills and should focus on broad managerial concepts such as planning, financial management, problem solving, decision-making, and human resource management, since managers with these skills will improve institutions in the long run.

5. In-country orientation to USAID and MOH procedures for TOs and MOH staff should be conducted to stimulate team building, help to identify problems early on, and propose solutions for dealing with these problems.

6. Recruitment for future long-term technical advisors should take into consideration not only the technical but also the managerial knowledge and skills necessary for project implementation. Future long-term advisors or technical assistants must have good interpersonal skills and be dynamic and creative to help address the challenges presented by the health systems in developing countries.

Conclusion

Assigning TOs to the MOHs was a very important and useful strategy for implementing the ACSI-CCCD Project in participating countries. Its advantages, however, should be viewed in the context of the many other factors which are also critical. This study attempts to document some of those factors in the hope they will be considered when designing future development projects.

Introduction

Background of the ACSI-CCCD Project

The Combatting Childhood Communicable Diseases (CCCD) Project dates from 1981 when a regional project was initiated to strengthen child survival capacity and services in Africa. When the CCCD Project was proposed in 1981, the aim was to increase the ability of African governments to do the following:

- control six childhood communicable diseases (measles, polio, tuberculosis, diphtheria, pertussis, and tetanus) through the Expanded Program on Immunization (EPI)
- control diseases of local importance such as yellow fever and yaws, and possibly, malaria at some point
- provide simple treatment for the Control of Diarrheal Disease (CDD)

The target group for immunization consisted of children less than 1 year of age (following the established World Health Organization vaccination schedule) and pregnant women. For treatment of diarrheal diseases, children less than 5 years of age were targeted (A.I.D. and CDC 1981). Following country assessments, the project objectives were amended and made more specific, i.e., to prevent the major communicable childhood diseases that are preventable by immunization, treat dehydrating diarrhea with oral rehydration therapy (ORT), and treat malaria in children and prevent malaria in pregnant women (Raleigh et al. 1990). Strategies adopted to support achievement of these objectives were training, health education, health information systems, operations research, and health care financing. The project is funded by the U.S. Agency for International Development (A.I.D.) and is a collaborative effort with the Centers for Disease Control and Prevention (CDC), other government agencies, and non-governmental organizations.

The major thrusts of the CCCD Project from 1981 to 1983 were EPI and CDD. Malaria was added to the project when officials in the countries that were visited during the country assessments indicated that malaria was a priority child health problem. In 1988, in response to Congressional earmarks, the project's name was changed to the Africa Child Survival Initiative-Combatting Childhood Communicable Diseases (ACSI-CCCD) Project (A.I.D. and CDC 1993).

Following the 1981 project agreement and country assessments in four anglophone and eight francophone countries, projects were launched between 1982 and 1985 in Burundi, Central African Republic (CAR), Congo, Côte d'Ivoire, Guinea, Lesotho, Liberia, Malawi, Rwanda, Swaziland, Togo, and Zaire. Nigeria became the 13th country to join the project in 1986. The selection of the original 12 countries was based on a 25% coverage of countries in sub-Saharan Africa. The Republic of the Congo dropped out of the project prematurely in 1987 because of disproportionate allocation of resources to tertiary care, a fact incompatible with the ACSI-CCCD Project. The years 1991 to 1993 mark the final phase of the

ACSI-CCCD Project, with Guinea and Lesotho ending their projects in 1991. The projects in Liberia and Zaire were terminated the same year because of civil strife. After several extensions, Côte d'Ivoire and Togo finally terminated their projects in 1992. In 1993, the project will end in Burundi and Nigeria. Table 1 gives dates for project start up and termination and technical officer assignments.

Table 1

ACSI-CCCD Project Dates and Technical Officer Assignments by Country

ACSI-CCCD Country	Project Dates	Technical Officer Assignments
Burundi	1985 - 1993	1985-1986 1988-1990 1992-1993
Congo	1985 - 1987	1984-1986 1986-1987
Central African Republic	1984 - 1992	1984-1986 (based in Congo) 1986-1987 1987-1990 1990-1992
Côte d'Ivoire	1985 - 1992	1985-1988 1989-1991
Guinea	1985 - 1991	1985-1987 1988-1991
Lesotho	1984 - 1991	1984-1987 1987-1991
Liberia	1983 - 1990	1984-1988 1989-1990
Malawi	1984 - 1988	1985-1988
Nigeria	1987 - 1993	1987-1989 1989-1990 1990-1993 1991-1993
Rwanda	1984 - 1988	1984-1988
Swaziland	1984 - 1991	1984-1987 (based in Lesotho) 1987-1991
Togo	1983 - 1993	1983-1986 1987-1991 1991-1993
Zaire	1982 - 1991	1982-1986 1986-1988 1989-1991

The Technical Officer Concept

As the regional ACSI-CCCD Project draws to a close in September 1993, A.I.D. and CDC are engaged in a retrospective look at the project. Their review has as its focus the lessons to be learned from the project's 12-year existence. The strategies that were developed and used during the project are being documented and shared. One key management strategy was the assignment of Technical Officers (TOs) to Ministries of Health (MOHs) to help implement the ACSI-CCCD Project. The original CCCD Project document, in describing project management, indicated that "Overseas, the Implementing Agency will assign medical epidemiologists and **operations officers** to work with regional and sub-regional organizations and selected countries in operational research and technical development activities to assist sub-Saharan African countries to plan and implement better control of childhood communicable diseases (emphasis added)" (One America 1980). The management concept of "operations officers" would later be known as the resident "Technical Officer" in ACSI-CCCD country projects.

The assignment of TOs was by no means a new project management strategy. It had a strong history in the World Health Organization's (WHO) Global Smallpox Eradication Campaign of the 1960s and 1970s. In collaboration with WHO and A.I.D., CDC sent teams to endemic countries consisting of medical and administrative personnel who were trained in epidemiology, management, and other technical skills. There was also an emphasis on their acquiring language and cultural training (Ogden 1987). These managerial personnel, or "operations officers," were CDC public health advisors whose duty was to "ensure managerial and logistical expertise in each country" (Etheridge 1992). According to Hopkins (1989),

> "As the campaign developed, it became increasingly clear that the effort *was a management operation as much as it was epidemiologic*. For this reason, the concept of public health advisors (PHA) received more and more attention and another important factor in the campaign's achievement was the use of such personnel. Eventually, public health advisors became a major element of the West Africa campaign. Very often, managerial expertise proved more important than medical knowledge. It soon became clear that PHAs could handle most epidemiologic problems as well."

The major management lesson learned by hiring operations officers for a health program was the importance of focusing on ability and commitment, not traditionally accepted qualifications and status (Hopkins 1989). According to Etheridge (1992), these operations officers proved crucial to the success of the smallpox campaign. As a result, several years later, A.I.D. and CDC were applying the lessons they had learned from the use of operations officers in the implementation of the ACSI-CCCD Project.

A position description for the post of TO in Central African Republic is indicative of the duties and responsibilities of the TOs in other ACSI-CCCD Projects. These are outlined below with a detailed description found in Appendix A.

- planning, implementation, and monitoring of program activities
- evaluation of program efficacy and adequacy
- liaison with private voluntary organizations (PVOs) and international organizations
- training of host country staff in program management and technical interventions
- logistical systems development and coordination
- promotion of public participation in project activities
- provision of information and preparation of reports and annual workplans

The above activities were to be accomplished in collaboration with host country nationals (known as counterparts) who would be expected to acquire these program management and technical intervention skills. This collaboration was to be facilitated by direct location of the TOs within the MOHs of the host country, a goal that was achieved in 12 of the 13 ACSI-CCCD Project countries.

Finally, it is important to distinguish between program management and project administration in the ACSI-CCCD Project. The original project document stated that while CDC would provide necessary technical inputs, "A.I.D. will be responsible . . . for the administration of CCCD project funds and procurement of equipment and supplies required by individual programs" (One America 1980).

Objectives of the Case Study

The decision to focus this study on the implementation strategy of assigning TOs to MOHs was based on the high priority placed by A.I.D. on the lessons to be drawn from the management aspects of the project. It was believed that these lessons could guide the development and implementation of future technical assistance projects. The overall purpose was to document the experiences of ACSI-CCCD country projects that used the strategy of placing TOs to the MOHs. Therefore, the following became the primary objectives of the study:

- identify TO skills that were important for the successful implementation of the project
- document the effect of assigning TOs to MOHs in implementing the ACSI-CCCD Project
- identify country-specific characteristics that would help enhance the ability of TOs to successfully implement the project

Methods

The choice of a qualitative or quantitative approach is a design issue, different from decisions about specific data needs and data gathering methods (Patton 1987). In this particular study, the case study design was the qualitative method of choice. A case study is an empirical inquiry that uses several data sources to investigate a contemporary process within its natural context (Yin 1989). A "case" or process can be a person, program, time period, critical incident, community, or an event (Patton 1987). The case study design is appropriate when depth and detail are needed from a small number of cases where the number available is too small to make confident generalizations. With 13 host countries in the ACSI-CCCD Project, the case study was appropriate for learning about the functions and roles of the TO.

Study Population

The introductory section described the ACSI-CCCD Project and listed the 13 countries where it was implemented. The study population comprises representatives from these 13 country projects, and particularly the TOs who managed them. An effort was made to obtain some information on all 13 countries, but fieldwork was undertaken in 3: Burundi, Central African Republic, and Côte d'Ivoire.

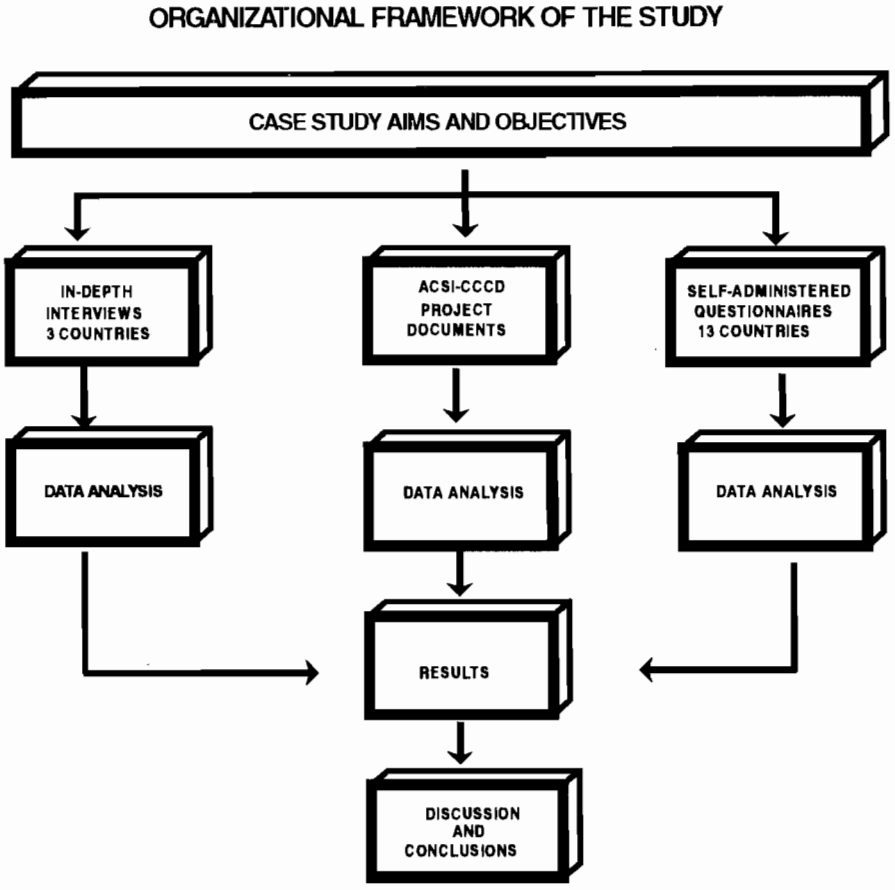
Methods

Qualitative research designs use three general kinds of data collection methods: 1) in-depth, open-ended interviews; 2) direct observation; and 3) written documents (Patton 1987). The case study design, although qualitative in nature, may use a combination of both qualitative and quantitative methods. According to Yin, it is sometimes beneficial to pose the same questions to two pools of respondents—a smaller pool that is the subject of case study interviews and a larger pool that is the subject of a survey. This approach was taken in this study to increase the sources of data, thereby enhancing the construct validity of the data and to obtain an indication of the prevalence of issues drawn from the case study interviews. Three methods for collecting data were used:

- in-depth interviews
- self-administered questionnaires (mail survey)
- review of ACSI-CCCD Project documents

Figure 1 presents the organizational framework of the study.

