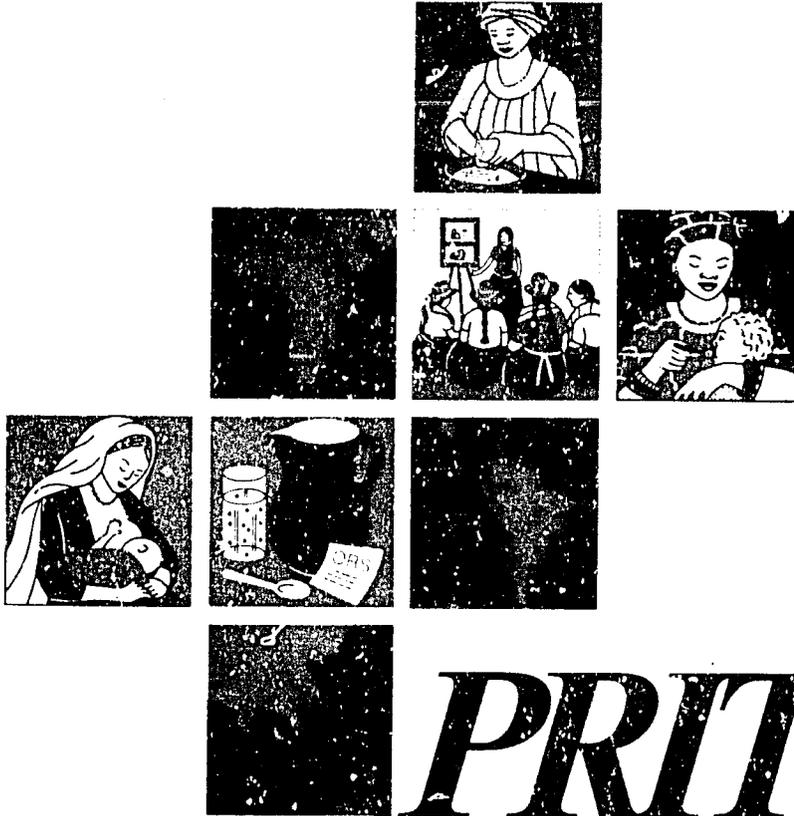


PW-ARW-970
82080



PRITECH

Technologies for Primary Health Care

Occasional Operations Papers

Origins of
the Ugandan National Training Unit
Steps in the Process

by Lawrence J. Casazza

**ORIGINS OF THE UGANDAN
NATIONAL DIARRHEA TRAINING UNIT:
STEPS IN THE PROCESS**

by Lawrence J. Casazza

February 1993

Preparation of this document was sponsored by the PRITECH Project under Contract #DPE-5969-Z-00-7064-00 to Management Sciences for Health, for the A.I.D. Office of Health, Bureau for Research and Development. This paper represents the opinions of the author and does not represent A.I.D. policies and opinions.

INTRODUCTION

This Occasional Operations Paper is another in a series that the PRITECH Project, funded by the U.S. Agency for International Development, will be publishing periodically. The papers focus on programmatic experiences in the field and on lessons we have learned. The PRITECH Project has full-time field staff operating in country and regional offices in Africa, Asia, and Latin America. Our field staff, in collaboration with their national colleagues, have operational experiences and ideas to share with their colleagues through these papers. Although the experiences derive from a particular country situation, we hope that lessons learned can be useful to CDD program managers elsewhere.

We believe that, by sharing our experiences working with national CDD programs throughout the world since 1983, we may give you new ideas for your programs. We encourage you to let us know about your experiences. We hope that you find this series interesting and useful — and that you enjoy a sense of sharing in the many struggles and successes of CDD programs throughout the world.

BACKGROUND

The Ugandan Ministry of Health started a national control of diarrheal diseases (CDD) program in 1984 as one of the child survival programs working toward the goal of primary health care for all. Initially, the program was directed primarily at diarrheal case management at health centers and was linked operationally with the expanded program in immunization. In addition to promoting oral rehydration therapy in health units and hospitals, the program recently expanded to reach the community level using the health inspectorate personnel. Organizationally, the national CDD program is a part of the maternal and child health division, which also includes immunizations, family planning, and nutrition.

The national CDD program is in a continuous process of adaptation as it adjusts to the newly evolving order of the Ministry of Health and the Government of Uganda. Several emerging national and Ministry directions are helping to shape the thinking for the CDD program. These include:

- A national emphasis on decentralized budgeting, planning, and implementation of government-sponsored activities.
- A focus on the districts (39 in total) as the key unit of decentralization.
- A Ministry of Health emphasis on integrated primary health care, with a concomitant and growing emphasis on collaborative planning and implementation between the Ministry's functional (that is, training, health education, planning) and disease-specific (such as CDD, immunizations, or AIDS) departments.

The PRITECH Project's activities in Uganda are currently focused in the following areas:

- Development of a health personnel training strategy centered on the creation of a national-level diarrhea training unit (DTU);
- Development of a strategy for the training of traditional healers;
- Development of an in-service training strategy for the health inspectorate;
- Promotion of commercial oral rehydration salt production;
- Development of planning and management capacity within the national CDD program;
- Input into diarrheal disease control by nongovernmental organizations.

This paper tracks the progress that was made between March 1990 and July 1992 in establishing the national DTU. During this period, Dr. Casazza, PRITECH Technical Officer, made seven trips to Uganda to assist with the DTU effort. The continuous work done by the team made up of staff from the national CDD program, Mulago Hospital, and the pediatrics department of the Makerere University School of Medicine — with support from the local UNICEF office and Sjoerd Postma, PRITECH's country representative in Uganda — was the essential element that contributed to the success of this effort.

ESTABLISHMENT OF THE NATIONAL DTU AT MULAGO HOSPITAL

Diarrhea training units, or DTUs, are publicly funded centers for training both future trainers and health workers in diarrheal case management. They are usually located in health facilities that see large numbers of diarrheal cases, to provide adequate hands-on practice during training. PRITECH assisted a Ugandan team in the establishment of a national DTU at Mulago Hospital. This process involved eight steps:

- Preliminary planning stage
- Planning the physical set-up of the DTU
- Assessing the training needs through a health facility survey
- Collaborating with lactation management training
- Developing an overall training strategy to include the follow-up of trainees
- Developing a curriculum
- Pretesting the curriculum
- Continually revising and updating the curriculum
- Formal opening of the national DTU.

Except for the last two steps, which continue on into the future, they correspond with the trips by Dr. Casazza to Uganda to provide the team with technical assistance as it engaged in the activities to move the DTU initiative ahead. The chronology of these visits as they correlate with the respective activities is shown in box 1.

