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**IMCI COMPLEMENTARY COURSE
FIELD TEST IN ZAMBIA**

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ACRONYMS

BASICS	Basic Support for Institutionalizing Child Survival
CDC	Centers for Disease Control and Prevention
CI	Clinical Instructor
CO	Clinical Officer
DHMT	District Health Management Team
EHT	Environmental Health Technician
HW	Health Worker
IMCI	Integrated Management of Childhood Illnesses
IMCI-CC	The Complementary Course
IMR	Infant Mortality Rate
Inpt	In-patient
MOH	Ministry of Health
Outpt	Out-patient
U-5	Children below 5 years of age
UNICEF	United Nations Children's Fund
UTH	University Teaching Hospital
USAID	United States Agency for International Development
VLW	Very Low Weight
WHO	World Health Organization
Wt	Weight
ZEN	Zambian Enrolled Nurse

EXECUTIVE SUMMARY

The Integrated Management of Childhood Illnesses Complementary Course (IMCI-CC) was developed by BASICS/USAID and World Education, Inc. The purpose of the visit was to field test the course material during the period September 15 to October 3, 1997. The specific objectives of the visit were to observe and document the complementary course and to evaluate the technical content of the course as compared to the standard Zambian Standard IMCI Course.

Participants who were unlikely to cope with the rigors of the standard IMCI course because of low reading ability were selected for the IMCI-CC on the basis of low general education and a long period of service without any or limited in-service training. Experienced facilitators were trained in non-formal adult education facilitation techniques for one week to prepare them for the IMCI complementary course. The IMCI-CC had a similar organization to that of the standard course except for its duration, which was three weeks. In the IMCI-CC, there were similar practical (clinical) sessions, and the same video sessions, chart booklets, wall charts and recording forms as in the standard course. The technical content was also the same as in the standard IMCI course. The course reading material was reduced by 40 percent, from 480 pages to less than 240 pages.

The methods used to transfer the skills needed were participatory techniques. Facilitators were trained during the week prior to the course on how to use small group discussions, case studies, critical incident, brainstorming, demonstrations, lectures, and icebreakers/energizers to keep the health workers fully participating.

The IMCI-CC was monitored very closely. Tools like a monitoring checklist, summary checklist for clinical sessions, feedback during facilitators' meetings, and recording forms were used throughout the course. To evaluate the competence of health workers at the end of the course, several tools were developed and piloted for inpatient and outpatient sessions. Regarding the outpatient tool, it was the same as the one used to evaluate health workers during the initial follow-up visit.

During the inpatient sessions, there were 139 patient-participant contacts; during the outpatient sessions, there were 239 patient/participant contacts. The patient participant ratio for various clinical signs and classifications were similar to those of other IMCI courses.

Evaluation results performed on the tenth and eleventh days of the course showed that participants gained sufficient skills from the IMCI-CC. Using the clinical instructor or other facilitators as a gold standard, participants were shown to correctly identify most clinical signs during inpatient and outpatient evaluations. Participants were also evaluated as satisfactory on identifying treatment, giving treatment, counseling on drugs and dosages, using checking questions, and counseling caretakers on feeding. Weaknesses, like not identifying or not using "*general danger signs*" for classification were seen. It can be concluded fairly safely that the course was successfully completed with the same content as that of standard IMCI course.

The course was completed on the fifteenth day for two groups, and the morning of the sixteenth day for the third group. The results of evaluation of the IMCI-CC were so encouraging that it can be assumed that the IMCI-CC can be given in other settings using the same set of materials and techniques, perhaps with minor adaptations.

PURPOSES OF VISIT

The goals of the IMCI Complementary Course field test were to train participants in the use of the IMCI algorithm, to test the IMCI Complementary Course design, and to make recommendations for its improvement.

Accordingly the main activities of this visit were—

- 1) Observe and document the IMCI-CC field test in Zambia as developed by BASICS/USAID and World Education Inc., in collaboration with WHO.
- 2) Compare the IMCI-CC's technical content with that of the standard IMCI Zambian course.
- 3) Evaluate the IMCI-CC process and its impact on the technical content.

BACKGROUND

Zambia has a population of about 9.38 million (43% urban-1995) with an IMR of 113 per 1000 live births, and an under-5-years of age (U-5) mortality rate of 202 per 1000 live births. The Zambian government is now implementing health reforms in an attempt to decentralize health service management to regions and districts. The Zambian government, through Zambia's National Programme of Action for Children, is committed to reducing the IMR and U-5 mortality rates by the year 2000. For over a year, Zambia, with support from BASICS/USAID, has been one of the pioneer countries in implementing IMCI. IMCI has been targeted to all levels of health workers, but most importantly, to those health workers working in remote places. However, the experience in the last year has shown that health workers who have many years of service after finishing school and little opportunity to further their education have difficulty reading the modules of the standard IMCI course. Therefore the IMCI Complementary Course was developed by BASICS/USAID and World Education to train such health workers. In January 1997, there was a course development workshop where experienced IMCI facilitators and health workers who have already used IMCI participated. The World Health Organization (WHO) also participated in this development process. Since then, World Education has revised activity designs according to suggestions received from the workshop, with BASICS/USAID providing the necessary biomedical input. The course was supported by BASICS/USAID and has two phases:

1. A one-weeks facilitators' course immediately followed by
2. A three-week IMCI Complementary Course (IMCI-CC) for front-line HWs with limited writing and reading abilities

FACILITATORS' COURSE

The main course was preceded by a one-week facilitators' course to train already experienced facilitators on non-formal adult education techniques in preparation for the IMCI complementary course. This took place from September 8 to 12, 1997. The overall objective of the facilitators' course was to review and practice critical segments of the IMCI-CC, to expand their skills in the use of participatory training methods, and to get more practice. By the end of the IMCI-CC field test, facilitators had given feedback on various aspects of the complementary course and its design, including timing, appropriateness of methodology, and facilitators' guide and supplementary materials. The course was facilitated by Beth Gragg and co-facilitated by Emily Moonze. David McCarthy, Meg Chute, and myself were observers.