Figure 1



In-depth Interviews

Selection of Three Countries

Three countries were identified from the 13 ACSI-CCCD countries as sites for the case study interviews. Initially, an attempt was made to guide the choice of countries on the basis of the following considerations:

- individuals with recollection of the ACSI-CCCD Project available for interviews
- participation in subsequent USAID-funded follow-on projects
- large and small countries based on geographic area
- countries at different levels of economic and health infrastructure development
- anglophone and francophone countries

- existing logistical support, such as current ACSI-CCCD staff, to facilitate data collection
- countries where CDC still had a working relationship with the MOH or the USAID Mission or both

However, it was difficult to incorporate all these factors in the final selection of countries because only four responded positively to a cable to USAID Missions that described the study and invited participation. Burundi, the Central African Republic, and Côte d'Ivoire (all francophone countries) were selected. Attempts were made to include anglophone countries; however, this was not possible because of TOs not currently assigned to the MOH (Nigeria), travel restrictions caused by drought conditions (Lesotho), civil unrest (Liberia), lingering tensions between USAID and the MOH about the project (Swaziland), and the departure from the MOH of staff who had worked with the project (Malawi).

Selection of Interview Candidates and Survey Participants

In qualitative research, sampling is not a matter of probability but of theory. As qualitative inquiry is concerned about the varied experiences and perspectives of different participants in the program process (Patton 1987), it was necessary to consider the different categories of participants who should be interviewed and surveyed to provide a well rounded view of the roles and functions of the TOs in the MOHs.

A master list of individuals who were employed by or associated with the ACSI-CCCD Project was compiled from reports (annual, country, trip, etc.) and from key informants.[1] From this list interview candidates and survey participants were selected.

Interview Candidates

Table 2 shows a framework for identifying persons for interview. Broadly, the ACSI-CCCD Project participants were divided into two groups: those affiliated with the host country target agency (MOH) and those associated with the external donors (USAID, CDC). In addition, three levels of program involvement were outlined, with the first being those directly involved in managing the activities, the TOs themselves, and their local counterparts (MOH employees who worked directly with the TOs to implement the project), such as the National Coordinators and managers of specific technical programs (EPI, CDD, Malaria). At the second level were administrative and policy making personnel such as the USAID country staff and the directors of relevant ministry departments. At the third level were external staff of donor or collaborating agencies such as UNICEF and WHO.

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1 Key informants are persons with whom an investigator develops special relationships for the purpose of information exchange. The key informants are considered "experts" by virtue of their special knowledge and experience about the topic being investigated. The interviewer has discussions and interviews with the key informants more than once (WHO 1990).

Table 2

Interview Framework			
Level	Personnel	Donor Agency	Host Country
I	Principal project implementors	Technical officers	National project coordinators, Program managers
II	Principal implementing organizations	USAID, CDC directors, managers	MOH directors
III	Donor or collaborating agencies	UNICEF, Peace Corps, WHO	Not applicable

Prior to the arrival of the research team, the USAID Mission in each of the three case study countries was asked for a list of names from the categories in Table 2 who would be prospective interview candidates. The USAID Mission contacted these persons and requested their participation. Upon arrival in the country, the team compared the names of prospective candidates from its master list with those identified by the USAID Mission. Differences between the names on the team's list and those identified by the USAID Mission were then resolved; if deleted, names of other interview candidates were added.

Survey Participants

The final list of prospective respondents totaled 185, and survey questionnaires were mailed to these individuals. They included staff from A.I.D. and their counterparts in USAID Missions; CDC field staff (including TOs) and Atlanta-based supervisory PHAs, project coordinators, and technical support staff; and National Coordinators, program managers, and project staff with whom TOs worked closely. A cover letter explaining the purpose of the study and requesting participation was prepared, signed by officials of A.I.D./Africa Bureau and CDC/IHPO, and mailed with each questionnaire.

Instruments

The interview and survey instruments used for data collection were identical, with the exception of manner of administration (i.e., interviewer-administered vs. self-administered) and two questions added to the survey questionnaire: 1) Name of the ACSI-CCCD country for which you are responding and 2) If you served in more than one ACSI-CCCD country, please describe cross-country experiences that would be useful for this survey. These questions would have been inappropriate for the in-depth interviews because the country was already known, and the majority of the interview respondents were MOH employees and had only worked with their own country's ACSI-CCCD Project.

The instruments were developed with the assistance of a Case Study Advisory Group (see Appendix C for names and organizational affiliations) which proposed possible questions for each case study objective. Questions were selected from those proposed and were developed

and formatted into the data collection instruments. The instruments were translated into French, pre-tested in Guinea, and revised accordingly.

The final instruments had four sections and consisted of closed- and open-ended questions. For the closed-ended questions, respondents were asked to do the following: 1) choose one from among a number of possible responses; 2) choose a response and give an explanation; and 3) rank a given set of items. Open-ended questions were designed to permit spontaneous and unguided responses.

Demographics

The section on demographics was composed primarily of closed-ended questions and requested data on the characteristics of the respondents such as age, sex, current and past organizational affiliations, and positions held during their association with the ACSI-CCCD Project.

ACSI-CCCD Project

The closed- and open-ended questions about the ACSI-CCCD Project requested respondents to report on interventions and support strategies. Questions asked concerned country health policies, whether the project was considered a success or failure, reasons for success or failure, and problems encountered in implementing the project interventions.

Technical Officer

Specific questions concerning the assignment of the TO were asked, among them: location and department of assignment and the perceived effect of where the TO was physically located, number of counterparts and their organizational status in relation to the TO, perceived role of TOs and how they spent their time, and knowledge and skills considered necessary for TOs to have.

National Counterpart

This last section contained more open-ended questions, giving the respondents the opportunity to express their thoughts more freely about transfer of skills from TOs to National Counterparts (NCs), the effect of certain country factors on the project, the effectiveness of the project, and ACSI-CCCD as a model for future development projects.

Data Collection

Interviews

In all, 36 interviews were conducted in the three countries by the principal and second authors with the help of interpreters. The principal author is Jamaican with some French

comprehension, the second is Ghanaian and fluent in French. The interpreters, all Africans, were fluent in French and English, and interviews were conducted and recorded in the language (French or English) of the persons being interviewed. French interview transcripts were translated into English, and data from each interview were transcribed and entered into a word processing file (WordPerfect 5.1, WordPerfect Corporation)[2] in the language in which the interview was conducted (i.e., French or English). A research assistant proofread each file for errors and confidentiality of the responses was ensured.

Mail Survey

For the survey, self-administered questionnaires were mailed. Persons who had not responded by the requested date were reminded by telephone or in writing to send in their completed forms. A second set of questionnaires was sent to persons who had not received or had misplaced the first set sent to them. The identity of survey respondents was protected by coding each questionnaire.

Documents

In qualitative research, the analysis of written documents yields excerpts, quotations, or entire passages from records, correspondence, official reports, and transcripts (Patton 1987). The purpose of reviewing documents in this study was not only to obtain background information on the ACSI-CCCD Project, but also to determine the official organizational expectations of the activities (job descriptions) of the TO. In addition, documented information was sought in both general and country-specific terms about the actual effect of having TOs in the field. The following are examples of the types of documents reviewed for this study:

- CCCD Project documents
- country authorization or agreement documents
- position descriptions of TOs
- country and project evaluation reports

A complete bibliography can be found in Appendix B.

Data Analysis

In case study research, few fixed formulas guide analysis, unlike in statistical analysis. What is required is "rigorous thinking with sufficient presentation of evidence and careful

2 Use of trade names is for identification only and does not constitute endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

consideration of alternative interpretations" (Yin 1989). With the available "evidence," one seeks major categories within the responses and observations in line with the basic proposition(s) of the study. In this situation, the theoretical proposition is that successful management of the ACSI-CCCD Project depended on the TO and on effective transfer of knowledge and skills from TOs to their NCs (Midiwo 1988). Further analysis of the evidence identifies patterns within and across cases, and provides explanations of the observed patterns (Yin 1989).

Interviews

Data from closed-ended questions were tallied by hand and responses to open-ended questions were aggregated by question using a software program (GOfer, Microlytics) for managing textual data. In the preliminary analysis, responses to specific questions were compared for all interview respondents and reviewed for similar patterns and themes. Finally, interview responses were compared with the survey data to identify similarities or differences.

Mail Survey

The same numerical code was assigned to corresponding responses to closed-ended questions. A coding guide was developed for some open-ended questions and the exact comments were recorded for others. Responses in French were translated into English and checked for accuracy. The responses to the questionnaires were entered into an *Epi Info* record file. Frequencies, cross tabulations, and variable listings were prepared.

Documents

Data from documents were used to illustrate the objectives of the study, verify interview and survey findings, and serve as background information.

Study Limitations

To provide an accurate measure of the TO's input is difficult, given the limitations of resources and the study design. Better measurements may have been obtained had the ACSI-CCCD Project been designed to measure the effect of the TO's presence from the outset so that impact, process, and outcome objectives could have been planned and continuously measured. For example, there was no way to accurately estimate whether or not specific skills had been transferred from the TOs to the NCs because no baseline data were available on the skills and abilities of the NCs.

Recall bias may also have had a role in skewing the data. The ACSI-CCCD Project occurred during a 12-year period and many of the persons who were involved in it could have been assigned elsewhere since their initial assignment. During follow-up phone calls, several people who did not return their questionnaires mentioned that recall was indeed a problem.

Mail-in questionnaires are known to have a low response rate, compared with telephone surveys and face-to-face interviews (Fowler 1988). However, the use of mail-in surveys was justified in this study, given the geographical distribution of the sample: 62 MOH staff in 13 east, west, and southern African countries and 74 CDC and 48 A.I.D. staff posted in Atlanta; Washington, DC; and throughout the world. Telephone surveys or face-to-face interviews would have been more costly and could have resulted in an even lower response rate for some country nationals. An effort, however, was made to improve the response rate by conducting follow-up via letters of reminders, telephone calls, and computerized messages.

The lowest response rate for the survey came from the MOH staff (47%). The response rate for A.I.D. staff was 63%, and for CDC staff, 69%. The low response rate for MOH staff may have resulted from 1) the political turmoil in Liberia, Zaire, and Togo from which only a few responses were received, and 2) greater difficulties experienced in reaching this group for follow-up. Many of the CDC nonrespondents said they had worked as short-term consultants only for a brief period and were not familiar enough with the project or the TO's role for them to answer the questions. The nonrespondents were not polled because of lack of time and manpower.

Possible bias could also have resulted from the manner in which case study countries were selected. It was not possible to apply the selection considerations mentioned earlier in this section because only four countries (all francophone) responded positively to the request for participation in the study. One country was the site of pretests and the other three were sites for the case study interviews.

To compensate for possible biases, multiple data collection methods were used. Judging from the similarity in the results from the different methods used, we believe that the results have not been significantly affected by recall or other biases.

Results

Field work is invaluable in qualitative research. For example, in response to a mail-survey question, one respondent noted that "This is much too complex a question to try to answer in this format. Therefore, I have no comments to make." Similarly, an interview respondent told the researchers that "There is a different impression to have a team face-to-face. This is very encouraging." The results of this study are therefore presented in two sections: the first section presents results from the mail-survey responses; the second section describes the in-depth interviews supplemented by information from observations of interactions among members of the study population on management logistics and organization and on other aspects of organizational dynamics. The data in both sections are supplemented with project document data where applicable.

Mail Survey Responses

Characteristics of Survey Respondents

Of the 185 questionnaires mailed, 111 were returned (60%), and 95 (51%) were usable. Nine said that their association with the project was only short-term and therefore chose not to respond. Seven questionnaires were less than three-quarters complete and were not included in analysis.