Rationale for a DTU

The Ministry of Health's national CDD program has long recognized the need to establish a DTU associated with Makerere University's Mulago Hospital in Kampala. The hospital, which serves a large pediatric population of in-patients and out-patients, has lacked a facility to pursue diarrheal disease training and research objectives. For the purpose of this paper, the DTU function as a training institution is highlighted.

Box 1. Technical assistance visits and activities	
March 1990	Preliminary planning
May 1990	Planning the physical setup of the DTU
August 1990	Continued efforts to site the DTU; planning for survey
February 1991	Assessing needs with the health facility survey; developing an overall training strategy
August 1991	Collaborating with lactation management training; developing the curriculum outline
April 1992	Finalizing the draft curriculum
July 1992	Pretesting the curriculum.

The training-related purpose of the DTU is to train medical officers, interns, residents, and medical and nursing students in correct case management of diarrheal disease. This

training also includes modules to provide trainees with instruction to become CDD trainers when they return to their home facilities. Finally, the DTU staff plans to be involved with follow-up of the trainees' progress in the field.

Moving from Ideas to Action

The original plan for establishing a DTU in Uganda stipulated that the World Health Organization (WHO) would take the lead in its development. However, in March 1990, the WHO country representative and Dr. Fred Musonge, the national CDD program manager, agreed that the technical assistance responsibility for the DTU effort would be transferred to PRITECH. WHO would provide technical training materials as needed, and WHO/Brazzaville agreed to supply additional training materials. The local UNICEF and USAID offices agreed to support this arrangement as well.

Mulago Hospital had already designated a location on the compound for the DTU known as ward 15 (see appendix A). Dr. George Zirembuzi and Dr. Elizabeth Kiboneka, from the Makerere University's medical school pediatrics department and Mulago Hospital staff, indicated their willingness to serve as the DTU directors. Together they brought strong technical and managerial leadership to the DTU effort. While the steps outlined in the initial implementation plan (see appendix B) were purposely comprehensive, they proved somewhat overwhelming to the Ugandan team, due to the fact that they had many other teaching and clinical obligations in addition to the DTU planning tasks. Furthermore, PRITECH had no continuous representation in Uganda at that time that would assist them with this effort. However, continuous dialogue with Dr. Musonge through letter and telephone kept the momentum alive. Also, the team greatly benefited from the background technical information forwarded by PRITECH's Information Center, which eventually formed the nucleus of the future DTU library.

Simultaneously, the role of the future DTU was being incorporated into the five-year national CDD plan. According to the plan, the DTU was envisioned to be a key element in the CDD training strategy and would figure prominently in the plan's two main themes: decentralization of CDD responsibilities to the district level and increased emphasis on preventive efforts in diarrheal disease control.

By May 1990, the DTU directors had prepared a draft proposal for the DTU including floor plan, furniture, and equipment list for the unit, which they shared with the Ministry, UNICEF, and USAID. Three important decisions were made at this time:

- WHO would fund and provide technical assistance for a baseline national health facility survey scheduled for February 1991.
- UNICEF, while supportive of the DTU concept, would provide funds for the site remodeling only after the team had demonstrated their commitment with the

institution of diarrheal case management services.

- **Mulago Hospital administrators would officially assign the proposed DTU site to the master plan for the rehabilitation of Mulago Hospital, being finalized with the World Bank.**

The site of the proposed DTU was ideally located in the old Mulago complex with easy access to the main pediatric out-patient triage facility where several hundred children are screened daily. It shared a building with the social pediatric ward, thus linking the unit to a home visiting program for those cases with complicating social problems.

Linking Training to Performance

In February 1991, Dr. Jeanne Newman (Quality Assurance Project), Dr. Judith Graeff (HealthCom Project), and Dr. Casazza of PRITECH traveled to Uganda. Before departing, they formulated a conceptual framework linking the DTU training to the performance of the health worker after exposure to the course. This framework, shown in appendix C, calls for a follow-up system of support and supervision for the trainees, primarily at the health-facility level. This activity connects the training program to an evaluation and supervisory function useful for management purposes as well as for identifying new training needs. Implied in this framework is the importance of supplementing the training in diarrhea case management with training in the areas of supervision, communications, and in-service or on-the-job training. This approach was presented by the consultants and discussed with the CDD program director and future DTU faculty members.

The national CDD training strategy therefore adopted a comprehensive conceptual framework that included supervisory and support activities directed to the district level to ensure that the trained workers would indeed be able to perform as trained upon returning to their home facilities. This concept would come into full play only when the training program had involved decentralization of the courses to the district levels. This change will be phased in after June 1993, following the first training-of-trainers course for district-level health teams.

Role of the Health Facility Survey

The WHO Health Facility Survey of Diarrhoea Case Management was carried out in February and March 1991. The objectives of the survey, identified by the national CDD program, were: 1) to assess the quality of diarrhea case management in health facilities where supplies for an oral rehydration corner had already been delivered, and 2) to identify strengths and weaknesses that could be enhanced or improved through training or better facility support.

Dr. Musonge decided that the surveyors for the health facility survey should be largely comprised of future DTU faculty members, thus providing them with first-hand exposure to the clinical problems and staffing constraints in the districts. This proved to be a major formative decision, as it anticipated the future role of the DTU faculty as support and supervisors to the field trainees.

On completion of the survey data collection, the same team proceeded to data analysis with technical assistance from WHO, UNICEF, and PRITECH. The results are summarized in box 2. This exercise proved invaluable in sensitizing the participants to the real difficulties that future DTU trainees would face in implementing their acquired training in the field. Also, drawing from their field exposure to actual clinical conditions, they were convinced of the need to incorporate a strong emphasis on nutrition into the DTU training and to link their efforts with breastfeeding promotion.

With the completion of the health facility survey, the team responsible for the DTU curriculum development decided that, based on the needs assessment provided by the survey data, they needed more than a minor adaptation of existing case management training materials. Rather, the situation warranted a major effort to redesign the participants' training materials as well as those needed for the training of trainers. Dr. Musonge decided that a group composed of those who had taken part in the survey as well as additional technical specialists in nutrition, obstetrics, training, and curriculum development issues would hold a three-day workshop to design a curriculum outline.

Developing the Curriculum

Box 2. Results of the health facility survey

- Oral rehydration salts were used frequently and were in adequate supply.
- Mothers knew good home-care practices.
- Health workers' assessment of diarrhea was inadequate.
- Inappropriate treatment was selected for children with some dehydration.
- Children with severe dehydration were not treated according to national policy.
- Antibiotics were overused, although anti-diarrheals were rarely used.
- Counseling for mothers was inadequate.

The group concluded that a modular approach would be the most practical one for the DTU curriculum because it is the most flexible in responding to the needs of the various categories of workers to be addressed in training and the particular skills required in their respective job descriptions. Additional modules could also be added as called for by the on-going training evaluation or to accommodate any possible expansion of the DTU's function in the future.