There were seven facilitator trainees. These trainees had been involved in the nine standard IMCI courses given in Zambia. The table below shows the names of these facilitator trainees, and the cadre and number of courses they have already facilitated in the standard IMCI course. All of them were trained in the standard IMCI course, and in the IMCI facilitation course, and all of them have facilitated at least one IMCI course previously. Four were clinical officers (3 years diploma training) and three were nurse tutors (see Appendix A for details).

Name	Position\Cadre	Facilitated IMCI
Kabika Mulonda	Clinical Officer	Yes (X3 times)
Elastus Lwando	Chief Clinical Officer	Yes (X6 times)
Martha Mwendafilumba	Nurse Tutor	Yes (X5 times)
Richard Bweupe	Clinical Officer	Yes (X4 times)
Margaret Katai	Clinical officer	Yes (X1 time)
Tennyson Musyani	Nurse Tutor	Yes (X3 times)
Mary Kaoma	Public Health Nurse	Yes (X1 time)

The main purpose of the complementary course is to enable participants with slow reading ability to learn IMCI by reducing the amount of reading material. The facilitators' course is given to train experienced facilitators in specific techniques to enable the lower level health workers with limited reading ability to acquire the standard IMCI course content.

Facilitators were familiarized to the new material by practicing adult learning techniques: brainstorming, case studies, critical incident, demonstrations, videos, icebreakers/energizers, lectures, role plays, and small group discussions. As the facilitators had already had some experience in many of these methods, the facilitators' course was planned for five days and was completed in that time. Clinical sessions were not planned for this course because it was agreed by both the course directors and facilitator trainees that there had already been a sufficient variety of cases for learning during their previous IMCI courses.

Facilitators' training emphasized introducing the IMCI system by applying adult cycle of learning techniques. All topics started with current practice and then built onto IMCI lessons for every activity. New knowledge and skills were applied in the practical clinical sessions and were continuously monitored. At the end of each activity, there was evaluation either in the form of cards or written exercises. Facilitators were familiarized to critical segments of the course; in particular, to those where there were differences in the sequence of activities in the daily schedules from that of the standard IMCI course. Using checklists developed by World Education, facilitators were given feedback by their own fellow facilitators, as well as from process and content observers, while practicing the various facilitation techniques. Information from the checklists gave course observers some understanding of the types of skills that needed to be emphasized as the complementary course was being given. Facilitators were also given feedback during facilitators' meetings. There was no formal evaluation of the performance of the participants of the facilitators' course.

THE IMCI COMPLEMENTARY COURSE

PREPARATION FOR THE COURSE

Selection of Participants

The selection of participants was thoroughly addressed as it determines the possibility of the IMCI-CC being used in other settings or countries. Two course facilitators during pre-training site audit visits to participants' health centres obtained information regarding health workers' educational background, professional background, number of years seeing children, previous participation in in-service training, and access to reading materials. The results of this survey is shown in Appendix C. The study identified 18 possible participants from a total of 30 who were interviewed by two the course facilitators (Mary Kaoma and Martha Mwendafilumba) in collaboration with the District Health Management Team members. Seventeen participants came for the course; two of participants were replacement for others that were interviewed, but these two also fulfilled the set criteria. One participant, Chulu Banda, reported 23 years of service during the survey when she only had 2 years of service, but she was the only exception to the set criteria.

The criteria that applied for the 16 participants were the following:

- 1) Health workers who have a low level of general education (i.e., below 9th grade) and are currently managing sick children
- 2) Health workers who have more than 10 years of service
- 3) Health workers who have fewer opportunities to participate in other workshops or courses

- 4) Health workers who are currently practicing in remote areas and where there is no doctor present

Fifteen of the course participants were Zambian enrolled nurses (ZEN), and two were environmental health technicians (EHT). For most of the participants, it took several days (2 to 5 days) walking or by bus to reach the training site in Lusaka. Most of the participants could read and write English, but rather slowly. Some of the participants had problems reading because of vision problems. In fact, seven participants needed eye glasses, with which were provided and this seemed to improve their reading ability. The EHTs were not trained in the management of patients while in school, but still they were managing sick children in their health centres. Only five of the participants had previous in-service training: four in control of diarrheal diseases (CDD) and one in surgical/medical emergencies. While it was true that enrolled nurses had previously gone through the standard IMCI course, it was found that some were slow because of poor reading ability. Although some of the IMCI-CC participants might be near retirement, it was reported that these health workers still continue to work even after retirement.

The selection criteria of participants for the complementary course was designed to estimate, partially, low reading ability. Participants were informed about the course, and when and where it would be ahead of time; thus the turn out of selected participants was unexpectedly high in comparison to other courses. All the participants came from Eastern Province from three districts: Chama, Lundazi and Chipata, and the standard IMCI course has not been introduced to those areas yet. The names of participants and their characteristics are detailed in Appendix B.