Of the 95 questionnaires analyzed, 61 (64%) were from men and 34 (36%) were from women. Of the 94 who gave complete responses to the demographic data, 27 (29%) had worked for or had been affiliated with the ACSI-CCCD Project through the MOH, 22 (23%) were affiliated through USAID or A.I.D., 41 (44%) through CDC, and 4 (4%) through other organizations.[3] Of all respondents, 68 (75%) had worked for or been affiliated with the project between 2 and 6 years and 14 (15%) respondents worked the longest (7 to 11 years). Most of the respondents were more than 36 years of age: 30 (32%) were between 36-40; 21 (22%) were between 41-45; 10 (11%) were between 46-50; and 25 (27%) were more than 50. Thirty respondents (32%) are currently employed by other organizations, 29 (31%) by CDC, 18 (19%) by A.I.D. or USAID, and 17 (18%) by the MOH.

Knowledge and Skills of TOs Considered Important

One objective of the case study was to identify the knowledge and skills that were needed by TOs to successfully implement the ACSI-CCCD Project. Nine management functions were

3 These four who were associated with other organizations during their affiliation with the ACSI-CCCD Project were not included in further analysis because of their small number.

identified from an ACSI-CCCD assessment document (A.I.D. and CDC, undated) as being part of the TO's responsibilities. Respondents were asked to rank these functions in order of importance from 1 (most important) to 9 (least important). On the basis of mean scores obtained for each function, they were ranked according to employer (MOH, A.I.D., and CDC) at the time of the ACSI-CCCD Project (Table 3). From the three employer groups, 89 persons responded to the question. They all agreed that planning was the number 1 priority management knowledge and skill a TO should have. Information management was ranked as the second most important by MOH personnel, but was ranked third by A.I.D. and fourth by CDC staff. Communication was considered second in importance by both CDC and A.I.D. respondents and fourth in importance by the MOH staff. The 15 TOs surveyed ranked these items in the same order as all the CDC respondents combined.

Table 3

Desired TO Management Knowledge and Skills Ranked by Employer Groups

	Rank Order* by Employer Group		
SKILL (N = number responding to question)	MOH (N = 27)	A.I.D. (N = 22)	CDC (N = 40)
Planning	1	1	1
Information Management	2	3	4
Communication	4	2	2
Evaluation	3	5	5
Administration	6	4	3
Financial Management	5	6	7
Personnel Management	8	7	6
Transportation Management	9	9	9
Supplies Management	7	8	8

* 1 = most important; 9 = least important

Respondents were also asked to rank desired TO technical knowledge and skills from 1 to 4 (1 = most important). As Table 4 shows, both MOH and CDC staff ranked disease surveillance as most important, and A.I.D. employees ranked this second. Again, the 15 TOs ranked these items in the same order as all the CDC respondents combined.

Table 4

Desired TO Technical Knowledge and Skills Ranked by Employer Groups			
	Rank Order*by Employer Group		
SKILL (N = number responding to question)	MOH (N = 27)	A.I.D. (N = 22)	CDC (N = 40)
Conducting vaccine coverage surveys	3	3	2
Designing and implementing vaccine schedules	2	1	3
Conducting disease surveillance	1	2	1
Knowing about drug resistance	4	4	4

* 1 = most important; 4 = least important

Other knowledge and skills that survey respondents considered important for TOs to have were:

- knowledge of host government rules and regulations
- knowledge of A.I.D. regulations and procedures
- interpersonal skills described as *"operating style," "attitude and personality," "good working relationship with Ministry of Health officials," "team spirit," and "dynamic, creative"*
- knowledge of training
- French language skills

Role of the TO

In addition to the closed-ended questions asking respondents to rate the knowledge and skills needed by a TO, they were also asked in an open-ended question to describe how they perceived the role of the TO. The responses from the 71 persons who answered the question were coded and presented in Table 5. The most commonly mentioned role by all three groups was "strengthen MOH management," followed by "manage the ACSI-CCCD Project," "training/skill transfer," and "facilitator/catalyst." Promoting teamwork was seen as important to MOH respondents, but CDC staff were more concerned about promoting interorganizational liaison and linkages.

Table 5

Perceived Role of TO by Employer Groups

	Percentage of Respondents Mentioning Each Role by Employer Groups		
ROLE (N = number responding to question)	MOH (N = 22)	A.I.D. (N = 15)	CDC (N = 34)
Strengthen MOH management	59%	40%	50%
Manage ACSI-CCCD Project	36%	33%	29%
Facilitator, catalyst, help generate new ideas	22%	33%	35%
Trainer, transfer of skills	18%	20%	23%
Liaison, link, interpreter	4%	0%	17%
Promote teamwork	22%	13%	5%
Technician	4%	6%	8%
Leadership	0%	0%	8%

Use of TO Time

Although planning was cited by survey respondents as the most important management knowledge and skill that TOs need to implement the ACSI-CCCD Project, when asked what percentage of the TO's time was spent on administration, field, or other activities, 77 out of 95 said that TOs spent the majority of their time on administration (Table 6). Actually, the TOs themselves gave the lowest average estimate (42%) for the time they spent on administration, and CDC and MOH staff both estimated that 59% of a TO's time was spent on administration. In all categories of respondents, administration was reported to have taken the largest single portion of the TO's time. This is consistent with the results from the in-depth interviews conducted in the three countries visited.

Table 6

Estimated Percentage of Time Spent by Technical Officers on Project Activities

	Estimated Percentage of Time			
Activity (N = number responding to question)	MOH (N = 22)	A.I.D. (N = 20)	CDC (N = 20)	TOs (N = 15)
Administration	59%	49%	59%	42%
Fieldwork (Technical)	27%	37%	31%	38%
Other	14%	14%	10%	20%

The average perceived amount of time spent on field (technical) activities was approximately one-third overall, with TOs themselves saying that they spent more time in the field than was reported by other respondents. Other activities included attendance at meetings, interagency coordination, project design, policy development, developing workplans, training, operations research, and program monitoring.

Effect of Assigning TOs in Ministries of Health

CDC's key strategy for in-country implementation of the ACSI-CCCD Project was the assignment of TOs to work in the MOHs. With the exception of one country (Nigeria), TOs worked in the same department and often were located in the same building with their NCs. Open-ended comments were predominantly positive and supportive of this arrangement, for example:

From MOH Respondents:

- *"Fostered close working relations, and [provided] hands-on technical guidance and support"*
- *"Created an opportunity for [transferring] appropriate knowledge and skills to counterparts"*
- *"Good effect, communication is easier, collaboration has improved"*
- *"Closer working relationship, accessibility possible at all or most times"*

From A.I.D. Respondents:

- *"Improved planning and coordination, better access to senior government officials"*
- *"Extremely effective in providing assistance in planning and developing training programs and other technical assistance as needed"*

- *"Closer collaboration and support, better morale"*

From CDC Respondents:

- *"Very positive. [The] Technical Officer understood the problems and constraints of the Ministry of Health better and could better adapt and respond to them"*
- *"Critical to informal and formal interaction. Especially useful in developing national workplans and exploring new strategies and activities based on available data. Very critical in gaining the confidence of counterparts. Useful to learn the Ministry of Health bureaucracy and proper protocol"*
- *"Critical in coordinating technical assistance and in moving project forward"*
- *"Incredibly useful/effective because of daily interchanges/dialogue for planning, implementation, and evaluation"*

There were very few negative comments. One MOH employee noted that this arrangement *"relegated the National Counterpart to a secondary position."* An A.I.D. respondent observed that *"it was a solid idea; however, there were some personality clashes."* Another A.I.D. respondent explained that location within the MOH did not always mean within the same building, and had the TO and NC been in the same location, *"the Technical Officer would have been better able to facilitate communications."*

Transfer of Knowledge and Skills

According to a CDC report, TOs were central to the successful management of the ACSI-CCCD Project because of their function of transferring knowledge and skills to their NCs (Midiwo 1988). The role of the TO as an agent for the transfer of knowledge and skills to senior MOH managers had been defined earlier in job descriptions and in a 1986 paper which stated that training of senior national managers through the ACSI-CCCD Project would be achieved through formal courses and on-the-job training provided by TOs (CDC 1986). Therefore, the effect of assigning TOs in the MOH was analyzed in terms of the knowledge and skills transferred to their NCs.

Respondents were asked whether knowledge and skills transfer in the nine identified areas of management had taken place. Of management knowledge and skills reportedly transferred from TOs to NCs, planning, information management, and evaluation were the most frequently mentioned by all three groups of respondents, as shown in Table 7.

Table 7

Perceived Transfer of Knowledge and Skills by TO to NCs by Employer Groups			
	Percentage of Respondents Who Said Transfer Occurred		
Knowledge and Skill (N = number responding to question)	MOH (N = 27)	A.I.D. (N = 22)	CDC (N = 40)
Management:			
Planning	74%	65%	78%
Information Management	77%	68%	82%
Communication	33%	36%	60%
Evaluation	70%	61%	62%
Administration	18%	40%	47%
Financial Management	18%	40%	50%
Personnel Management	3%	31%	62%
Transportation Management	29%	22%	44%
Supplies Management	63%	45%	52%
Technical:			
EPI	59%	63%	67%
CDD	59%	54%	60%
Malaria	48%	59%	55%

All the 15 TOs were most positive about transferring the following knowledge and skills: planning (93%); information management (93%); communications (90%); evaluation (80%); and supplies management (80%).

Interestingly, the CDC respondents had a generally higher perception of knowledge and skill transfer than did the MOH staff. The exceptions were evaluation and supplies management. The difference was greatest in the area of personnel management, where only one MOH respondent indicated that knowledge and skills had been transferred, compared with 62% of the CDC respondents. Table 7 also shows that only about 50%-60% perceived technical knowledge and skills to be transferred across all employer groups. Some respondents believed, however, that although the TOs may have succeeded in transferring knowledge and skills in some areas, they were less successful at delegating responsibility

so that the transferred knowledge and skills could be learned, practiced, internalized, and institutionalized:

- *"The Technical Officer was very good but did too much for, rather than through, the Ministry of Health"*
- *"Unless country nationals do the work themselves, results will be short-lived, even if the project meets U.S. goals"*

Role of Training in the Transfer of Knowledge and Skills

In response to open-ended questions on how the ACSI-CCCD Project manpower and money could have been more effectively used, survey respondents said that more nationals should have been trained. More training, they said, could have been done for all levels of staff—from senior central management to provincial—in financial management, epidemiology, use of data, and evaluation. This could have been accomplished through in-country, on-the-job, short- and long-term training, continuing education, and work and study tours of duty.

The respondents stated that sustainability of health programs, development of national human resources, building national capacity, and motivation of personnel could be achieved through training of nationals. The overwhelming recommendations for more and better training of nationals could be an indication that sufficient knowledge and skills may not have been transferred through the ACSI-CCCD Project. These findings corroborate Helfenbein's report (1986) in which strategies for training senior managers were recommended and discussed.

Country Characteristics

The third objective of the case study was to identify specific country characteristics that may have affected the TO's ability to implement the project. A.I.D. officials would like to know which characteristics of a country could positively enhance, negatively affect, or have no effect on a TO's ability to implement projects such as ACSI-CCCD. The study asked about four groups of characteristics:

- infrastructure (roads, electricity, water supply, and telecommunications)
- organization of government services (centralized or decentralized)
- health services delivery (access to health facilities, number of staff, storage and distribution of supplies, collection and storage of data, supervision, and donor coordination)
- indigenous factors (traditional health systems, governance, and practices)

Of the 92 who responded to the question on infrastructure, 44% said poor electrical service and 35% said lack of clean water supply had the most serious negative effects on project implementation. Most of the survey respondents (66% of 90) felt that a decentralized

government system would have a positive effect on project implementation. Survey respondents said that only access to health facilities (62% of 90), supervision (55% of 92), and donor coordination (66% of 94) contributed positively to the TO's ability to implement the project. Among 92 survey respondents, 59% said that the traditional system of governance had a positive effect on the TO's ability to implement the project.