For each of the five modules named below, the possible audience was identified together with a draft list of subjects to be covered. Also, the specific performance and training objectives, resource materials,

suggested teaching activities, and evaluation methods to be included in the module were defined. The modules are:

- Module 1. Understanding Diarrhea (an overview of technical concepts and epidemiologic information)
- Module 2. Diarrhea Case Management (much more detailed technical instruction with hands-on practice)
- Module 3. Communication Skills (general concepts for effective communication and counseling)
- Module 4. Supervisory Skills (general description of approaches to supervision activities)
- Module 5. Training Skills (guidelines with exercises for training of trainers).

The latter three modules, while using CDD situations as illustrations, would be adaptable to other training programs such as the control of respiratory infections and breastfeeding promotion.

In the process, the members of the team learned how difficult and tedious curriculum development is to accomplish. Although most of them were experienced university-level teachers, they had never undertaken the entire process, beginning with a needs assessment and following it through to the development and testing of the final materials.

Collaboration with the Lactation Management Clinic

The first discussions concerning collaboration with the newly established lactation management clinic took place with Dr. Mukasa, the clinic's director, in May 1990. Dr. Mukasa had recently returned from a training at Wellstart (San Diego), under PRITECH auspices, along with five others who received basic training in order to establish lactation promotion activities at both Mulago and Mbarbara hospitals. The Ugandan Wellstart associates proposed to link the development of their training curriculum to that of the DTU. This was a logical choice as the "generic" modules (Modules 3, 4, and 5) could be shared. The DTU staff also wished to incorporate breastfeeding promotion and instruction in lactation management into the DTU course. Therefore two additional modules were added to the list:

- Module 6. Understanding Breastfeeding (an overview of technical information on breastfeeding and lactation)

Module 7. Lactation Management (more comprehensive technical training with practical instruction).

Once again, in April 1992, Dr. Musonge gathered a competent, hard-working group of technical persons together, most of them veterans from the August 1991 workshop in Jinja, where the modular outlines had been drafted. This time he was assisted in preparation by his competent staff and by Sjoerd Postma, who had been hired by PRITECH in October 1991 as its full-time representative in Uganda. His presence greatly facilitated the in-country follow-up of progress as well as coordination with other donors and the PRITECH office in Washington.

Mary Kroeger, a nurse-midwife from Wellstart, also came to assist with developing the two breastfeeding modules. After five days of work in small groups assigned to the various modules, the team emerged with considerable detail on content, teaching activities, and specific resource materials for all seven modules. Training materials were derived from several WHO resources, the extensive CDD and nutrition literature, and breastfeeding references — all greatly contributing to the draft product.

Even with the modules developed, however, there was still no clear idea how they would be used in actual training. This would hopefully be clarified during their pretesting. Nor had the team yet devised a training implementation schedule, although it was envisioned that eventually DTU training would be decentralized to the district level with the national DTU staff serving as facilitators to the local trainers who had completed a training-of-trainers course at the national DTU.

By this time, the DTU had been operational for three months as a service provider for pediatric diarrhea cases coming into Mulago Hospital. But a brief assessment of the health workers' performance pointed up the need to upgrade the standard of care as soon as possible. Except for the three faculty members who had received case-management training several years before at various international CDD training centers, there were no adequately trained DTU personnel in Uganda. In fact, the curriculum development process additionally provided a necessary update of skills and knowledge to staff who had received previous CDD training.

Training-of-Trainers Course

The DTU team decided that the modules were ready for pretesting in July 1992. But in order to speed up the development process, the pretesting was incorporated into a training-of-trainers course. While this was not the ideal situation, there were significant numbers of "new" participants (all were future DTU trainers and resource persons) who had not been involved in the earlier curriculum development steps and whose direct input was important to the finished produce. Now they would have "hands-on" practice with the full content of the course. Financial support for the training came from UNICEF/Uganda, and

WHO sponsored the participation of Dr. Hans Troeddson, WHO representative from Zambia, as an experienced course facilitator together with Dr. Casazza, sponsored by PRITECH.

The participants included 25 trainees, with three coming from Mbarbara University Hospital, where a second lactation management clinic and DTU are planned. The Mulago Hospital participants included the DTU nurses and their senior nursing officer, the medical officer in-charge, and the team of supervisory pediatricians. A clinical nutritionist, a health educator, a health visitor, an obstetrician, and a nurse tutor, together with nursing officers assigned to lactation management at Mulago Hospital, rounded out the multi-disciplinary group selected as future trainers and resource persons.

During the ten-day course, the group worked through all seven modules developed in the earlier workshop. They decided to focus the course on Modules 1 and 2 dealing with diarrhea case management and Modules 6 and 7 for lactation management training. The three generic modules would be interspersed throughout the course at appropriate times. The diarrhea case-management training materials consisted of selected WHO training materials with additional updated hand-cuts from the literature. The lactation-management component relied heavily on Wellstart training materials. Finally, the group agreed that the products for the course would be:

- Revised training Modules 1 through 7, and
- the 1992-93 DTU training plan of action.

The general approach to the didactic training activities was as follows: the person responsible for the module presented its learning objectives in their prescribed order using all the preselected training materials and hand-outs; after the presentation of each learning objective, the audience provided feed-back to the presenter on the adequacy and clarity of the technical material as well as on the training methods employed. The speaker's use of audiovisual equipment was also critiqued.

Using the checklists shown in appendix D, Dr. Casazza recorded his observations of the various learning activities, as well as a summary of the group's remarks. At the end of each week, the key faculty members for both diarrhea case management and lactation management, together with the PRITECH country representative and consultants, convened for a thorough review of the week's activities.

In general, the modules required only minor revisions and reorganization. It became evident that Modules 1, 2, 6, and 7 were the core modules for diarrhea case management and lactation management training; Modules 3, 4, and 5 were important as references to be read by the participants who would incorporate the concepts presented in them within the context of the core modules. This was especially true for the subject areas of training and communication skills.

Dr. Ezra Teri, a UNICEF health-education consultant to the Ministry of Health, was helpful in clarifying the essential elements in Modules 3 and 5 dealing with training and communication skills. These modules were read as homework the night before their presentation; then their salient points were discussed as they related to CDD and breastfeeding training and clinical service. The participants' enthusiasm for more detailed instructions on how to improve lectures, demonstrations, and group discussions markedly increased as they became more aware of the importance of the methodological aspects of training to their effectiveness as teachers.

Module 4 on supervisory skills was only briefly presented as the content was seen to be more relevant to a supervisory skills course for the relevant participants, but the interpersonal skills used in supervising personnel were practiced as they are related to training skills as well. This module could serve as a useful conceptual introductory building block to follow-up training in supervisory skills.

Corresponding with the presentation order of the core modules, hands-on practice sessions for both breastfeeding and CDD were carried out at Mulago Hospital, except for one side trip to nearby Rubaga Hospital to visit a busy oral rehydration corner there. When the regular courses are offered in the future, the goal will be to incorporate about 50 percent of the total agenda time to practical training.