During the site audit visits to identify participants, it was noted that most of these clinics do not have referral hospitals nearby. When children are referred, caretakers were not willing to take them because of the distance involved. This situation was thorough by discussed and after group discussions, the following decisions were made: the annex "*where referral is NOT possible*" would be discussed thoroughly after participants reached "*Component V: Treat the child*" and after they read about pre-referral treatments. It was also agreed that pre-referral treatments should be continued for severe pneumonia or very severe disease, very severe febrile disease, severe malnutrition, mastoiditis, and serious bacterial infections in the sick young infant until the patient could be referred or improved. However, participants should also be introduced to this section if they show concern about referrals before reaching this component. In the future, this section should be "integrated" into the "*treat the child component*" and not left as an annex.

Selection of Facilitators

As shown above, the facilitators were experts who have already facilitated a number of IMCI training courses; some coming from another course without interruption. Facilitators were selected on the basis of their good performance in previous courses, and also on their being available for the whole training period. Facilitators were assigned to small groups on the basis of their background and experience.

Selection of Clinical Instructor

Dr. Mary Ngoma, who is now working in the WHO office in Lusaka, accepted the assignment of being the clinical instructor for this course only because there was no one else available during this time. This was her first time doing clinical instructorship, even though she had done the standard course once. More importantly she was not able to participate in the facilitators' workshop. On the eighth day of the course she was replaced by Dr. Kasonde Moyinga, who is a recent graduate in pediatrics and was trained in IMCI last year. Dr. Moyinga showed more enthusiasm and energy, but she needed a bit of coaching by the content observer.

Course Organization

The course was coordinated satisfactorily. It was given in the Andrews Motel, about a 15 minutes drive south of Lusaka. This location was a bit further than desired from the office (BASICS/USAID), especially considering the fact that there were no photocopier, printer, or accessible telephone services in the hotel; however, there were three well-lighted, well-ventilated, and big enough rooms for three groups of five or six participants each. Both facilitators and participants were accommodated in the same place.

Teaching aids including video players and monitors, wall charts, handouts, and flip charts. The University Teaching Hospital (UTH), which is situated on the other side of the city, was used for inpatient clinical training and had a sufficient case load, acceptable quality of care, and staff interested in IMCI. Three health centres—Kabwata, Kamwala, and Kanyama—were selected for outpatient sites on the basis of their patient populations. Kanyama is a 20 minute drive from the hotel. The fact that all these training sites are far apart from each other resulted in a loss of time and energy because of transport.

Also, one facilitator, Mary Kaoma, had to abandon the course because of other urgent problems on the eighth day of training; almost at the same time, the clinical instructor had to be replaced by another one.

Course Materials

There were seven facilitators' guides (all in draft version), one for each component. Participants received only handouts, which fit well into a single folder. No modules were used. Two important structural changes were made in terms of sequence of the course materials:

- a) The Introduction module, now called "*Component I*" has added "*asking the mother what the child's problems are,*" "*initial or follow-up visit,*" as well as assessing for "*general danger signs.*"
- b) Counsel the Mother module was introduced earlier in the course, before the first clinical session, to allow participants to use the skills for longer period. Wall charts, chart

booklets, and the recording forms were the same ones used for the standard IMCI course for both the child 2 months up to 5 years, and the sick young infant. (Recording forms needed to be photocopied at training sites.)

The seven facilitators' guides were the following:

1. Integrated Management of Childhood Illness (IMCI) Complementary Course—
Component I: Introduction
2. Integrated Management of Childhood Illness (IMCI) Complementary Course—
Component II: Assess and classify the sick child age 2 months up to 5 years
3. Integrated Management of Childhood Illness (IMCI) Complementary Course—
Component III: Counsel the caretaker
4. Integrated Management of Childhood Illness (IMCI) Complementary Course—
Component IV: Identify treatment
5. Integrated Management of Childhood Illness (IMCI) Complementary Course—
Component V: Treat the child
6. Integrated Management of Childhood Illness (IMCI) Complementary Course—
Component VI: Follow up
7. Integrated Management of Childhood Illness (IMCI) Complementary Course—
Component VII: Management of the sick young infant

Drugs and other supplies were not available as required. During a session when participants were practicing how to mix ORS, there were not enough jugs or other measuring utensils for the participants to use. Injectable antibiotics were not available for practice in the classroom. Wicking material was available in the classroom, but arrangements were not made to practice wicking the ears on patients. Similarly, there was no clinical practice on cleaning the eyes or treating mouth ulcers.

COURSE CONTENT

The complementary course (IMCI-CC) is based on the Zambian adaptation version of the standard IMCI course; it includes changes like assessment and treatment of wheezing and the convulsing child, all fever is considered as high risk for malaria, growth faltering with low weight for age is added, and repeating chloroquine regimen if fever persists after two days. (See Zambian version for details). Over all, the IMCI-CC's technical content is similar to that of the standard course. The clinical sessions, both outpatient and inpatient, were exactly the same in terms of quality, tools and procedures used, and time. The video and photograph sessions and the

exercises were also the same, except for segmentation according to the flow of activities in the IMCI-CC.