Other Country Characteristics

Characteristics other than those specified in the study were raised by the survey respondents: size of the country, economic resources, political climate, and the cultural differences within countries. Respondents commented that these characteristics, as well as those specified in the study, should be taken into serious consideration on a country-by-country basis in planning future development projects:

- *"[take] a better look at and analyze a particular country's characteristics [and develop] appropriate proposals on how to resolve some of the constraints while promoting development and sustainability . . ."*
- *"Goals and objectives should be clearly developed and prioritized for each country. They must be realistic for the situation—not based on a generalization for the region"*

Finally, the problems inherent in the health care systems were linked to the need for management training, as evidenced by the following response:

- *"[It would be] hard to achieve results in specific areas without paying attention to managerial weaknesses and problems of the general health care system"*

In-depth Interview Reports

Characteristics of Interview Respondents

Eleven interviews were conducted in Burundi, 12 in CAR, and 13 in Côte d'Ivoire (a total of 36). Table 8 presents the number and categories of staff interviewed and their affiliations.

Table 8

Categories of Personnel Interviewed		
Personnel (Total N = 36)	**Donor Agency (N = 12)**	**Host Country (N = 14)**
Principal project implementors (TOs & NCs)	2	4
Other staff from principal implementing organizations	6	20
Staff of collaborating & related agencies	4	n/a

Of those interviewed, 67% (24/36) were MOH employees. Half of the respondents (18/36) had worked with the project for 2 to 6 years and 8 had worked for 7 to 11 years. The rest had either worked for less than 2 years or did not respond to this question. Of the 36 respondents, 26 (72%) were men and 10 (28%) were women, and 31 (86%) reported their age: 16 (52%) were between 30 and 39 years; 12 (39%) were between 40 and 49 years; and 3 (9%) were 50 years or more.

In-depth Interviews: Burundi

The CCCD Project in Burundi was signed on August 30, 1985, for a period of 30 months. The project followed a USAID-funded EPI project which enjoyed such success that, according to one respondent, *"Burundian officials requested a continuation of the project. CCCD was a way to continue the EPI activities."*[4] The idea in August 1985 was to create a broader program which would, in 2 years, provide immunization coverage to 80% of the target age group, and ORT and malaria treatment services to 50% of the children younger than age 5 (USAID/Burundi and Burundi MOH 1985). An evaluation of the project some 26 months later spoke well enough of the progress made toward accomplishing these objectives; as a result, the project was extended until September 1991 and with increased funding. On the basis of the evaluation recommendations, the amended project emphasized donor coordination, supervision and coordination of malaria and diarrheal disease activities, and health care financing (USAID/Burundi and Burundi MOH 1988).

4 Unless otherwise indicated, all quotes are from the in-depth interviews.

Project Implementation

The interview respondents unanimously agreed that the ACSI-CCCD Project had been successfully implemented in Burundi. Success of the project, however, was characterized mainly in terms of the success of the immunization intervention:

> *"Concerning immunization, this was successful. We managed to come up to the objectives settled on for the 90's decade and decentralize this program, and used it as support to the integration of primary health care. All available resources were used so that they support the rest of primary health care."*

The reason most cited for the success of the immunization intervention was the high level of social mobilization at all levels, *"The highest authorities were involved and social mobilization throughout the periphery was a reality."* Those interviewed also mentioned training as an important strategy contributing to the success of the project, evidenced by the result that now, *"In any health center the workers can put together graphs for tracking EPI [because of the training they received]."*

Comments on how the program had evolved over the years were expressed from the perspective of time, i.e., problems experienced "at the beginning . . ." and those experienced "now . . ."

> *"**At the beginning**, the [target] population didn't quite understand the purpose and objectives of the [immunization] exercise. In some areas, particularly at the periphery, there were accessibility problems, the number of health centers was insufficient, logistics were difficult to organize, and the staff was reluctant to work on a continuous basis. Sometimes there were interruptions in the supply of vaccines, not between the donors and the project but between the intermediate and periphery levels. Cold-chain [storage] was difficult to organize at the periphery. Training was provided [before] but [now] the new technicians [also] need to be trained, which the Ministry is planning to provide in medical schools."*

After 7 years, the problems had progressed to another level: *"**Now**, the problem about the project is sustainability . . . There is also a problem about the quality of the program."*

Although many of the MOH staff viewed the immunization program as well integrated into the primary health care services and decentralized to the periphery, opinions outside the MOH differed and the "top down" nature of the program was considered a problem.

The Technical Officer

Not unlike many other ACSI-CCCD Project countries, Burundi has had more than one TO during the life of the project, as shown in Table 1 (Introduction Section). There were significant gaps between TO assignments. The TOs differed by educational training, international experience and, as shown later, by their tasks. The first two TOs had masters degrees in public health. At the time of their assignment to the project, their international

experience amounted to 5 years in the case of one and 4 years in the case of the other. The third TO is a medical epidemiologist with extensive experience in health surveillance systems, the particular area to which he has been assigned in Burundi, but no prior long-term international experience.

All the persons interviewed indicated that the TOs were assigned to the Department of Hygiene and Prevention of the MOH. There was less clear-cut agreement concerning the number of NCs the TO has or had. Half the respondents stated that the TO had one NC, i.e., the National CCCD Project Coordinator (who is in the Department of Hygiene and Prevention). The other half stated that there was more than one counterpart and included the coordinators of the interventions as counterparts.

The present TO is not assigned to the Department of Hygiene and Prevention but rather to the Epidemiology and Statistics (EpiStat) Unit of the Department of Health Services. He interacts most directly and on a daily basis with the director of that unit. However, as the TO for the ACSI-CCCD Project, he still works with the National Coordinator and program managers for diarrheal disease and malaria, with his time spent approximately *"75% with EpiStat and 25% with CCCD."* Because of the specificity of his assignment to establish a ministry-wide Health Information System (HIS), the present TO perceives his counterpart as the director of the EpiStat Unit rather than the National Coordinator. A 1989 internal review of the project described the TO as one who "functions as a counterpart to the Project Coordinator and provides technical inputs to the Coordinators and Technician/Supervisors" (Delliquadri, et al. 1989). This infers that the TO was intended to have one official counterpart—the National Coordinator—but works with the program managers.

Overall, the interviewees had positive words about the placement of a TO in the MOH, even though, as described below, there were some problems over the duration of the program:

- *"A positive effect because of direct contact"*
- *"It was globally positive, but there is a slight difference [in] communication between the different Technical Officers"*
- *"It was good in allowing the Technical Officer contact with his counterpart and for making decisions. It helped in collaboration. There was direct contact"*

The fact that the TO and NCs were initially located in the same building was thought to be the *"key strategy for ensuring communication, collaboration, and relationship."* The present TO, however, is not located in the ACSI-CCCD office with the National Coordinator; he occupies an office in the EpiStat Unit next to his new counterpart. Neither the TO nor the ACSI-CCCD National Coordinator openly expressed concern that this arrangement might affect their working relationship, as both said that they see each other from time to time.

Role of the TO

Perceptions of the role of a TO ranged from statements about what would be ideal, to what would be practical, to what was actually experienced. **Ideally**,

> *"A Technical Officer should be more involved with his counterpart. A Technical Officer should understand any problems from the nationals' point of view, the reason behind having a Technical Officer in the Ministry of Health, and that he is there to teach. He should not be a boss but more of a collaborator and a trainer of his counterpart."*

> *"The Technical Officer must have good skills in his field, possess practical knowledge, and must also be a field worker. He must work with the National Counterpart and strengthen him with training and support for a transfer of competence."*

Another respondent commented that, **practically** speaking,

> *"The most important thing is to come to a compromise on objectives with the National Counterparts. The Technical Officer is commissioned by his organization to achieve these objectives and he won't achieve them without having sold and shared them with his counterparts. It is necessary to handle these objectives with reserve because some might not correspond to the country realities. The objective of a Technical Officer is never to make himself a key-man."*

> *"He has to bring the skills that we do not have and train the National Counterparts who work with him. From my point of view, it is the most important [thing]."*

Another respondent observed that, in **actuality**,

> *"The Technical Officer at that time was a technician and maybe he did not have the power to change some [management] problems because when we saw the audit we were wondering why the Technical Officer did not say anything. After all, he was working with the nationals and he should have said that something was not working well. They are good technicians, but they were not monitoring the management aspects of CCCD."*

TO Knowledge and Skills

The importance of specific management knowledge and skills that a TO must have was rated by the respondents on a scale of 1 to 9 (1 = most important). Planning received the most support as the "most important" knowledge and skill, followed by information management, communication, evaluation, and administration. Financial management, personnel management, and transportation management received lower scores, and supplies management received the lowest score. When asked about technical knowledge and skills, designing and implementing vaccine schedules was mentioned as "most important" by most respondents, followed by conducting disease surveillance, conducting vaccine

coverage surveys, and knowing about drug resistance. A 1987 program evaluation document highlights the actual skills of one TO in the Burundi project:

> He has demonstrated technical competence in all project areas and remarkable administrative skills. His effectiveness in working with the MOH and other donors is clear to all observers and was amply evident during this evaluation visit. His high level of energy and ability to initiate activities and motivate others is rare. The TO has been particularly effective in his use of frequent and appropriate short-term technical assistance to support training, health education, and the HIS components of the project (Bossert, et al. 1987).

Transfer of Knowledge and Skills

Most of the respondents felt that knowledge and skills had been transferred from the TO to the NCs. Frequently mentioned were planning, communication, information management, and supplies management. Ironically, supplies management was ranked least important on the list of management knowledge and skills. With its heavy emphasis on EPI, the Burundi ACSI-CCCD Project most likely required a lot of work in management of supplies that led to knowledge and skill transfer at a practical level. Expectations for transfer of knowledge and skills at present are more focused because of the current assignment of a TO with specific responsibility for HIS. This is seen not merely as providing technical assistance but also *"training the nationals so that they will be able to do the same work after he leaves."*

CCCD Management in Burundi

Although not explicitly stated as a goal or objective of the ACSI-CCCD Project, as was the case with the technical goals, the improvement of management was implicit in the language of Annex 1 of the 1985 Project Grant Agreement:

> . . . emphasis would be placed on the improvement of health delivery from administrative, logistic, and epidemiologic points of view; and emphasis would be placed on improving financial management including allocation of fuel and health "hardware" such as cold chain equipment. . . . (USAID/Burundi and Burundi MOH 1985).

Management Problems

Responsibility for implementation of the ACSI-CCCD Project in Burundi rested with the three agencies involved in the project: USAID/Burundi, the MOH, and CDC. Management problems experienced by the project can be traced to all three organizations.

Within the MOH, the major problems were said to be *"administrative problems—the National Coordinator was unable to produce receipts for expenditures. He had no support for accounting and nobody was in charge of budgeting for the project. It was only later, in*

August [1992], that someone was hired to do accounting and budgeting for the project." As a result of this accountability issue, USAID/Burundi requested an external audit of the project in 1991. According to the report,

> . . . the records and financial reports are not audited and are not adequately supported, financial liquidation reports are submitted on an average of 4 months apart rather than 30 days, quarterly financial reports and biannual progress reports are not prepared as required (Price Waterhouse 1991).

The question raised was "Why did USAID find it necessary to request an external audit of the local currency costs handled by the MOH 6 years into the project if its own internal monitoring mechanism had been functioning?" The answer to this question may be found in the following observation made by a respondent with regard to USAID's management of the project:

> *"USAID should be more involved in the project. Compared with other USAID projects which have a full-time administrator and full-time accountant, CCCD has been the poor cousin or baby of USAID. It is important but has not been given the same amount of support as agriculture and economic development projects. The Technical Officer is not able to do everything."*

To its credit, the USAID/Burundi Mission has made attempts to recruit a Health, Population and Nutrition (HPN) officer but has found it hard to find a French-speaking candidate. The Mission has, therefore, been left to rely on its available pool of personnel to manage the health portfolio, often calling on the TO for assistance. Only recently (mid 1992) was this issue resolved by the hiring of a full-time ACSI-CCCD program specialist to handle CCCD and other health-related matters.

The overall management environment within the MOH was also considered to have contributed to the project's problems, as evidenced by the following comments:

> *"The Ministry of Health is centrally organized. Since the field people have no vehicles, they can't train or make supervisory visits to the periphery. The projects are almost all vertical and the peripheral level has no resources but does all the work."*

> *"Projects drive the Ministry of Health because that is where the money is. The money goes directly to the projects. The Ministry of Health does not get the money."*

Another problem with management at the MOH was the lack of basic project management capability in rather critical and specific areas such as financial management. The Price Waterhouse audit reviewed the job descriptions and qualifications of personnel associated with the project to determine the appropriateness of the descriptions and the ability of personnel to perform the required financial management functions. It found that "the financial management capability of the staff involved in the project is generally weak. Persons involved in the project's financial management have limited knowledge of

accounting and basic bookkeeping. These individuals require significant training to meet minimum accounting and reporting standards" (Price Waterhouse 1991).