There was ample opportunity for all the participants to have sufficient exposure to a variety of clinical problems associated with pregnant and postpartum mothers at the prenatal clinic at Mulago and the outpatient lactation management clinic, respectively. But the overcrowded space for these out-patient services made it difficult to accommodate the trainees. Furthermore, most of the common breastfeeding problems encountered by postpartum mothers can be adequately demonstrated on the ward.

The newly-remodeled DTU was the site for the CDD practicals and case presentations; it easily accommodated the busy patient flow along with the added trainees and facilitators. During the training course the DTU initiated feeding of the patients together with rehydration; this will become a routine activity for the unit.

One of the most significant accomplishments of the training of trainers was the design and pretesting of a new DTU case management form to be used for all cases presenting to the unit (see appendix E). The form incorporates data collection for many of the risk factors associated with diarrheal disease in infants and toddlers as presented in the didactic portion of the training. These include nutritional and dietary assessment and immunization status. Furthermore, it links the information collected in the history-taking with the relevant preventive messages to be stressed in the counselling activity. Finally, it forces the health worker to conduct a thorough investigation of the whole child by responding to each and every question on the one-page form, thus promoting a degree of quality assurance to the interaction.

The training-of-trainers participants used a draft version of this form throughout the course and contributed helpful suggestions for its revision, which were incorporated immediately. It was agreed that this form would be used routinely in the DTU after its finalization and the data collected would be analyzed regularly by Dr. Charles Mugeru and the DTU pediatricians.

Future Activities

The group reached a consensus that in the future there could be separate courses for CDD and lactation management, but regardless of which emphasis the course presents, all courses will contain elements of Modules 1, 2, 6, and 7. Depending on the roles and functions of the health workers to be trained, the specific course agenda can be designed to include those selected learning objectives chosen from the four core modules that reflect best the course objective. For example, only nursing and medical school tutors would be possible candidates for all objectives of all modules, while pediatricians might find modules 1 and 6 redundant in view of their previous education. Modules 3, 4, and 5 would be included as appropriate for the audience.

Finally, the group agreed that the next training activities would build on the training of trainers to address the needs of: 1) the newly assigned, yet untrained DTU staff; 2) other relevant Mulago Hospital staff, especially those in the pediatric department; 3) DTU staff with major organizational and programmatic responsibilities; 4) the district-level teams who would later decentralize the CDD and lactation management training; and 5) principal tutors of training schools. Health workers who had been involved in this training of trainers would be called upon to participate in these training activities to further refine the modules and their own teaching skills. The funding for these future activities would be forthcoming from WHO, UNICEF, USAID, and the Ministry of Health.

IMPACT OF THE DTU

The DTU team agreed that there should be no outcome evaluation of the DTU efforts for at least the first six months. During this period, a series of courses will be conducted with the dual objectives of: 1) training health-care workers and 2) refining the training skills of the trainers. An exchange of trainers with the national DTU in Zambia is also scheduled.

By the end of 1992, two additional courses had been conducted by the trainers, thus training 52 doctors, midwives, and nurses from Mulago and Mbarara hospitals; two more courses are planned for the near future. After each course, the trainers showed keen interest in evaluating the knowledge and skills acquired by the participants as well as improving their own skills in assessing these changes. At the conclusion of the course scheduled for February 1993, the modules will be finalized. So far, there has not been any supervision or support activity undertaken by DTU faculty, because the participants were comprised of faculty and staff from the two hospitals that will function as DTUs. The decentralization of training and the follow-up supervisory and support activity will begin in June 1993.

Both the Ugandan government and UNICEF/Uganda are looking to the DTU and its team of trained trainers to function as a potential platform for a national case management training center. Additional disease-specific modules will be developed for this purpose in order to strengthen the quality of case management applied to other major killers in the under-five population, namely, acute respiratory infections and malaria. With the WHO case management protocol available for respiratory infections, this could be the next step for the DTU.

As a spin-off effect of the establishment of the DTU, its staff can now make a stronger case for facilities to be provided by Mulago Hospital in support of the DTU activities. These include a hostel for the trainees, regular drug supplies, and food from the central kitchen for DTU cases.

Finally, while UNICEF assisted in the development of the structural improvement of the facility, PRITECH provided computer equipment for word processing and case load monitoring, equipment for producing training materials, and minor kitchen items. The DTU now functions regularly on a 24-hour basis with an average of 30 patients seen daily. Many are complicated cases with malnutrition, acute respiratory infections, or suspected AIDS, thus contributing to a greater number of moderately and severely dehydrated cases.

LESSONS LEARNED

Training should be linked with a supervision and support system to be effective.

A major challenge to health training efforts is to develop courses that are relevant to the needs of the workers and the clients that they serve. As more emphasis is given to assessing the quality of these training efforts, the measure of success hinges more on the measurement of *competency* developed in carrying out new skills and *changed behavior* in both the health workers and the caretakers (mothers). The behavioral change measurements become the focus for the monitoring and evaluation of the training efforts. Thus, the follow-up of the trainees and the clients they serve can be an informational source for the entire program. Through a support and supervisory role assigned to the trainers (already the DTU faculty is primed for this from the experience of the health facility survey), other elements in addition to current CDD training practices can be identified as obstacles to implementation of the training received. This follow-up step provides feedback to those involved with logistics, administration, and eventually planning for the overall project.

While the implementation of the support and supervision concept has not been fully worked out for the program at this time, nonetheless, the concept proved to be a strengthening element in unifying the donors and the diverse participants from the university and ministry ranks behind the rationale for the DTU.

Curriculum development is a key activity around which "national ownership" of a CDD training program can be established.

Through the steps involved in the process of developing a curriculum, the DTU faculty became intimately familiar with the needs of the health workers and the clinical conditions they treat. This process began with a "needs assessment" accomplished with the health facility survey. The actual curriculum preparation phase followed, which required interdisciplinary collaboration to address the technical content as well as the methodological issues. Most importantly, it will include a supervisory and support activity that ties the training component into the overall strategic planning and evaluation activities of the program once the training becomes decentralized.

A specific case management protocol provides a core for a clinical service delivery program. WHO deserves much credit for the development and promotion of its case management protocol for diarrheal disease. Lending its name to the protocol gives it credibility among clinical experts in the medical field globally. But more importantly, the protocol provides the needed technical guidance for specific diagnostic, treatment, and counselling activities essential to handling patients presenting with the illness. For cases of diarrheal disease, the diagnostic and treatment procedures that the protocol advocates are more simple and cost-effective than the practices currently in place. In Uganda, the curriculum embraced all the assessment, treatment, and counseling principles of the protocol while giving it the specificity needed to make it nationally appropriate.