In contrast to standard IMCI facilitation, the complementary course is more demanding for facilitators because it requires them to be continuously interacting with participants. There is little time to breathe, such as by asking participants read to “page. . . . “ as can be done in the standard IMCI course. Much of the reading load is done by facilitators. The facilitators, though hard working, were not able to systematically build the IMCI concepts onto current practices. The transition of each session from what participants know and do to the IMCI recommendations was not done as expected. A lot of time was used to write down all possible points participants mentioned in their practice on flip charts; however, only a few points, usually ones that agreed with IMCI recommendations, were picked-up and discussed. There was no attempt to rationally cancel the other points. Building on what facilitators/participants know requires a good basis of technical knowledge, including clinical and epidemiology of local diseases, etc.

In the first week, it was obvious, even to the participants, that the facilitators were struggling through the facilitators’ guide to decide what was next. Facilitators needed a lot of time to grasp the sequence of events in each activity of the facilitators guide. Skills on the techniques of facilitation, like the use of checking questions, required the entire first week before these skills were imprinted into the facilitators’ minds. Facilitators were able to follow the steps of the adult learning cycle without consulting the guidelines during the last two weeks; observers were helping by giving feedback to the facilitators at every opportunity, including the evening meetings.

All components (equivalent to each module in the standard IMCI course) started by session objectives and the current practice of health workers. The session then added or built on what the health workers already know and do. At the end of the session, an evaluation of what the health workers had learned was performed, mainly by using techniques employing cards. This activity completed the adult learning cycle.

The participants started off with an empty folder and added handouts to it from each session so as to have all the course material in one folder. The volume of material in the two courses (modules compared to handouts) is list below:

1. Introduction 14 pages (18 pages in standard IMCI)

A handout on the advantages of IMCI is included in the complementary course materials. Assessing for “*general danger signs*” is also included in this session. The glossary is taken out; however, most terms are defined when they come up for the first time in the text. Much time is allotted to getting to know each other and current practices during the introduction. Some of this could be cut down.

2. Assess and classify 66 pages (143 pages in standard IMCI)
(2 months up to 5 years)

Assess and classify cough or difficult breathing

The anatomy of the airway is excluded. Good communication skills are brought-in here, just before the first clinical session. An assessment for wheezing is added.

Assess and classify diarrhea

All the classifications use the same criteria. An emphasis on assessing for dehydration, persistent diarrhea, and dysentery was made using the abbreviation “DPD,” referring to the first letters of each classification. The scheduled time for the classroom work was too short and the work needed to be rushed in order to be completed before the clinical session.

Assess and classify fever

Signs and classifications are the same as for the standard IMCI course. The definition for fever and how to look for neck stiffness are given more elaboration using simple language.

Assess and classify for ear problem and check for malnutrition and anaemia

Growth faltering is added. Signs and classifications are the same as for the standard IMCI course.

3. Counsel the caretaker 10 pages (66 pages in standard IMCI)

Good counseling skills were brought in after finishing “*assess and classify cough*” and before the practical sessions start. Assess the child’s feeding and counsel the mother about feeding problems was brought in at the end of *Component 2*. Participants were quite receptive to the section(s) on counseling and advising on feeding, perhaps because of their hand-on experience. The content was exactly the same as in the standard IMCI course.

4. Identify treatment 41 pages (50 pages in standard IMCI)

Treatment for wheezing was added for both severe pneumonia or very severe disease, and pneumonia. The introduction was expanded, adding some explanations related to the epidemiology of the classification, as well as the need for the recommended treatment. Most of this information came from the “*assess and classify*” module in the standard IMCI course. Suggestions were given about reducing the material by turning it into a

tabulated format since it is too long as it is now in draft. (26 pages versus 3 pages in the standard IMCI module.)

5. Treat the child 57 pages (148 pages in standard IMCI)

The clinical session was done before reaching plans B and C in the classroom. The annex on an ORT corner was incorporated into main text. ORT pictures were used to show the progress of a child in plan B. Exercises in some topics like immunization were reduced. The immunization schedules as recommended in IMCI yet adapted by the EPI in the MOH of Zambia created some discomfort among participants. "*Where referral is NOT possible*" was planned to be done in detail, but was not done (given as homework), except in one group. The content of the whole component otherwise was the same as in the standard IMCI course.

6. Management of the sick young infant 39 pages (62 pages in standard IMCI)

This was the last component according to original plan, but as the clinical session for the sick young infant has to come after this session, it was rescheduled to be before the follow up component. Activities in this component were done thoroughly. Activity 4 (identify treatment) in the same component is three times more work than in the standard IMCI course, and suggestions were given to reduce it. Activity 7, which dealt with teaching mothers on correct positioning, needed to be moved back to fit with the clinical session on it. Otherwise, there was a similar content to that of the standard IMCI course.

7. Follow Up 22 pages (43 pages in standard IMCI)

The follow up component was not rushed and there was no difference in content from the standard IMCI course.

In summary, the volume of reading material using number of pages (and not word number) is reduced from 530 pages in the standard IMCI Zambian modules to 240 pages in the complementary course handouts.

At the end of the IMCI-CC training, a half morning was allotted for health workers to discuss possible problems they will face when they go back to their facilities by talking with health workers who implemented IMCI in the last year. Also, health workers were asked to come up with strategies on how they would start IMCI activities, even while they were in the course. They identified the following potential problems, discussed them, and came up with suggestions as to how to approach them by finding solutions: transport for referral, lack of pre-referral drugs, shortage of man power, shortage of recording forms, failure to accept tablets rather than injections by the community, shortage of space in the clinics, and lack of communication. That such discussions started while participants were still in the course is expected to prepare them for

the finding of solutions to possible difficulties they are likely to encounter during implementation.