From CDC's perspective, a major contribution to the project's management problems was the lack of continuity in TO placements caused by long lag times between replacements. There was, for instance, a period of almost 2 years between the departure of the first TO and the arrival of his replacement. Similarly, almost 2 years again elapsed between the arrival of the second and third TOs.

Specific to the time of the audit, respondents noted that the TO did not live up to some of their expectations. In addition to the problem in communication about expectations, the TO did not appear to share the idea that he also had responsibility for the financial administration of the project:

> *"I think he has a role to play in management. He is an advisor—not the decision maker— but he can still point out when things are going wrong. They [the nationals] did not get any warning from the Technical Officer that [the financial aspects of] the project was falling down. It seemed that the Technical Officer did not really handle the situation seriously."*

> *"The Technical Officer did not definitely deal with financial management except for specific expenditures like communication fees. Having a competent and motivated manager at the very beginning would have been better."*

This TO experience brought to a head a major division of responsibilities issue between CDC and USAID where, in principle, the former would handle program management and the latter, fiscal administration. The problem of expecting one resident staff member to handle both was put clearly by another interviewee: *"Just having one person with no backstopping from USAID is not sufficient. You need an administrative assistant and an accountant. . . . A Technical Officer who is a manager with technical skills who is backstopped by longer term technical assistance from consultants might work."*

Use of TO Time

The need for administrative back-up was reinforced by estimates from those interviewed that the TO spent 72% of his time, on average, on administration and only 28% on field (technical) work. However, this formula has changed with the present TO because he does not believe that most of his time should be spent in administrative matters. Also, administrative assistance has been recently obtained by hiring an accountant to work with the MOH and assigning a USAID staff person to backstop the project.

Country Characteristics

Respondents did express concern about how the level of national development affected program implementation and the ability of a TO to function. They noted that even though

only 5% of the population live in urban areas, the overall infrastructure (roads, electricity, water supply, and telecommunications) made a positive contribution toward the project's implementation. In particular, telecommunications had been enhanced with the use of a facsimile machine for communication with the regions.

Many respondents thought that the highly centralized system of decision making and administration in the country had a negative effect on the TO's ability to implement programs. In particular, this resulted in delayed efforts. In terms of the traditional system of governance, respondents felt that this had a positive effect on project implementation, particularly in terms of its fostering grassroots political mobilization.

The Future

In Burundi, the future of the project concerned national staff and was best expressed by a respondent:

> *"First of all, we are very concerned about the completion of the [CCCD] project which is coming very soon. We are worried about the financial aspect of the programs we have successfully implemented over the years. For example, the immunization coverage will come to a stop as soon as the Technical Officer leaves and funds will not be available anymore."*

The critical issue now facing the Government of Burundi is how to sustain the project's activities after the closing date. When the project ends in 1993 and the TO departs, will the Burundians be able to continue project activities? The prospect of this looked bleak to some MOH staff, but fortunately they were also thinking about solutions:

> *"Measures should be taken to prevent a drastic termination of the project. Funds should continue to be made available while we approach other donors and beneficiaries for participation in the sustainability of the project."*

> *"More nationals should be trained to achieve sustainability. Continuation must be ensured. We still need support."*

In-depth Interviews: Central African Republic

In 1983, the Government of the Central African Republic requested USAID for a country assessment on the basis of their interest in a collaborative program to combat childhood communicable diseases. A 4-year project agreement was subsequently signed in May 1984 between CAR and the US Government, with USAID funding the project for US$691,000, and CAR contributing US$217,065. The project would "reduce the level of infant and childhood morbidity and mortality in the Central African Republic by expanding and upgrading immunization services and oral rehydration services and by providing presumptive treatment of fevers from malaria" (USAID and CAR Ministry of Health 1984). Since there is no USAID Mission in CAR, the A.I.D. Liaison Officer (ALO) in the US

Embassy provided local donor agency supervision for the project. General oversight was provided by the HPN Officer in the USAID Mission in Yaounde, Cameroon (Raleigh, et al. 1990).

Project Implementation

The indicators often used in country needs assessments (economic and other infrastructure, organization of government services, health services delivery system and resources, and traditional and cultural influences) would have painted a grim picture of CAR's potential to support the ACSI-CCCD Project. However, the interview respondents and key informants on the project consider CAR the most successful ACSI-CCCD Project country of the three countries visited in terms of having had the most consistently positive TO assignments. Additional recognition of CAR's success came in 1990 from the National Council for International Health which recognized the government for outstanding progress in child survival activities.

To the question of whether the project was successful in CAR, all the respondents said "yes" and gave three major reasons for its success:

1. **Competent National Counterparts**

   "The nationals who are responsible for the project are outstanding, [the] National Coordinators are natural public health managers. They know where they want to go and how to get there. Some of the technical people have developed tremendously and are key people in making the project successful. They are empowered to do something and have motivation."

2. **Technical assistance and support from the TO and CDC consultants**

   "The main factors for this success are the permanence and continuity of the project and the experts' competence; these two elements are related to the relevance of the strategy."

3. **Teamwork**

   "It has been a really positive experience for everyone. We do things on the basis of teamwork, not just one person doing everything. People have been able to expand their skills. Now it's firmly entrenched in daily activities (modus operandi) that you do things on a rational basis; you gather data, establish a national policy, define where you want to go, and describe how you are going to get there."

The spirit of teamwork and the dedication of the MOH staff to the ACSI-CCCD Project were also observed by the researchers. For example, during the site visit, while a national strike was in progress and many MOH staff were observed gathered in groups outside the

MOH buildings, the ACSI-CCCD staff were at work in their offices and graciously participated in the interviews. In response to questions about the strike, a respondent said:

> *"People have not been paid for 6 to 7 months but they recognize that what they are doing is important, so people come despite the strikes. Motivation is high. They have something to contribute."*

The Technical Officer

CAR was the only one of the three countries visited that had TO assignments more or less on a continuous basis. There were four periods of TO assignments: 1984 to 1986; 1986 to 1987; 1987 to 1990; and 1990 to 1992. The same TO who was assigned from 1984 to 1986 served again from 1990 to 1992. There was also an interim TO who served for approximately 4 months during 1990.

The TO assigned to CAR from 1984-86 managed the project on a part-time basis and was also responsible for the ACSI-CCCD Project in the Congo. This arrangement had been proposed in the 1983 country assessment:

> In addition to the activities outlined above, the regional component of CCCD will provide funds to support the periodic visits to CAR of a Technical Officer based in another CCCD country. This Technical Officer will provide managerial, operational, and logistical guidance; and will collaborate closely with those CAR Ministry of Health officials responsible for the implementation of CCCD activities. The Technical Officer will devote 20% of his total annual work time to CAR consultation (CDC 1983).

This part-time status translated into 2- to 3-week visits by the TO every 3 months with the time split between the MOH and the U.S. Embassy. The arrangement was found to be unsatisfactory as it proved difficult to manage effectively on such a small amount of time in-country and was *"psychologically disruptive."* Following-up on activities was difficult even though there was a U.S. Embassy staff person responsible for ensuring that plans were carried out in the TO's absence. This early experience taught them that *"To be a good Technical Officer, you need the person full-time. You need a counterpart. You need the money."* The assignment of a full-time TO began in January 1986 when the then ALO was detailed from the State Department to CDC for the position. The November 1986 external evaluation report noted the progress that had been made in moving the project forward since having a full-time TO and emphasized that "it is vitally important to have a full-time CCCD Technical Officer continue in CAR until the project ends in May 1989 (or May 1990 if the project extension to that date recommended by the evaluation team is approved). Conversations with the Government of CAR's CCCD National Coordinator and the U.S. Embassy [staff] indicate agreement in principle to this assessment" (Westinghouse 1986).

Respondents did not believe that the turnover in TO assignees (four in 8 years) affected the project significantly because the consistency and high quality of the management of the

project by NCs compensated for the changes in TO personnel and any delays brought about by such changes.

The placement of the TO in the MOH was considered by all respondents to have had a positive effect on project implementation, as evidenced by the following comments:

"The great reason for success is that the Technical Officer is at the Ministry of Health. Communication is easy."

"Decisions are easier to make since they [TO and NCs] are in the same building."

"The Technical Officers were able to gain confidence more quickly. [Their] competence was accepted. They [the nationals] get to know who the Technical Officers are."

Role of the TO

The role of the TO was described by respondents in terms of the qualities and qualifications one should bring to the position. Good management and interpersonal skills were important issues stressed by CAR respondents:

"[The TO must] know the policy recommended by WHO, know program management, planning, and budgeting, and must be a good manager."

"He should be a team builder and have good people skills, project management, financial management, and interpersonal skills. He should know his limits, [such as] when to call in an expert or when we need a consultant on KAP studies. He ***must*** *know his limits."*

"One must see his technical contribution in the program design, in program implementation, and in technical problem solving."

The role of the TO as advocate and facilitator was also emphasized:

"His role is to facilitate the work. The Technical Officer intervenes when there are problems [such as] when the Minister wants to use the project's vehicles for other assignments."

"The Technical Officer plays an important role for the project in the sense that he is just like the project's Mayor. He helps us with our problems."

Additionally, the importance of the TO's ability to understand and relate to the needs of the country and the project were summed up by an MOH and donor agency respondent as follows:

"He must master the system to which he belongs. He must make an effort to understand the system in which he is working. On the operational level, the Technical Officer must

understand the various components of the project and his place in the project. He must be able to cooperate with his counterpart. We were lucky to have really efficient people."

"[The TO's role is] to help his counterpart in the project's implementation and to know and understand the country's problems."

Use of TO Time

Administration of project activities was said to consume an average of 61% of the TO's time whereas, on average, 36% was spent on field (technical) activities. The rest of the time, 3%, was said to be spent in *"ensuring coordination between Ministry of Health staff and other partners, such as the Peace Corps."* Even with the help of an administrative assistant, most of the TO's time was still devoted to administrative matters.

TO Knowledge and Skills

When asked to score specific management and technical knowledge and skills that a TO must have by order of importance (1 = highest), the ranking, based on the average of the score given by eight respondents, was 1) planning, 2) information management, 3) communication, 4) financial management, 5) administration, 6) personnel management, 7) supplies management, 8) evaluation, and 9) transportation management. The technical knowledge and skills were ranked by the respondents as 1) designing and implementing vaccine schedules, 2) conducting vaccine coverage surveys, 3) conducting disease surveillance, and 4) knowing about drug resistance.

Transfer of Knowledge and Skills

It was believed by most of the respondents (only one dissenter) that knowledge and skills in planning had been transferred from the TO to the NCs. A slightly lower number of respondents (two dissenters) said that knowledge and skills had been transferred in information management, evaluation, and supplies management, although, as indicated above, the two latter areas were not as highly ranked as the former in terms of importance. Even fewer respondents said that knowledge and skills had been transferred in financial management, personnel management, administration, and transportation management. One MOH employee responded to the question by saying:

"I don't think that the Technical Officer's role is to transfer competencies, but [rather] to identify the counterpart's shortcomings. The Technical Officer can communicate these shortcomings to experts [who can help]. The transfer should be on the material level and in a discreet manner."

In other words, the TO should identify the knowledge and skill areas in which the counterparts need assistance and bring consultants to work with them in those areas. In this way, knowledge and skills transfer can occur, but in a prudent way.

CCCD Management in CAR

The central factor given for the success of the project and TO assignments in CAR was that the TOs and the NCs possessed and exhibited the requisite management knowledge and skills and were able to combine them into an effective team approach to their work. A mutual respect for one another through their good interpersonal relations served to cement the team. The 1990 external evaluation of the project spoke highly of the management strategy of the CAR project team:

> The current management team has shown significant strategic wisdom and management acumen in turning around a program with difficulties and making rapid progress in needs assessment, training, logistical and information support systems, management, and supervision. A key part of the strategy was to attack the three major technical interventions (EPI, CDD, and malaria control) one at a time. The Evaluation Team has been impressed by the effectiveness of the strategy which resulted in a complete integration of the roles of manager, technician, and trainer in the case of each lead DMPGE manager (Raleigh, et al. 1990).