Furthermore, it sets standards of care that can be translated into indicators for measuring not only the quality of care given by the health workers but the training they received as well. As WHO develops new protocols for use in management of the sick child, the experience gained by DTU staff and faculty can be expanded to address these clinical situations as well.

This “process development” approach is time-consuming.

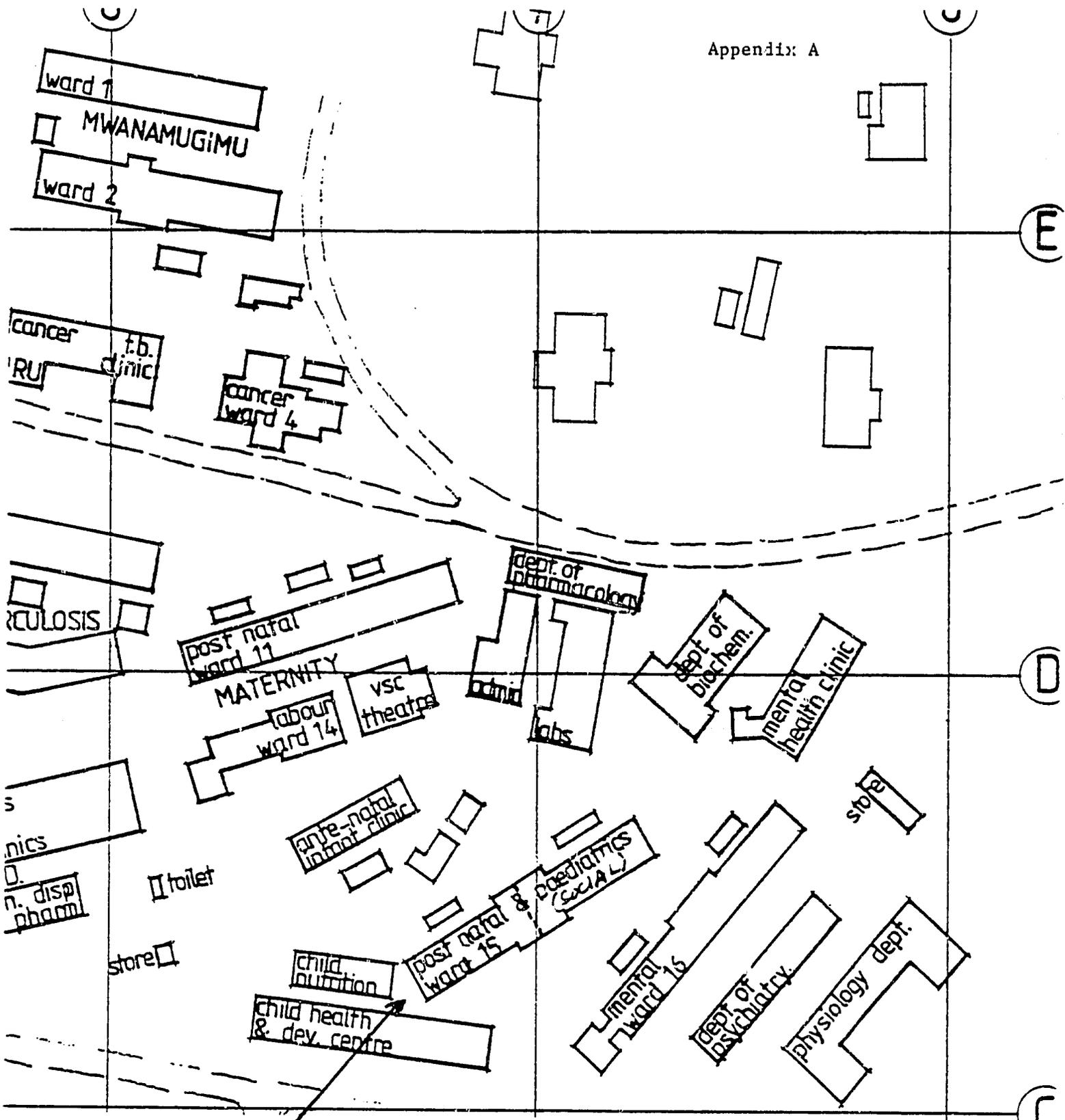
The time expended from the initial discussions with the national CDD program leaders until the testing of the modules was approximately two and a half years. Although some of this time was spent in site acquisition and remodeling, it is conceivable that this period would have been shorter if the available WHO materials had been directly adopted for courses. It remains to be seen just what long-term effects this process has had on the professional development of the trainers and the quality and sustainability of their work in the future. No doubt there will be revisions added to the course content as a result of feedback from the trainees; the modules are designed to accommodate such up-dating as well as new subjects as needed.

Curriculum development requires adequate technical assistance inputs.

By expanding the scope of the technical content to include breastfeeding, communications, training, and supervision, the need for additional technical expertise expanded to include both local and international resources. This brought together professional resources that, if isolated by subject area (such as breastfeeding promotion or diarrheal control), would not have had the opportunity to interact and develop the integrated curriculum. Another example is the assistance of an expert from the Ministry of Education in addressing issues of general curriculum development. His guidance was essential for adherence to national educational standards required before introducing a new curriculum into government and university training programs.

Multi-donor involvement is essential from early on for successful completion and sustainability of the effort.

The DTU program represents the combined efforts of WHO, UNICEF, PRITECH and USAID, the Ministry of Health, Makerere University School of Medicine, Wellstart, the Quality Assurance Project, and HealthCom. In addition, a World Bank-sponsored team was involved in the decision on the DTU site. The persistent advocacy for the DTU by the CDD program was key to this complex coordination of donors. Also, the PRITECH resident representative assisted greatly in this effort. With the anticipated phase-out of PRITECH funding in mid-1993, it was essential for its long-term survival that this effort have multiple agencies interested and already involved. The probability of the DTU's continuing activities and its sustainability for the future have been established at this time because of the extensive investment in funding and effort that each organization has contributed so far.