Clinical Sessions

In general, clinical sessions were not expected to be much different from those of the standard IMCI course. In the standard IMCI course, clinical sessions take about 30 percent of the course time; in the complementary course, clinical sessions take about 20 percent of the course time. However, there were some problems that might have a negative impact on the training: during the first two weeks, there were no facilitators' assistants in the health centres to help identify patients of the day and to take a patient's body temperature and weight. Also, adults' scales were used, thus signifying the wrong message to trainees. Facilitators spent too much time in transport, and identifying patients, taking weights and temperatures. Despite these problems, participants were able to manage two to three patients each during the first two weeks. However, the selection of patients to show participants typical cases was unsatisfactory and demonstrations were not ending with clear-cut lessons.

Inpatient sessions were hampered by the lack of an experienced clinical instructor and the clinical instructor replacement on the eighth day of the course. Initially participants were left to choose their own patients and during presentations, clinical findings were not always demonstrated. When there were controversies, the clinical instructor was not coming up with convincing arguments for the final decision. Participants saw one case per session per participant and they saw the common signs they were expected to see. One persistent problem was the fact that the clinical instructors were less inclined to do demonstrations of typical cases at the beginning of the sessions. The second clinical instructor, though inexperienced, was enthusiastic and seemed to have the potential to take over this function for future standard IMCI and IMCI complementary courses in Zambia.

Debriefing after clinical sessions was practiced all the time. Initially this was planned to be done in the vehicles while returning from the clinics; however, after the first day's experience, it was felt that there were too many distractions in the vehicles and that debriefing sessions should be held in classrooms. Following debriefing, participants filled in the wall checklist. Participants saw all signs except mastoiditis, deep or extensive mouth ulcers, and clouding of the cornea. Although as one of the participants had clouding of the cornea herself, it may be assumed that they have seen one case. With regard to details, see Appendix G regarding the wall checklist.

Improvements Made During the Course

In the evenings, facilitators met and discussed issues and problems seen during the day, and according to suggestions made, a form was initially introduced to capture all the necessary improvements that could be used immediately or for future courses (see Appendix F for the form). Following the facilitators' meeting, an observers' meeting was held every night. In these meetings, several issues were looked at, including the effectiveness of the methods used, flow of

design and how well the design guided facilitators in completing the learning cycle, coordination, appropriateness and accuracy of materials such as the flip charts, how understandable the reading material was, how appropriate the schedule was, and how tolerant, and accommodating the facilitators were to questions raised by participants. The following major changes were made—

- a) Changes related to the sequence of items during facilitation: this was a major undertaking. For example, “*correct positioning during breastfeeding*” had to be done earlier so that participants could use the information in the clinical practice when they assess breastfeeding, and good attachment. There were several occasions when video sessions had to be shifted forward or backward depending on the flow of the session.
- b) Changes related to the technical content of facilitators' guide were, in general, minor.
- c) Changes related to style of language: there was an attempt to capture simple and easily understandable phrases and words that facilitators used and to make the changes accordingly. Also, there was attempt to cut down on the redundancy of instructions and notes.
- d) The time table was adjusted depending on how long each activity took and a final timetable was produced (see Appendixes D and E for classroom and clinical schedules).
- e) Editorial changes: numerous editorial changes were made.

EVALUATION

To determine how prepared the course trains participants were to carry out IMCI algorithm, various tools that were already available for the standard course were used: checklist for outpatient and inpatient practice of individual participants, summary wall check-list, recording forms, day's reflections, and follow-up tools. Participants were closely monitored and their performance was discussed during facilitators' meetings in the evenings. The weaknesses and strengths of individual participants or groups were identified for action in the subsequent days.

The checklists filled by facilitators and clinical instructors were used to assess the number of patients the course provided to the participants. During the whole training period, participants were exposed to a variety of cases. For infants aged 1 week up to 2 months, they saw cases with fast breathing, mild chest indrawing, severe chest indrawing, nasal flaring, grunting, many or severe pustules, lethargic or unconscious, and less than normal movement, using a total of over 40 patient/participant contacts (see Appendix G for summary checklist). Participants also practiced breastfeeding attachment, effective suckling, and correct positioning on healthy babies. For the age group 2 months up to 5 years, participants saw a total of 378 patients. Given that there were 17 participants, this means that each participant saw an average of 22 patients. The

number of cases for each classification and the ratio of patient: participant for children aged 2 months up to 5 years is shown below.

Overall, these ratios are more or less similar to that of the first facilitators' courses in Uganda and Tanzania for the standard IMCI training (for which we have data). For example, in Tanzania, the ratio for convulsion was 1.8; for chest indrawing, the ratio was 2.8; and for measles, it was 0.1. In Uganda, the ratio for convulsion was 1.7; for chest indrawing, it was 1.6; and for stiff neck, it was 0.9. The corresponding ratios in the complementary course are shown below.