Management Problems

Even with the harmonious working arrangement described earlier, the project still experienced some management problems that can be attributed to all three implementing agencies. According to responses from those interviewed, problems in the MOH resulted from poor coordination at the national level among the MOH departments, the concentration of donor-funded projects in the MOH Department of Preventive Medicine and Endemic Diseases (DMPGE) described as *"the motor for the Ministry of Health because that is where many donors have been for their projects,"* and donor coordination. The 1986 and 1990 external evaluations also mentioned problems related to donor coordination, and the 1986 report offers some explanation for the government's reluctance to formalize donor coordination:

> Previous efforts to set up a more formal donor coordination structure chaired by the government have been unsuccessful because of governmental concerns that the donor committee will be used as a pressure point to force the government to do things it feels unwise. The [evaluation] team agrees that it is not necessary to have a full fledged committee at this stage for child survival/CCCD activities, but feels that as the program becomes operational, more frequent consultation between the government and the donors and between donors will become more useful and needed (Westinghouse 1986).

The issue has still not been resolved and interview respondents said that only an informal network exists. In the opinion of one donor agency representative, *"Globally, the donor coordination up until now is bad. Even within the UN it is hard, so outside the UN is even worse. It is the job of the government to provide the right atmosphere. There is no political will [in the government] for coordinating donors. The government must create some mechanism with a technical body to coordinate all the programs."*

Coordination between MOH departments was also said to pose difficulty and the 1990 evaluation recommended that the ALO should assist in strengthening the office of the Director General of Public Health so that it could, in turn, "strengthen its coordination role across the different Directorates while maintaining its current policy of decentralizing management, where appropriate" (Raleigh, et al. 1990). However, how possible this coordination can be when donor funds are primarily concentrated in one department (DMPGE) is questionable. Regarding the role of the ACSI-CCCD Project, a donor agency respondent noted that *"CCCD will have to coordinate with other departments of the Ministry of Health [and] not focus its attention only on DMPGE. The present structure of the Ministry of Health does not favor integration."*

The major management problem on the part of A.I.D. was said to be the *"load of accountability"* imposed by the Agency. A.I.D. was described as *"drowning in paperwork."* Fortunately for CAR, which does not have a Mission, the tendency for the Agency to *"micro-manage"* the project has not been strongly experienced. The ALO is primarily responsible to the State Department and therefore does not view his role as primarily a reporting position. In terms of reporting, his priorities are different from a USAID HPN Officer's.

In the past, CDC had not been seen as providing enough support to the project. However, *"there has been a big change"* and a lot more support is now being received. The additional support was attributed to the expansion of the capability and experience of CDC's International Health Program Office. One respondent noted that at CDC management issues are not seen as major or *"as strong a priority as technical issues."*

Country Characteristics

In CAR, poor roads and electricity outside of Bangui, the capital city, were reported by most of the respondents to have had negative effects on the project's implementation, whereas water supply and telecommunications were said to have had positive effects. The system of government organization and decision-making in CAR, as a former French colony, has been centralized for a very long time. Efforts have been made by the government to decentralize management to the regional level, which the majority of respondents agreed would affect implementation efforts positively. The traditional system of governance was also reported by the majority of respondents to have had a positive effect on project implementation. Finally, the low number of MOH staff was the only element of the health services delivery system considered by respondents to have had a negative effect on project implementation in CAR.

Other factors have also proved to be as important to project implementation, if not more so, as infrastructure, organization of government services, health services delivery, and indigenous factors. This conclusion is based on the fact that, of the three case study countries, CAR has been consistently named by key informants and those interviewed as the country with the most successful TO assignments and project. Compared with Côte d'Ivoire, CAR has a lesser developed infrastructure and health delivery system and lower health and economic status. However, factors other than these country characteristics specified in the

study have played a pivotal role in enhancing the ability of TOs and NCs to successfully implement the project in CAR, such as.

- strong emphasis on teamwork
- competent NCs
- good approach to project management

The Future

The future for the ACSI-CCCD Project activities in CAR seemed tied to the newly-funded USAID Sustainable Child Survival Project which began in 1992. The research team was told that *"We have a five-year commitment for US$ 12.5 million. It's the same kind of activities [as CCCD]. There is no break in activities."*

The question, however, is whether these activities are being integrated into MOH programs so that they will be sustained after donor funding ceases. As one donor agency respondent said:

> *"CCCD as a vertical program is out of date. For the success of the country, there is the need for integration. A few years ago, most of our projects were run in a vertical manner [but] two years ago, we changed to an integrated basis. [Before] we supported EPI with CCCD, [but] now we support PHC. We changed our approach because it will be better for sustainability purposes."*

According to the 1990 external evaluation, the ACSI-CCCD Project staff and activities are integrated into the DMPGE at the national level and components of ACSI-CCCD are integrated into certain health and sub-center staff functions at the periphery. However, ACSI-CCCD Project support mechanisms operate semi-autonomously and have not been integrated into the overall MOH support systems (Raleigh, et al. 1990). The challenge facing the DMPGE now is how to integrate into the structure of the MOH the successful management approaches and support systems it has used to implement the ACSI-CCCD Project activities.

In-depth Interviews: Côte d'Ivoire

Côte d'Ivoire became involved in the ACSI-CCCD Project in early 1986 following the signing of a project agreement by A.I.D. and the Government of Côte d'Ivoire in June 1985. The project ended officially in September 1992; but because of the absence of a TO for much of that year, the project can be considered to have ended with the departure of the last TO. Major project activities had more or less been suspended and the likelihood is that unspent project funds will be subsumed under a new project which began in 1992.

Project Implementation

Those interviewed were asked to share their perceptions about the project's outcome and suggest possible reasons for the results obtained. All but one respondent said that the project was a success. Comments included, *"it provided an opportunity for working together," "staff were trained," "the project provided logistic support,"* and *"it led to the improvement of health policies."* All respondents said that a policy on immunization existed prior to the CCCD Project, and the majority thought there were policies for control of diarrheal diseases and malaria. Most of the respondents said that the aims of CCCD were consistent with the existing EPI policy, and approximately half of the respondents thought that CCCD was in concert with the CDD and malaria policies. A clarification by a key MOH respondent shed light on the issue of policy versus implementation:

> *"Yes, the project objectives are in conformity with the policy, but not at the implementation level. In the process, the Ministry's organizational structure must be taken into consideration. The Technical Officer's assignment must be integrated into this structure on a horizontal basis; that is, support the existing structure. He must have a global idea of the problems."*

The Technical Officer

The assignment of the TO to the MOH was considered a key issue by USAID and CDC for the achievement of the objectives of the CCCD Project. Two TOs served in Côte d'Ivoire. The first was assigned from 1985 to 1988 and the second from 1989 to 1991. For all practical purposes, the project ended prematurely when the second TO was transferred to another country and was not replaced. Thereafter, consultants and staff from CDC were sent on short-term assignments to cover the TO post. When asked about the effect of not having someone to replace the departing TO, the following comments were typical:

> *"Very bad. The problem is not completely resolved yet. We still have not found anyone with the same competence, skills, and qualities of the last Technical Officer. We work together a lot but it is not the same. For example, certain decisions in the various programs could not be carried out because of lack of a Technical Officer."*

> *"There was no follow-up and we did not benefit enough from experts during the successive intervals."*

> *"Everything was blocked and, at that time, there were a whole lot of expert consultants who came but who did not start any activities on the project. That period of suspense blocked everything and it is still blocked presently."*

According to the respondents, the TO was located in the Department of Planning and Health Statistics of the MOH and he had one NC. The effect of having the TO in the MOH and in the same building with the NC was expressed by some respondents:

> *"It was a good thing. Previously, the National Counterpart worked directly with the Technical Officer. Now, it is very difficult to communicate [with the CCCD staff]. One has to refer to different heads [of programs] situated at different places and this disrupts project implementation."*

> *"It had a positive effect [because] by working together it improved working relations between the counterparts and promoted cooperation, which also facilitated collaboration."*

> *"By having the Technical Officer in the Ministry of Health, there was a lot of coordination. The National Coordinators felt that they were not left out and they were important. Decision-making and problem-solving took place quickly. The nationals felt they had easy access to the CCCD office and staff. For example, to get to A.I.D. was a problem. The Technical Officer knew the immediate problems the National Counterparts encountered. There was easy access to Ministry of Health staff."*

Role of the TO

Respondents were asked in an open-ended fashion what they perceived the role of the TO to be. Their responses were compared with the TO's functions described in the CDC job description as shown in Table 9.

Table 9

Perceived Role of Technical Officer Compared with Functions in the CDC Job Description

Functions According to CDC Job Description	Perceived Role According to Interview Respondents
Program Manager	Facilitates implementation of the CCCD Project Carries out the program objectives Mobilizes resources Exchanges experiences with nationals with whom he works Is part of a team Brings program support to the project from conception to planning and implementation Provides financial and technical support
Health Technician	Epidemiologist Health Information Systems specialist Consultant on KAP studies
Coordinator of Donor Assistance	An intermediary between the MOH and the donor agency
Trainer	Provides training Passes on knowledge and skills to National Counterpart(s) by the end of the project Trains staff in the use of computerized data
Administrator	(No corresponding responses)
Planner	Provides support in developing and planning the project components Knows the problems of the country and comes up with solutions
Advisor	Serves as an advisor
(No corresponding category)	A field worker An interpreter and an ambassador One who understands any problems from the national's point of view One who is familiar with the health, social, and cultural realities of the country to which he or she is assigned One who is open and adaptable One who communicates well One who has good people skills One who is not egotistical

In addition to the many qualities that respondents mentioned, an especially important management quality was good interpersonal relations that was seen as necessary to create the right working environment for achieving success. This was the way one MOH respondent elaborated on the issue:

> *"This is not a scientific factor but a human one: respect for the person, for the individual. There must be good interpersonal relations. This factor can affect a program. One can have resources, means, and technology, but without good interpersonal relations, nothing is possible."*

Use of TO Time

Those interviewed were asked to give the percentage of time that the TO spent on project administration and field (technical) activities. The respondents said that the TO had spent, on average, 53% of his time on administration and 43% on field activities. The additional 4% was said to have been spent on *"conferences, meetings, etc."* According to an MOH respondent:

> *"If there was an assigned team, [the Technical Officer] would have spent less time on administrative tasks. The administrative workload in implementation distracted a lot. For example, management of the funds affected the project and the Technical Officer's work because he was obliged to send reports to Washington."*

In Côte d'Ivoire, the second TO had an administrative assistant and a program specialist who worked on administrative issues was based at the Regional Economic Development Support Office (REDSO). It is doubtful that the first TO had an administrative assistant since hiring of such personnel started later in the project.

Project documents reviewed shed additional light on the functions of the TO. The reactions were mixed, as stated in the 1987 evaluation report:

> [Although] contact between the two CDC long-term contractors[5] and the national project coordinator has been for the most part informal and positive, it has not always provided for focused attention to project progress, problems, and planning (Plopper, et al. 1987).

Finally, a 1988 evaluation report noted the "excellent cooperative working relations" that had been fostered in part by the TO between CCCD and other donor agencies, particularly UNICEF and WHO (Brown, et al. 1988). This cooperation was seen as a valuable contribution by the evaluation team because the Ministry itself had no formal donor coordination mechanism. This conclusion contrasts with the observation of one respondent who cited interagency (donor) competition and rivalry in technical assistance and suggested that *"We must get rid of the colonial beliefs."*

TO Knowledge and Skills

When asked to choose five from a list of nine basic management knowledge and skills that TOs must have, respondents most often chose, in order of importance 1) planning, 2) evaluation, 3) information management, 4) communication, and 5) financial management. Regarding the four areas of technical knowledge and skills, respondents

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5 This refers to the TO and a medical eqidemiologist based in Côte d'Ivoire working in a region-wide capacity.

chose the three most important as 1) designing and implementing vaccination schedules, 2) vaccine coverage surveys, and 3) disease surveillance.