DTU site

MULAGO HOSPITAL

1990

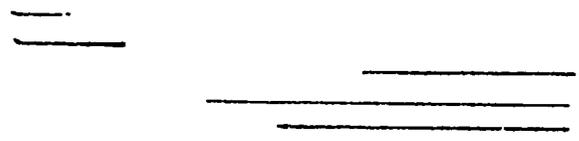
1991

ACTIVITY

May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

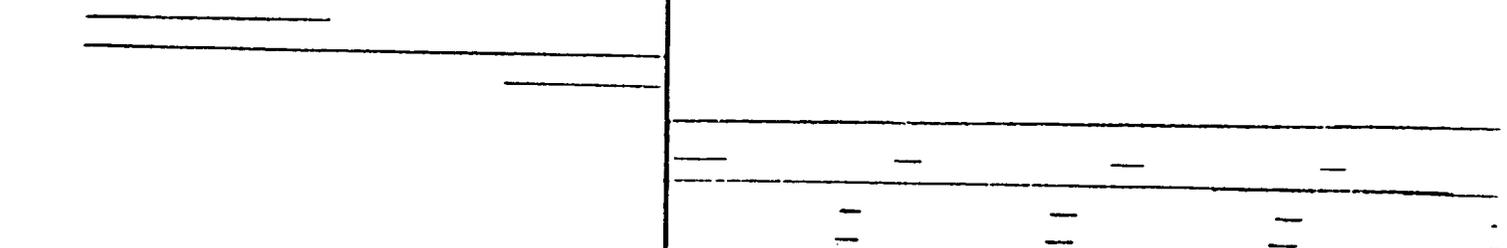
DTU PREPARATION

- a. Site selection
- b. Hospital approval
- c. Facility remodeling
- d. Equipment procurement
- e. Library establishment



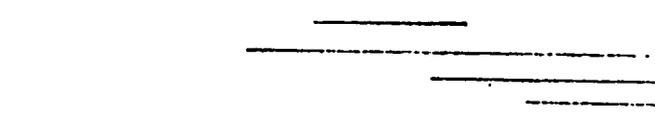
TRAINING PREPARATION

- a. DTU staff training
- b. Curriculum preparation
- c. Curriculum finalization
- d. prep. of training schedule
 - a. med students
 - b. housestaff
 - c. nursing students
 - e. district hosp. staff
 - f. MCH workers
 - g. DMO's



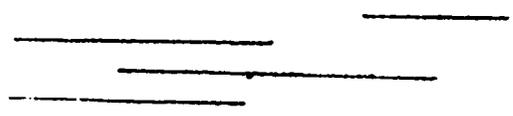
TRAINING-ACTIVITIES

- a. select additional instructors
- b. order supplies
- c. copies of training materials
- d. arrange for lodging
- e. training courses implementation



ROUTINE SERVICES

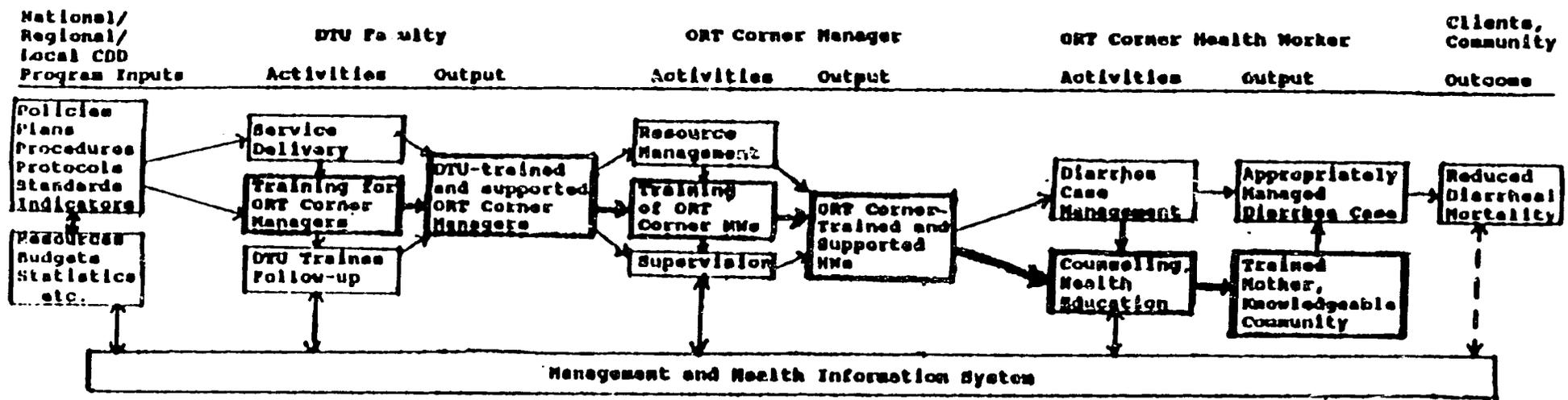
- 1. referral system design
- 2. record system design
- 3. form prep and printing
- 4. reporting system design for CDD/MCH and Mulago Hosp.



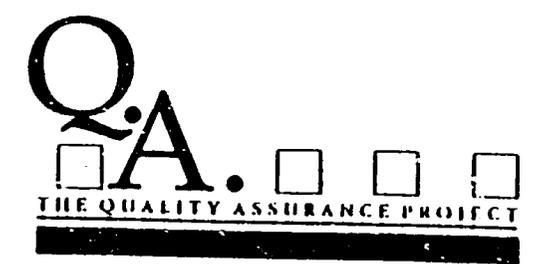
Evaluation

- a. Health facility survey
- b. follow-up survey





ORT Corner/DTU Training and Support System



I. COURSE OBSERVER'S CHECKLIST
LECTURE

SESSION: _____ FACILITATOR: _____

TIME: Session: Beginning: _____ Ending: _____ Total: _____

Discussion, etc. (other than lecture) Total: _____

TEACHING METHOD(S): (Tick all that apply)

<input type="checkbox"/> Lecture	<input type="checkbox"/> Demonstration	<input type="checkbox"/> Role-play
<input type="checkbox"/> Q/A	<input type="checkbox"/> Practice	<input type="checkbox"/> Case study
<input type="checkbox"/> Group work	<input type="checkbox"/> Reading	<input type="checkbox"/> Video/film
<input type="checkbox"/> Discussion	<input type="checkbox"/> Tour of facility	

- | | | | |
|-----|----------------------------------------------------------------------------------------------------------------------------|------------|-----------|
| 1. | OBJECTIVES presented at the beginning? | Y | N |
| 2.1 | Objectives for the session (list): | <u>Yes</u> | <u>No</u> |
| | | — | — |
| | | — | — |
| | | — | — |
| | | — | — |
| | | — | — |
| | | — | — |
| 2.2 | Were most objectives covered? | Y | N |
| 3. | Number of participants attending: _____ Not attending: _____ | | |
| 4. | Does the instructor speak clearly and loudly? | Y | N |
| 5. | Are slides/overheads clearly visible/legible to all? | Y | N |
| 6. | Is adequate time for discussion provided? | Y | N |
| 7. | Do participants ask questions and/or make comments? | Y | N |
| 8. | How many participants come late (after the lecture started)? | — | |
| 9. | Are most participants concentrating on the lecture (not sleeping, talking, or reading something different from the topic)? | Y | N |

18

10. Is the content of the lecture satisfactorily covered (i.e. according to the WHO DTU guidelines)? Y N
11. If no, describe differences, gaps:
12. Were gaps satisfactorily addressed, either by the lecturer or other DTU faculty, during the session? Y N NA
13. Observer's overall assessment:
- | | | <u>Content</u> ¹ | <u>Method</u> ² |
|--|----------------|-----------------------------|----------------------------|
| | Acceptable | _____ | _____ |
| | Not Acceptable | _____ | _____ |
14. Other comments: (e.g., on how the material is presented: with enthusiasm, convincing, boring, etc.)