Classification	Number of cases			Ratio
	Inpt (N= 139)	Outpt (N= 239)	Total (N=378)	
General danger signs	26	3	29	1. 7
Severe pneumonia/vsd	31	7	38	2. 2
pneumonia	24	58	82	4. 8
No pneumonia	20	130	150	8. 8
Severe dehydration	22	1	23	1. 4
Some dehydration	21	19	40	2. 4
No dehydration	20	91	111	6. 5
Persistent diarrhoea	4	3	7	0. 4
Severe persistent diarrhoea	9	3	12	0. 7
Dysentery	4	4	8	0. 5
Very severe febrile disease	15	0	15	0. 9
Malaria	51	93	144	8. 5
Measles with eye/mouth comp	5	1	6	0. 4
Measles	1	3	4	0. 2
Acute/chronic ear infection	6	10	16	0. 9
Severe malnutrition	28	0	28	1. 6
Severe anaemia	17	0	17	1. 0
Anaemia	26	45	71	4. 2
No anaemia or VLW for age	12	23	35	2. 1
Plan A	-	4	4	0. 2
Plan B	-	2	2	0. 1
Feeding advice given	-	10	10	0. 6
Counsel the mother	-	21	21	1. 2

The checklist data also helped assess the progress of participants in correctly assessing, classifying, and treating children when compared with the facilitator over time. The next table and the figures on the next page provide data showing the progress participants made over time in classifying pneumonia and severe pneumonia from Day 3 to Day 11 of the course, and malaria

and very low weight for age from Day 8 to Day 11 of the course. It can be shown that except for severe pneumonia, there was a trend for increasing agreement with facilitator (which should be assumed to equal improvement) and decreasing disagreement over the training period.

Progress of participants correctly classifying patients using data from checklist:

Classifications	Agreement With facilitator	Days of clinical sessions						
		3	4	5	7	8	1011	
Pneumonia (Outpatient)	Yes	3	3	5	4	13	5	7
	No	3	6	1	0	3	2	2
	% agreement	50	33	83	100	81	71	78
Malaria (Outpatient)	Yes	-	-	-	17	26	21	25
	No	-	-	-	1	1	0	1
	% agreement	-	-	-	94	96	100	96
No anemia or Very low Wt (Outpatient)	Yes	-	-	-	14	17	14	18
	No	-	-	-	5	3	3	2
	% agreement	-	-	-	74	85	82	95
Severe pneumonia (Inpatient)	Yes	3	2	3	4	0	2	0
	No	3	0	0	7	1	4	3
	% agreement	50	100	100	36	0	33	0
Malaria (Inpatient)	Yes	-	-	-	8	9	11	10
	No	-	-	-	1	1	0	0
	% agreement	-	-	-	89	90	100	100

Evaluation of Performance of Health Workers-Outpatient

In addition to the various monitoring tools mentioned above, the team agreed to do a more formal evaluation where participants were evaluated against the facilitators. After studying the available tools, and taking into account the fact that facilitators used a follow-up tool for the standard course, the *Zambian follow-up tool* was endorsed as a tool that can be used to evaluate participants during the course (see Appendix H). The follow-up tool has the advantage of being familiar to facilitators and thus there was no need to train facilitators in its use. It also makes sense to use this tool so that the same tool can be used during the initial follow-up visit to the health workers. The evaluation was administered after participants completed "*treat the child component*." This tool also emphasized areas which were unlikely to be captured by the inpatient evaluation tool. The facilitator completed the follow-up tool while listening to the

participant(s) and after that s/he assessed the child for areas the participant(s) missed. Facilitators did not allow changes to be made in the recording form during the presentation, but feedback was given after collection of the recording forms. (The observers for this course made sure that these steps were strictly obeyed.) The competence of the health worker was measured against the facilitator.

The evaluation was preceded by a pilot study to understand the mechanism and use of the tool and to recommend changes. Days 10 and 11 of the course were used for evaluation because the remaining two clinical sessions dealt with the sick young infant and breastfeeding techniques only. Depending on the number of patients available on the day of evaluation, each facilitator was expected to evaluate at least two participants according to a pre-designed, random allocation.

There were 23 evaluation forms filled out by the facilitators; thus each participant was evaluated at least once, and 6 participants were evaluated twice. As the number was small, the data is presented below using the actual number of cases. Except for missing the only two cases with general danger signs, participants did well in assessing, identifying clinical signs, classifying, and treating as well as counseling caretakers. It is important to note that the mean consultation time was 24 minutes.

Steps in IMCI process	HW agreed with facilitator(%)
1. Correctly identified general danger signs	0/2 (0)
2. Asked for all four main symptoms	23/23(100)
3. Classified cough correctly	19/19(100)
4. Gave cough remedy correctly	5/6 (83)
5. Classified diarrhoea correctly	7/9 (78)
6. Classified fever correctly	19/20 (95)
7. Classified ear problem correctly	1/1 (100)
8. Checked for malnutrition and anaemia	19/20 (95)
9. Identified pallor correctly	9/9 (100)
10. Assessed for oedema correctly	19/20 (95)
11. Classified as not very low weight	13/14 (93)
12. Checked and gave immunization correctly	6/6 (100)
13. Checked and gave vitamin A	5/5 (100)
14. Assessed and advised on feeding correctly	5/5 (100)
15. Identified lack of active feeding as a feeding problem	1/1 (100)
16. Used checking questions correctly	4/5 (80)

Consultation time recorded for 15 cases

Mean consultation time - 24. 3 minutes

Range of consultation time: 18 - 33 minutes

Evaluation of Performance of Health Workers-Inpatient

During Days 10 and 11 of the course, the clinical instructor used two tools of evaluation during inpatient sessions (see Appendix I). The first tool was targeted to observe a participant following all the steps in the assessment of a clinical sign. Even though few signs lend themselves to this kind of observation, it was possible to do one observation for each participant. Neck stiffness and oedema seemed to be missed frequently because the patients were obviously too well to have those signs, and participants tended to bypass the steps required and as the tool was meant to test for the steps taken even if there was no sign, the results were low. Otherwise, the results were satisfactory, especially on commonly occurring signs like fast breathing, chest indrawing, and skin pinch. The denominator for each patient varied according to whether the child had the main symptoms or not to enter into the box. There were 17 cases for which participants were evaluated.