Transfer of Knowledge and Skills

Respondents were asked whether knowledge and skills (management and technical) were transferred from the TO to the NC. The number of "don't know" responses almost always equaled or was higher than the "yes" responses for the managerial knowledge and skills. For example, the same number of respondents (6 of 13) said "yes" and "don't know" when asked whether knowledge and skills were transferred for planning, communication, and transportation management. When asked about evaluation, 7 of 13 said "don't know," and only 4 of 13 said "yes." For supplies management and financial management, the "don't know" responses (6 of 13) outnumbered the "yes" responses (5 of 13). And for administration, 7 of 13 said "don't know" and 3 of 13 said "yes." Only for information management were the "yes" responses (7 of 13) greater than the "don't know" responses (5 of 13). MOH respondents who gave negative responses to the question said that *"[since] there was no team, skills could not have been transferred,"* and *"it is difficult to say."*

Although half of the respondents said that some technical knowledge and skill transfer had taken place, when it came to the malaria intervention, no one could give any examples. Knowledge and skills transferred in immunization received the highest mention, further strengthening the fact that an immunization policy was firmly established, preceding the CCCD Project by about a decade. EPI, therefore, received more effort than did CDD and malaria control.

CCCD Management in Côte d'Ivoire

Problems relating to communication, organization, and management support were experienced in the Côte d'Ivoire project. At one time, the National Coordinator was concerned that monthly activity reports prepared by the TO for CDC were not shared with him. An evaluation report also noted concerns by nationals regarding decisions about the need for consultants:

> Coordinators for various components of the project have not always been adequately consulted regarding outside technical assistance to the project; the need for consultants has often been determined by American technical assistants and presented to local project personnel. This may contribute to problems of local ownership of, identification with, and responsibility for CCCD activities (Plopper, et al. 1987).

An MOH respondent echoed the above ideas with the comment that *"A very important point relating to technical assistance [is that] people should not come with programs already drawn up. The Technical Officer must take into consideration the country's priorities."*

The 1987 evaluation team felt that a more active TO-NC relationship was required to overcome problems of the CCCD program within the Ministry, particularly the perception that "the CCCD project is seen as being a somewhat separate and parallel program as opposed to a source of assistance to established (Ministry) public health programs" (Plopper, et al. 1987).

Another MOH respondent said that *"[CCCD] should have been placed within the Department of Community Health from the beginning. It was regarded as a parallel program."* And still another respondent said that *"The project was not regarded as something to help us improve our system but more like something which came from the outside."*

Three conditions noted in the report by Plopper seemed to exacerbate the problems of communication and organization further:

1. a lack of well-defined ministry strategies for the three disease interventions[6]

2. the National Coordinator not having a medical or public health background, which contributed to the problems of establishing his legitimacy

3. the National Coordinator not having responsibility for any of the coordinators of the various components of the CCCD project, who themselves did not always have full-time responsibility for those program areas either

Specific to the organizational structure of the MOH, the 1987 evaluation team noted that a problem for the CCCD Project was that "It has been difficult to obtain active participation and collaboration at times, particularly from coordinators for malaria and diarrheal disease control, both of whom are based at the DSPP (Direction de la Planification et de la Statistique Santaire)" (Plopper, et al. 1987). This inhibited communication and coordination among the different technical program components of CCCD.

Problems in the level of support from CDC and A.I.D. for nontechnical matters were noted in the 1988 evaluation:

> While the CCCD Technical Officer was strongly supported from a technical standpoint by CDC/Atlanta and AID/Washington, the same level of support was not apparent on general health management and organizational problems (Brown, et al. 1988).

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6 As explained earlier, policies did not always translate into their intended purpose at the level of implementation. Therefore, this finding does not conflict with the general perception of our interview respondents that Côte d'Ivoire had existing policies that were consistent with CCCD aims prior to the start of the project.

The 1987 evaluation team also noted that a particularly important missing aspect of administrative support was the need to facilitate communications between the National Coordinator and REDSO concerning financial matters. However, the 1988 team went away with "the impression that the situation had improved over the last six to nine months," after a CCCD program specialist had been brought on board at REDSO (Brown, et al. 1988).

A number of respondents felt that A.I.D. administrative procedures were unnecessarily rigid and often led to allocated funds being left unspent and to delays in getting needed equipment. These comments reflect the concerns:

> *"If CCCD did not have to go through A.I.D. each time for approvals, the money could have been better utilized and there would have been less delay because of the late approvals of funds."*

> *"The rigidity of the program does not facilitate the task of the National Coordinator. Presently, we have very serious problems and difficulties because of the absence of the Technical Officer."*

The reason for tight administrative procedures, especially on the part of REDSO, was explained as follows:

> *"Rules and procedures for accounting for money were not communicated to the government. There was a $150,000 advance which, because of the lack of knowledge about A.I.D. accounting procedures, could not be replenished. Unless you account for the first advance, you cannot get more money. Consequently, activities come to a standstill. Because of problems with money management the project could not go on in a smooth manner. Some Technical Officers overcame the problem by using money from other sources. When the problem was discussed, something should have been done about it there and then. CDC is not clear as to who should have the management responsibility for the project: A.I.D., the Technical Officer, or the Ministry of Health."*

The lingering tensions between the MOH and REDSO about the project were obvious to the researchers not only in what was said but also in the way individuals interacted with each other. Nationals bemoaned the fact that there was no one to mediate between them and REDSO:

> *"We need someone who can insure coordination between the National Coordinator and REDSO."*

> *"He helped clarify certain issues. For example, how to fill out a project implementation order form. Personally, it took me one year to understand the mechanism."*

The overall impression gleaned from the interviews was that the project in Côte d'Ivoire suffered from lack of unity and team spirit. There have been direct references earlier to the

lack of teamwork regarding the time spent on administration and transfer of knowledge and skills. Other references were made on the issue:

"The TO must not work [alone] in his office. He must not work in isolation but with a team."

"A team must be formed within the Department of Community Health to work specifically on the different components of the project."

"Plan on training a national or a national team which will be supervised by CDC. This will be less expensive for CDC because the Technical Officers cost a lot more than the nationals."

Country Characteristics

Persons interviewed were asked whether country-specific factors had a positive, negative, or no effect on the implementation of the CCCD Project. For Côte d'Ivoire, most of the respondents said that the existing system of roads, electricity, water supply, and telecommunications had a generally positive effect, although a small number reported that telecommunications had a negative effect. A few considered these amenities to have no effect on project implementation.

Concerning the organization of health services, one-third of the respondents rated the effects as positive, one-third as negative, and one-third as neutral. Access to health facilities and the number of health personnel were considered as positive aspects of the health service delivery system, whereas supervision and distribution of supplies were considered a problem. Most felt that traditional systems of governance had no effect on the implementation of the project.

The problem of lack of integration of the project into the MOH structure was explained by an MOH respondent in terms of the organization of government services:

"Centralization helped in bringing decisions from the top to everyone (therefore, it had a positive effect). Implementation of activities in the field was decentralized with specific guidelines, according to established procedures. But the vertical nature of the project was negative for the Ministry itself, and this overshadowed the local organization. In the absence of a clear action plan, the project developed its plan with its resources. Ideally, the Minister should have his own policy and a well defined program before appealing for external resources. The consequence is that when resources are exhausted, there is lack of vaccines, needles, refrigerators, etc. and vaccination cannot take place. [In this regard], there was no integration, or it was not programmed for in the beginning (therefore, the government's role had a negative effect on the CCCD project)."

The Future

It appeared as though the future of the ACSI-CCCD Project in Côte d'Ivoire had already been determined, i.e., that funds left over from the project would be added to the new A.I.D.-funded Health and Family Planning Project. Also, leadership at REDSO had changed and a long-term advisor at the MOH was not seen as a necessity.

Nevertheless, many lessons for designing future development projects in Côte d'Ivoire can be learned from the responses of those interviewed. The lack of a multi-sectoral approach to achieving the objectives of the ACSI-CCCD Project suggests directions for the future:

> *"The project must have multi-sectoral expansion. It must not only be regarded as a health project. For example, in oral rehydration, drinking water must be available for the preparation of the solution in homes, and this will maximize efforts."*

In addition, future health projects might be more successful if they have more flexibility:

> *"There was difficulty in including certain components in CCCD. For example, there was a high incidence of yaws in the villages. Just a small injection of penicillin would eliminate the disease. After treatment, the population would have better accepted the program being proposed to them. In this way, all areas must be exploited in order to set up a project."*

The problem of inflexibility may be *"linked with the design of project documents in Washington and Atlanta, which are based on certain restrictions."* And, to more effectively implement development projects:

> *"[we must] understand and discuss more, and listen to nationals in order to know their problems better. There must be more flexibility [especially in] financial resources management. Emphasis must be placed on interpersonal relations. [And] more nationals must be allowed to participate in project management."*

Perhaps working more closely with nationals to design projects for their country will foster better unity, teamwork, and ownership.

Discussion and Conclusions

The different methods used in gathering data proved to be valuable in three ways: 1) field visits provided insights, experiences, and interpretations of the findings that could not have been obtained through questionnaires alone; 2) complementing findings from the field with results of the mailed questionnaires served to expand the scope of input and validate the findings; and 3) the review of documents provided verification of findings from interviews and surveys. As noted in the Methods section, the response rate to the survey questionnaire among MOH personnel was the lowest of the three employer groups. Thus, the fieldwork provided an opportunity to interview a greater number of MOH staff since their views of its value are very important. Field visits also provided an opportunity to explore the TO experience over time. Many projects had more than one TO and the field visits allowed probing and clarifying questions that sorted out what happened during the tenures of different officers. The field visits also made it possible to gain greater insight into role conflicts experienced by TOs who often had to undertake administrative duties above and beyond their expected program management and technical responsibilities.

Knowledge and Skills of TOs Considered Important

Data from both interview and survey respondents were in agreement that planning was the priority management knowledge and skill for TOs to have. Good planning is critical for the development and achievement of sustainable programs.

Judging from the experiences in Burundi, CAR, and Côte d'Ivoire, TO training and experience should also emphasize good management and interpersonal skills. This has very important implications for the recruitment and orientation of TOs. Long-term staff such as TOs should be sufficiently trained, experienced, and skilled prior to their recruitment and assignment to countries where technical assistance is required. There were differences in the degree of experience and type of training TOs brought to the position. Typically, there were two kinds of recruits: 1) CDC-trained PHAs who had served as field officers in state health departments in the United States and as operations officers in the Smallpox Eradication Campaign and 2) persons with masters of public health degrees who had gained experience working abroad through the Peace Corps. Overseas assignment and the ability to speak French were important considerations for recruitment. However, the ACSI-CCCD Project management at CDC and A.I.D. did not anticipate that, unlike the Smallpox Program or a Peace Corps experience, the ACSI-CCCD Project would require managerial experience, knowledge, and skills of a different kind. The ACSI-CCCD Project was broader and therefore more complex. It involved working through many organizations (UNICEF, WHO, Peace Corps, etc.) and bringing diverse groups of people to consensus. Team building, group process and facilitation, advocacy, the ability to organize, and financial management were other critical management knowledge, skills, and experience that TOs in the ACSI-CCCD Project needed to have to a greater degree than in the Smallpox Program or a Peace Corps volunteer experience. Although interpersonal skills were thought by nationals to be

extremely important, these did not appear as requirements in TO job descriptions. Recruitment for future development projects must take into consideration not only the technical, but also the managerial and interpersonal knowledge and skills necessary for implementation of a project in a particular country.

Role of the TO

Future long-term technical advisors will also need to be, in the words of the study respondents themselves, "dynamic and creative" because the challenges presented by health systems in developing countries demand this. Most interview and survey respondents believed that the TO's role should be to strengthen the management of the MOH and to train nationals. Ultimately, the requirements for long-term technical advisors and the roles they are to assume must be based on the needs of host governments and the criteria agreed upon by the governments and donor organizations. The roles of long-term technical advisors must be clearly defined in order to avoid conflicts over unshared expectations.

Use of TO Time

A recurring issue apparent in the data from the interviews, surveys, and documents was the large amount of time that TOs spent on project administration rather than on field (technical) activities. Even in CAR and Côte d'Ivoire where TOs had administrative assistance, they still spent over 50% of their time on administration. To enable the TOs to make better use of their time implementing project interventions and providing much needed training for country nationals, A.I.D. should seriously consider cutting down or eliminating many of its burdensome administrative requirements.