¹Content acceptable if "yes" answers to questions 2.2 and 10 or, if "no" to question 10, then "yes" to question 12.

²Method acceptable if "yes" to questions 4,5,6, and 7.

**II. COURSE OBSERVER'S CHECKLIST
PRACTICAL SESSION**

SESSION: _____ PARTICIPANTS: _____
 LOCATION: _____ FACILITATOR: _____
 TIME: Beginning: _____ Ending: _____
 NUMBER OF PARTICIPANTS: _____ NUMBER OF TEAMS: _____
 RATIO:
 Instructor/Participant: _____
 Instructor/Team: _____

- | | | |
|----|-----------------------------------------------------------------------------------------------------------------------|-------|
| 1. | Was the instructor/facilitator available at least 80% of the time? | Y N |
| 2. | Did the facilitator provide specific ¹ feedback: | |
| | 2.1 after participants assess and treat? | Y N |
| | 2.2 after participants talk with mothers? | Y N |
| | If yes to either, give an example: | |
| | 2.3 Was the feedback provided accurate? | Y N |
| | 2.4 Did facilitator provide feedback in a clear and constructive manner? | Y N |
| 3. | Number of participants who assess and treat at least one case: | _____ |
| 4. | Number of participants who assess and treat at least one case with: | |
| | 4.1 no signs of dehydration | _____ |
| | 4.2 some signs of dehydration | _____ |
| | 4.3 severe dehydration | _____ |
| | 4.4 other problems | _____ |
| 5. | Number of participants who practice talking with mothers: | _____ |
| 6. | Did participants periodically monitor patients who are on Treatment Plans B and C? | Y N |
| 7. | Observer's overall assessment: Was the quality of the session acceptable (answers to questions 1,2, and 6 are "Yes")? | Y N |

¹"specific feedback": feedback addressing specific strengths and deficiencies in participant's performance as observed by instructor/facilitator.

**III. COURSE OBSERVER'S CHECKLIST
CASE PRESENTATION SESSION**

SESSION: _____ FACILITATOR: _____

PLACE: Classroom: _____ Ward: _____

PARTICIPANTS: _____

TIME: Beginning: _____ Ending: _____

NUMBER OF PARTICIPANTS: _____ NUMBER OF TEAMS: _____

- | | | |
|----|---------------------------------------------------------------------------------------------------------------------|-------|
| 1. | Number of participants who make at least one case presentation: | _____ |
| 2. | Are actual cases presented? | Y N |
| 3. | Did facilitator provide specific ¹ feedback to participants: | |
| | 3.1 about each case presented?
If yes, give an example: | Y N |
| | 3.2 Was the feedback provided accurate? | Y N |
| | 3.3 Did facilitator provide feedback in clear and constructive manner? | Y N |
| 4. | Observer's overall assessment: Was the quality of the feedback acceptable (answers to questions 3.1-3.3 are "Yes")? | Y N |
| 5. | Other comments: | |

¹ "specific feedback": feedback addressing specific strengths and deficiencies in participant's performance as observed by instructor/facilitator.

- 20 -

**IV. COURSE OBSERVER'S CHECKLIST
EXERCISE/DEMONSTRATION/ROLE PLAY**

SESSION: _____ FACILITATOR: _____

TIME: Beginning: _____ Ending: _____

NUMBER OF PARTICIPANTS: _____

1. Exercise format: (check all that apply)
- 1.1 individual _____
- 1.2 group _____
- 1.3 written _____
- 1.4 (circle one) role play, demonstration, or presentation
2. Did facilitator provide clear directions: Y N
3. Was facilitator available for questions during the exercise? Y N
4. Were necessary materials available to all? Y N
5. Did all trainees participate in the exercise? Y N
6. Were most of the participants able to complete the exercise in the time allowed? Y N
7. Did facilitator provide specific¹ feedback in a clear and constructive manner? Y N
- 7.1 Related to the exercise: Y N
- 7.2 Was the feedback provided accurate? Y N
- 7.3 Did facilitator provide feedback in a clear and constructive manner? Y N
8. Observer's overall assessment: was quality of the session acceptable (5 or more "yes" answers to questions 2 through 7.3)? Y N
9. Other remarks:

¹"specific feedback": feedback addressing specific strengths and deficiencies in participant's performance as observed by instructor/facilitator.

Date _____ / _____ / _____ (D/M/Y)
 Patient Name _____
 Address _____

Location _____
 Sex Male Female
 Age _____ yrs _____ mths
 Birth order # _____ of _____ children

DTU Number _____ IP Number _____

Interviewer Name _____

A. HISTORY OF CURRENT DIARRHOEA EPISODE (please fill in or circle answers)

- | | |
|-----------------------------------------------|---------------------------------------------------------------------|
| 1. Duration (# of days)? _____ days | 9. What has mother given child to eat or drink during this episode? |
| 2. Total stools in last 24 hours? <4 4-10 >10 | a. Fluids available in home extra usual less none |
| 3. Blood in stool? yes no | b. Breastmilk extra usual less none/stopped |
| 4. Fever? yes no | c. Other milks extra usual less none/stopped |
| 5. Vomiting? yes no | d. Food extra usual less none/stopped |
| 6. Urine passed in last 6 hours? yes no | 10. Has mother given child any medicine? yes no |
| 7. Other complaints present? yes no | If so, which? |
| 8. Did mother seek care elsewhere? yes no | a. _____ |
| If yes, where? health unit trad. healer other | b. Traditional medicine? yes no |
| | c. ORS? yes no |

B. HISTORY OF PAST DIARRHOEA EPISODE (please fill in or circle answers)

- | | |
|---------------------------------------------------------|---------------------------------------|
| 1. When was child's last episode? _____ / _____ / _____ | 2. Was DTU visited previously? yes no |
|---------------------------------------------------------|---------------------------------------|

C. CURRENT FEEDING PRACTICES AND IMMUNIZATION STATUS (please fill in or circle answers)

- | | |
|----------------------------------------------|--------------------------------------------------|
| 1. Breastfeeding? yes no | 5. Which foods or fluids? (Indicate all) |
| If no, age of baby when stopped _____ mths | Age Introduced Frequency |
| 2. Other foods or fluids? yes no | a. Water _____ / _____ days/mths _____ times/day |
| If yes, also answer #5 | b. _____ / _____ days/mths _____ times/day |
| 3. From history, diet is adequate inadequate | c. _____ / _____ days/mths _____ times/day |
| 4. Immunization completed for age? yes no | d. _____ / _____ days/mths _____ times/day |
| If no, which are missing? _____ | e. _____ / _____ days/mths _____ times/day |