The results of the evaluation of all participants observed on one patient were converted to percentages as shown below.

Clinical sign	Correctly identified by observation(%)
Lethargic or unconscious	13/17 (76. 5)
Counted breaths for a full minute	9/9 (100)
Chest indrawing	9/9 (100)
Stridor or wheeze	4/9 (44. 4)
Skin pinch	10/10 (100)
Neck stiffness	4/13 (30. 8)
Visible severe wasting	14/17 (82. 4)
Bipedal oedema	8/17 (47. 1)
Very low weight/growth faltering	14/17 (82. 4)

Participants were also evaluated for correctly identifying common clinical signs. Again, the gold standard was the clinical instructor. During selection of cases, the clinical instructor and the content observer (Lulu Muhe) completed the forms for the facilitator. The findings of the participant were filled in when he presented the case to the whole group. As the evaluation tool was filled in during the presentation of cases by each participant for the clinical instructor, it was possible to do two to three cases per participant. (There were a total of 47 patients used for this evaluation.) Clinical signs which were not present on cases seen during the evaluation period were left out of the table below. Because the number of positive signs was low, kappa values were not computed.

Clinical sign	Correctly identified (%)	Agreement with CI(%)
Lethargic/unconscious	1/4(25)	44/48(91. 7)
Fast breathing	16/19(84. 2)	28/32(87. 5)
Chest indrawing	7/8(87. 5)	30/32(93. 8)
Stridor	1/1	32/32(100)
Sunken eyes	17/21(80. 9)	23/27(85. 2)
drinking eagerly	1/1	23/27(85. 2)
Skin pinch very slow	3/9(33. 3)	20/27(74. 1)
Skin pinch slow	6/11(54. 5)	16/27(59. 3)
Neck stiffness	2/3(66. 7)	33/34(97. 1)
Measles rash	3/3	34/34(100)
Mouth ulcers	6/7(85. 7)	33/34(97. 2)
Pus from eyes	3/3	34/34(100)
Pus draining from ears	6/7(85. 7)	8/9(88. 9)
Visible severe wasting	14/18(77. 8)	42/47(89. 4)
Severe palmar pallor	1/1	45/48(93. 8)
Some palmar pallor	32/36(88. 9)	44/48(91. 7)
Bipedal oedema	7/7	48/48(100)
Very low weight	23/24(95. 8)	44/45(97. 8)
Growth faltering	12/12	47/47(100)

Evaluation of Course by Participants

Participants evaluated the course on the thirteenth day, when they had already done the “*identify treatment*” and started the “*treat the child*” component, using a standard evaluation form (see Appendix J). Participants appreciated the design of the IMCI-CC, especially the use of simple and clear language and the explanations given by facilitators to their questions were easily understandable to them; however, they felt the course duration was too short. Some suggested the need for follow up. Many of them said that the handouts should be given as booklets and that they need the wall charts to train their colleagues. The details of the evaluation results by participants are given in Appendix J.

Evaluation of the Course by Facilitators

This evaluation was done in a feedback session on the sixteenth day of the course. Facilitators felt that the course was, in general, feasible. They did not see any difference in course content from that of the standard course, but they suggested some improvements. They suggested that clinical sessions and video sessions should correspond to the classroom sessions. Also, the segmented video sessions begin and end almost abruptly and need improvement. They said there were too much repetition and that the language could be improved and better simplified.

DISCUSSION

Running such a course for three weeks is obviously expensive. It is also demanding because health workers as well as facilitators have to leave their work place for such a long time. When health workers of a certain cadre cannot cope with the reading material of the standard, two-week IMCI course, then it becomes necessary to come up with criteria to decide which health workers are eligible for the standard IMCI course and which ones belong in the IMCI-CC. While doing that, it is important to take precautions about presenting the IMCI CC as different or inferior to the standard course. Both should be considered as IMCI courses; the difference lies only in the duration and the methodology of teaching. The case of Zambia can be adapted depending on the kind of health workers available in a country. Criteria such as health workers from remote places, service of over 10 years, and who have a limited number of years of general education and those with limited reading ability can be some of the factors for consideration. Reading ability should be defined in terms of speed of reading as well as speed of comprehension. (The complementary course has reduced the volume of reading material to 40 percent of that of the standard course.)

The demand for good facilitators is higher for the complementary course. In order for the IMCI-CC to expand and reach all the health workers that need it, the course should be given more often and at the district level. This means facilitators should be selected from low-level health workers. Even though it was observed that participants were more concerned with administrative and logistic problems rather than the "why" of statements, it is necessary to back up the group with one facilitator with better qualifications to answer technical questions.