We believe that the current movement taking place within A.I.D. to restructure and reorganize its operations presents an excellent opportunity for the Agency to examine its administrative, financial, and procurement procedures for possible areas of modification and streamlining. Since administrative procedures that work in one system may not be appropriate for another, donor agencies should exercise enough flexibility in allowing country programs to adapt certain managerial procedures according to their individual circumstances. We also recommend that, in future projects, competent local personnel be hired to do a substantial part of project administration and financial management so the technical project staff, including the TOs, can devote more time to project planning, implementation, and evaluation.

The burden of administrative responsibility inherited by the TOs might also be traced to role conflicts between USAID and CDC. This was most evident in Burundi, where the TO's role in the financial management of the project was never clear. As a result, everyone involved, from donor agency to implementing agency to the MOH staff, had different expectations of the TO's responsibilities. For example, the management of project funds in itself was complicated. Although USAID had overall authority and responsibility for the funding allocation of the project, the TO was responsible for directly managing a small allocation through CDC, and the MOH was responsible for managing and reporting on bilateral funds.

The existence of separate funds relating to the same project and requiring separate reporting is a complex arrangement. How financial issues are handled and by whom has implications for future projects. This is a critical matter that will have to be negotiated by the collaborating agencies. Maybe it is best, as a Burundi interviewee suggested, to have all aspects of the project handled by one agency.

Effect of Assigning TOs in Ministries of Health

Overall, assigning TOs to the MOH was believed to have been a worthwhile strategy for the implementation of the ACSI-CCCD Project because the ready access TOs and NCs had to each other facilitated coordination. However, if TOs do not have the required knowledge and skills for assisting nationals in project implementation, physical presence has little value.

Transfer of Knowledge and Skills

For project activities to succeed and be sustained, managerial knowledge and skills—especially in program planning, implementation, monitoring, and evaluation—must be transferred to the national project staff. The survey results, however, showed differing perceptions about the actual transfer of knowledge and skills, especially between MOH and CDC respondents. Some knowledge and skills were reported to be more frequently transferred than others. Planning for example, was the knowledge and skill most frequently transferred because of the emphasis on developing workplans, and so was supplies management because of the high level of commodities that the project required to accomplish its objectives. However, this was not the case with personnel management because this activity was handled separately, i.e., the TO only managed personnel hired directly by CDC to work on the ACSI-CCCD Project, whereas the National Coordinator managed the MOH staff who were assigned to the project.

Role of Training in the Transfer of Knowledge and Skills

Although formal training of mid-level managers[7] was achieved through courses funded by ACSI-CCCD in-country, in the United States, and in third countries, senior-level

7 The documents reviewed suggest that there was lack of understanding and agreement about who constituted mid-level vs. senior-level managers. Helfenbein (1986) defines three groups as comprising the category senior-level managers: 1) national program managers for ACSI-CCD interventions, 2) regional health officers or their equivalents, and 3) "top-level" personnel in Ministries of Health such as directors of health and chief medical officers. WHO defined senior-level managers as national managers of EPI and CDD programs, and mid-level managers as regional or district directors and health center supervisors. And CDC offered its own definition of senior-level managers as those at high-levels in the ministry who make decisions and set policy and mid-level managers as those who manage the national EPI and CDD programs (CDC 1986).

management training should have been accomplished largely through on-the-job transfer of knowledge and skills from TOs to nationals.

Formal training for the ACSI-CCCD Project staff focused on providing the technical knowledge and skills required to deliver services in the three project interventions (EPI, CDD, and malaria control); however, it did not focus on the essentials for managing programs such as financial management, human resource development, decision analysis, problem solving, and strategic planning. If one uses the CDC definition of "senior managers" as "those at high levels in the ministry who make decisions and set policy," it is unlikely that TOs would be able to transfer essential managerial knowledge and skills to "senior managers" through on-the-job-training because TOs did not interface with them on as regular a basis as their "mid-level" counterparts. Formal nontechnical management training is therefore necessary for senior managers who tend to be placed in positions of management and leadership because of their technical training and skills. We advise that Helfenbein's (1986) definition of senior-level managers as 1) national program managers for ACSI-CCCD interventions, 2) regional health officers or their equivalents, and
3) "top-level" personnel in MOHs such as directors of health and chief medical officers be adopted and that formal nontechnical management training for this cadre should be included in all future development projects. This inclusion will result in development of human resources in management as an important and planned step toward having nationals assume full responsibility for the continuity of projects after expatriate personnel leave.

Many factors account for on-the-job transfer of knowledge and skills, such as knowledge and experience in training others, ability to delegate responsibility to the trainee, trainee's acceptance of the trainer, and well defined procedures to guide the training. For on-the-job training by TOs to be effective, the training must be a planned activity for both trainer and trainee, both of whom should be willing participants. On-the-job transfer of knowledge and skills in the context of development projects such as ACSI-CCCD is often viewed in a one-sided manner, i.e., from expatriate to national. It should be noted that the MOH staff assigned to direct MOH programs are typically highly trained technicians with in-depth knowledge about the health problems of their countries. It is certain that ACSI-CCCD TOs gained as much from their NCs as the NCs did from the TOs, although only one of the TOs who participated in the study acknowledged this. Assigning TOs to MOHs contributed to the institutional development of CDC and the professional growth of its employees because of the knowledge and experience gained in those settings. It is our belief that NCs must be viewed as equal partners rather than merely recipients in the knowledge and skills transfer process so that transfer, particularly on the more informal level, will be more beneficial to all involved.

Country Characteristics

The examples of CAR and Côte d'Ivoire and the responses from the survey give us reason to believe that traditionally-accepted indicators of project success such as infrastructure, organization of government services, health services delivery, and (sometimes) indigenous practices may not be the only or most important indicators to consider. Teamwork,

competent national leadership, and good management skills were the most important factors in the case of CAR. In Burundi and Côte d'Ivoire, more support from USAID representatives would have greatly facilitated the implementation process; in CAR, where ALO support was strong, the project did well. We believe that the importance of teamwork, competent national counterparts, good management skills, and strong donor agency support are factors that should not be overlooked in the development of future projects, and every effort should be made to build them into the implementation process. For example, in-country orientation of MOH, CDC, and USAID project staff could be added to the start-up phase of projects. Joint orientations emphasizing the administrative requirements of A.I.D. and the host country government and focusing on issues in which all participants would work together could serve as an initial team-building strategy. Joint orientations could also serve as a forum to identify potential problems and their solutions early on even before project implementation.

The Future

Although the study was not designed to address the issue of sustainability, it surfaced frequently throughout the interviews, survey, and documents. The concern for sustainability of the activities implemented by the ACSI-CCCD Project was a primary one for MOH respondents and caused questions to be raised by donor agency respondents. The following were major points:

1. training of nationals is seen as a way to achieve the sustainability of project activities

2. MOHs will not be able to develop their basic support systems to support all their departments when project funds are targeted only to certain departments and not integrated into the overall agency support

3. assurance of continued project activities is tied to continued funding by donors

For the ACSI-CCCD Project, the idea of sustainability was not built into the objectives at the outset but was introduced later. In 1990, an ACSI-CCCD Sustainability Strategy was developed by the A.I.D. Africa Bureau and, from 1992 to 1993, the Bureau conducted sustainability studies in Guinea, Lesotho, Nigeria, and Rwanda.

On the basis of an extensive study by its Center for Development Information and Evaluation, A.I.D. defines sustainability as "continuation of project activities and benefits 3 years after cessation of project funding" (Burkhalter 1993). Goodman, et al. (1993) use the term "institutionalization" which they say occurs when a program becomes an integral part of an organization's standard operations. Goodman also distinguishes the process of "institutionalization" from that of "implementation" stating that the latter is "the extent to which a program and program components are carried out as planned . . . Program institutionalization, on the other hand, concerns the extent to which a program becomes imbedded within the host organization so that the program becomes sustained and durable."

We believe that A.I.D., CDC, and host country governments have, for the most part, achieved their goal of implementing the ACSI-CCCD Project, as defined by Goodman. Future development projects must now build on the experiences of implementation to achieve the goal of institutionalization or sustainability. Reaching these goals will take considerable commitment on the part of A.I.D., commitments such as not funding projects incrementally, providing long-term funding (at least 10 years), supporting programs that strengthen the managerial systems and capacity ministry-wide (rather than on specific technical interventions), investing more in the training of nationals as managers, and including nationals in project design. Host country governments will have to make the necessary policy and operational changes at all levels of their organizational structure to accommodate the institutionalization of programs. This will include developing mechanisms for programs to generate their own funds. As donor agencies and developing country governments look forward to future challenges, such as eradicating polio and controlling the spread of HIV and AIDS, programs must be designed to include provisions and plans for their sustainability beyond the implementation stages.

[redacted]

Acronyms

Acronyms

ACSI	Africa Child Survival Initiative
A.I.D.	Agency for International Development
AIDS	Acquired Immunodeficiency Syndrome
ALO	A.I.D. Liaison Officer
ARI	Acute Respiratory Infection
CAR	Central African Republic
CCCD	Combatting Childhood Communicable Diseases
CDC	Centers for Disease Control and Prevention
CDD	Control of Diarrheal Diseases
DMPGE	Department of Preventive Medicine and Endemic Diseases, MOH
DSPP	Direction de la Planification et de la Statistique Sanitaire (Department of Planning and Health Statistics)
EPI	Expanded Program on Immunization
HIS	Health Information System
HIV	Human Immunodeficiency Virus
HPN	Health, Population and Nutrition
IHPO	International Health Program Office, CDC
KAP	Knowledge, Attitudes, and Practices
MOH	Ministry of Health
MOHs	Ministries of Health
NC	National Counterpart
ORT	Oral Rehydration Therapy
PEV	Programme Elargi de Vaccination (Expanded Program on mmunization)
PHA	Public Health Advisor
PVO	Private Voluntary Organization
REDSO	Regional Economic Development and Support Office, A.I.D.
TO	Technical Officer
UN	United Nations
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
U.S.	United States
USAID	United States Agency for International Development
WHO	World Health Organization

Appendix A

Position Description
Technical Officer

Position Description

Technical Officer

Duties and Responsibilities

1. Under the direction of the National CCCD Project Director, the Technical Officer (TO) works with host country counterparts in planning, implementing, and monitoring CCCD activities. Such activities include training, health education, health information systems, operation research, and the implementation of selected primary health care interventions including immunization, diarrhea, and malaria control.

2. Participates in development and implementation of evaluation activities which monitor the efficacy and adequacy of the program, including specific measures for concurrent and periodic assessment of trends in morbidity and mortality.

3. Under the direction of the Project Director, establishes and maintains liaison with private voluntary organizations, the World Bank and the African Development Bank, the United Nations agencies (World Health Organization, UNICEF, UNDP), and others concerned with technical cooperation with the host country in carrying out CCCD activities.

4. Assists in training host country health staff in program management, logistics, assessment techniques, supervision, training, and technical application of specific interventions in vaccine-preventable diseases, diarrhea, and malaria.

5. Provides technical assistance in the development and coordination of a logistical system to meet program needs for ordering, receiving, storing, handling, and distributing program supplies and equipment.

6. Works with national and local officials and others as appropriate to identify and develop methods to promote public participation in CCCD activities.

7. Provides routine and special information regarding program activities to the USAID Mission and CDC. Prepares, in collaboration with counterparts, an annual workplan projecting CCCD activities for the following year. Prepares and submits periodic reports containing morbidity and mortality data, description of program activities, discussion of program plans, and fiscal reports on the sub-allocation [funds for the country] and other related information.

Supervision and Guidance Received

1. Within the guidelines of the country-specified CCCD PASA and Project Agreement, incumbent is responsible for establishing workplan and priorities based on the annual project workplan established in consultation with senior project staff and the Project Director.

2. Incumbent's work is monitored in terms of achievement of objectives as set forth in the TO's workplan by the Director, Field Services Division, CDC/IHPO, who provides technical guidance as necessary and by the USAID/Project Officer, who provides administrative oversight and monitoring of the project's workplan.

3. The USAID/Project Officer, acting on behalf of the USAID Mission Director and in consultation with CCCD National Director, provides input to the Director, Field Services Division, CDC/IHPO, on the performance appraisal of the TO. This input assesses the TO's performance in achieving objectives set forth in his annual workplan and includes input into the performance appraisal elements of the EPMS.

[redacted]

Appendix B

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Appendix C

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