D. SUMMARY OF FINDINGS FROM PHYSICAL EXAMINATION CONDUCTED THIS VISIT (please fill in or circle answers; "*" denotes key signs)

- | | | | |
|---------------------------------------------------------------|-------------------------------|-----------------------------------------|--------------------------------------------------|
| 1. Vital signs | Axillary temperature _____ °C | Weight _____ kg | |
| 2. Condition | <u>Plan A</u> well, alert | <u>Plan B</u> restlessness, irritable * | <u>Plan C</u> very sleepy, unconscious, floppy * |
| 3. Eyes | normal | sunken | very dry, sunken |
| 4. Tears | present | absent | absent |
| 5. Mouth and tongue | moist | dry | very dry |
| 6. Thirst | normal | thirsty, drinks eagerly * | drinks poorly, unable to drink * |
| 7. Skin pinch goes back | quickly | slowly * | very slowly * |
| 8. Plot weight on growth chart and circle nutritional status. | normal | underweight | marasmus/kwashiorkor |
- Other Systemic Findings? _____

E. DIAGNOSES (please fill in)

F. TREATMENT AND MONITORING (please fill in or circle answers)

<p>1 Treatment plan selected _____</p> <p>2 Time treatment started _____ : _____</p> <p>3 Monitoring of treatment</p> <p>Plan B: ORS (volume) (Refer to WHO Treatment Chart, Plan B)</p> <p>Plan C: IV fluids (volume) (Refer to WHO Treatment Chart, Plan C)</p>	<p>Plan A No dehydration</p> <p>Plan B Some dehydration</p> <p>Plan C Severe dehydration</p>	<p>First 4 hours</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Target vol. / Actual vol.</td> <td style="width: 20%;">ml.</td> <td style="width: 20%;">Time</td> <td style="width: 20%;"></td> </tr> <tr> <td>_____ / _____</td> <td>_____</td> <td>_____ : _____</td> <td></td> </tr> <tr> <td>_____ / _____</td> <td>_____</td> <td>_____ : _____</td> <td></td> </tr> <tr> <td>_____ / _____</td> <td>_____</td> <td>_____ : _____</td> <td></td> </tr> </table> <p>Next 4 hours</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Target vol. / Actual vol.</td> <td style="width: 20%;">ml.</td> <td style="width: 20%;">Time</td> <td style="width: 20%;"></td> </tr> <tr> <td>_____ / _____</td> <td>_____</td> <td>_____ : _____</td> <td></td> </tr> <tr> <td>_____ / _____</td> <td>_____</td> <td>_____ : _____</td> <td></td> </tr> <tr> <td>_____ / _____</td> <td>_____</td> <td>_____ : _____</td> <td></td> </tr> </table> <p>First 3 hours (child > 12 months)</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Target vol. / Actual vol.</td> <td style="width: 20%;">ml.</td> <td style="width: 20%;">Time</td> <td style="width: 20%;"></td> </tr> <tr> <td>_____ / _____</td> <td>_____</td> <td>_____ : _____</td> <td></td> </tr> <tr> <td>_____ / _____</td> <td>_____</td> <td>_____ : _____</td> <td></td> </tr> <tr> <td>_____ / _____</td> <td>_____</td> <td>_____ : _____</td> <td></td> </tr> </table> <p>½ hr. _____ / _____ ml. _____ : _____</p> <p>2½ hrs. _____ / _____ ml. _____ : _____</p> <p>Total _____ / _____ ml. _____ : _____</p> <p>First 6 hours (child < 12 months)</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">Target vol. / Actual vol.</td> <td style="width: 20%;">ml.</td> <td style="width: 20%;">Time</td> <td style="width: 20%;"></td> </tr> <tr> <td>_____ / _____</td> <td>_____</td> <td>_____ : _____</td> <td></td> </tr> <tr> <td>_____ / _____</td> <td>_____</td> <td>_____ : _____</td> <td></td> </tr> <tr> <td>_____ / _____</td> <td>_____</td> <td>_____ : _____</td> <td></td> </tr> </table> <p>1 hr. _____ / _____ ml. _____ : _____</p> <p>5 hrs. _____ / _____ ml. _____ : _____</p> <p>Total _____ / _____ ml. _____ : _____</p>	Target vol. / Actual vol.	ml.	Time		_____ / _____	_____	_____ : _____		_____ / _____	_____	_____ : _____		_____ / _____	_____	_____ : _____		Target vol. / Actual vol.	ml.	Time		_____ / _____	_____	_____ : _____		_____ / _____	_____	_____ : _____		_____ / _____	_____	_____ : _____		Target vol. / Actual vol.	ml.	Time		_____ / _____	_____	_____ : _____		_____ / _____	_____	_____ : _____		_____ / _____	_____	_____ : _____		Target vol. / Actual vol.	ml.	Time		_____ / _____	_____	_____ : _____		_____ / _____	_____	_____ : _____		_____ / _____	_____	_____ : _____	
Target vol. / Actual vol.	ml.	Time																																																																
_____ / _____	_____	_____ : _____																																																																
_____ / _____	_____	_____ : _____																																																																
_____ / _____	_____	_____ : _____																																																																
Target vol. / Actual vol.	ml.	Time																																																																
_____ / _____	_____	_____ : _____																																																																
_____ / _____	_____	_____ : _____																																																																
_____ / _____	_____	_____ : _____																																																																
Target vol. / Actual vol.	ml.	Time																																																																
_____ / _____	_____	_____ : _____																																																																
_____ / _____	_____	_____ : _____																																																																
_____ / _____	_____	_____ : _____																																																																
Target vol. / Actual vol.	ml.	Time																																																																
_____ / _____	_____	_____ : _____																																																																
_____ / _____	_____	_____ : _____																																																																
_____ / _____	_____	_____ : _____																																																																

a. Status after 4-6 hours _____

b. Food taken _____

c. Antibiotics (if indicated) _____

d. Other medications _____

e. Immunizations given (if any missing) _____

G. INVESTIGATION RESULTS: (please fill in)

H. COUNSELLING (please circle or fill in answers)

	<p>Demonstration</p> <p>yes no</p>	<p>Discussion</p> <p>n/a</p> <p>yes no</p> <p>yes no</p>	<p>Handouts</p> <p>yes no</p> <p>yes no</p> <p>yes no</p>
1 ORS			
2 Prevention and early treatment (HAF) at home			
3 Weaning and breastfeeding information			

I. REFERRAL AND/OR FOLLOW-UP (please fill in or circle answers)

1 Referred where? _____

2 Follow-up plan: _____

3 Other remarks _____

4 Discharge Time _____ : _____ Date _____ / _____ / _____ (D/M/Y)

K. SIGNATURES

Health Worker _____ Supervisor _____

OHM
H