The tool that was introduced to evaluate health workers tries to capture all the important elements necessary in the IMCI algorithm. In our case, facilitators could administer the outpatient evaluations and the course director, together with the clinical instructor, could administer the inpatient evaluations. We recommend that these tools be tested further so that a standardized tool is developed very soon.

Facilitators became good on facilitation techniques as they practiced using them. However, they were not always comfortable answering technical questions, but in this course, there was no formal evaluation of facilitators. There is a need to develop an evaluation tool for both evaluating concordance of facilitators and their performance against a gold standard.

Participants were observed to have problems identifying and using "*general danger signs*" in classifying patients. That general danger signs are brought in the "*introduction*" component may perpetuate a problem that was also seen in the standard courses. Perhaps highlighting the box for general danger signs in pink may emphasize its importance and improve its visibility to health workers. It may also be wise to keep the general danger signs in the "*assess and classify*" component. And, even though "*counsel the mother*" was brought earlier than it would be in the standard course, participants were able to apply it correctly only during the last week of the course.

The adult learning technique used in the course was highly participatory and facilitated the learning of highly technical material by low-level health workers with poor reading ability. The participants, because they had a lot of hands-on experience, were able to participate fully and were receptive to the new information they were given, thus making the method appropriate for them. The attitude of participants was also excellent for the training. Because of the participatory nature of the method, individual feedback was rarely used and it was noticed that some slow participants had to struggle to cope with the rest of the group or sometimes probably feeling inferior. As individual feedback allows participants to work at their own pace and allows focused individual discussions geared toward specific areas of weaknesses of individual participants, it should be used when such circumstances arise. Participants were given homework only occasionally, sometimes only for video sessions. Ice-breaker sessions, which were much emphasized during the facilitators' course, were not performed as often as expected, but when they were used, they made the sessions more lively.

The facilitators' guide was still in an early draft version, thus increasing its bulkiness and exaggerating the workload of the facilitators. However, during the course a lot of streamlining and sequencing activities were performed and it is hoped that the next draft will be simpler, shorter, and more user-friendly.

Participants had opportunities to prepare themselves for initiating IMCI implementation when they would return to their health facilities. They were given laminated recording forms as a guide and timers. Participants expressed interest in training fellow health workers in their own facilities, and this was encouraged as the participatory training they went through allows peer training to be effective. There is a need to think as to how to utilize this interest.

Participants were bothered about the referrals. "*Where referral is Not possible*" was given to them initially as homework and was later discussed adequately. In future IMCI-CCs, this section is so important that it should be incorporated into the main text.

The course went very well except for a few occasions during the first week when there was a rush to complete a topic according to schedule. The course was completed in a relaxed fashion without any rushing in the last two weeks. Two groups actually completed their training on the fifteenth day, and the other group completed it in the morning of Day 16 (last day). Clinical sessions were not changed from the standard IMCI course; however, even in the standard IMCI course, there is always some shortage of time for clinical sessions. Considering the fact that participants did not practice treatment of local infections or demonstrations of how to prepare ORS solution for caretakers, and that some of them requested training on how to insert a nasogastric tube for plan C, it may be wise to squeeze in one or two additional clinical sessions to strengthen these skills that are so essential into the IMCI-CC.

In conclusion, the IMCI-CC, despite the few deficiencies I described above, has successfully transferred the IMCI content as it was supposed to. The evaluation tools showed that participants

performed satisfactorily. It remains to be seen during the initial follow-up visits as to how well participants perform in their own facilities.

RECOMMENDATIONS

1. The IMCI complementary course was successfully completed, with participants trained in IMCI content. The training techniques utilized by facilitators helped participants to learn better. It is important that these trained health workers be evaluated during a follow-up visit to provide a final word on the effectiveness of the complementary course. The results may also need to be compared with follow-up visit results of the standard IMCI-trained health workers.
2. The selection criteria of participants laid down for this course identified health workers who were able to absorb the IMCI information as designed in the complementary course. With a few modifications as necessary, the criteria may be used in many developing country settings. If a more objective way of testing reading ability could be designed, then the criteria set for selection of participants could include a measure of reading ability in addition to these set criteria.
3. The evaluation tools suggested for this course seem to be feasible and reliable. However, these tools need to be tested in several settings before recommending their use universally in other settings for both standard and complementary courses.

FOLLOW-UP ACTION REQUIRED

The ultimate test of IMCI-CC's effectiveness is the evaluation of performance of health workers during clinical practice in their own settings. Therefore, to ensure that IMCI is implemented and to evaluate how well the course's participants perform, an initial follow-up visit is absolutely essential.

APPENDIXES

APPENDIX A
List of Facilitators and Observers

FACILITATORS

Dr. Mary Shilalukey Ngoma	Inpatient Instructor	WHO
Emily Moonze	Course Director	BASICS
Richard Bweupe	Senior Clinical Officer	Kasama
Margaret Katai	Senior Clinical Officer	Lusaka Urban
Mary Kaoma	Training Advisor	BASICS
Martha Mwendafilumba	Nurse Tutor	Chainama College
Elastus Lwando	Chief Clinical Officer	Ministry of Health
Kabika Mulonda	Clinical Officer	U.T.H.
Tennyson Musyani	Nurse Tutor	Kitwe School of Nursing

OBSERVERS

Paula Nersesian	Technical Officer	BASICS, Washington
Meg Chute	World Education	Boston
Lulu Muhe	WHO	Ethiopia
David McCarthy	BASICS	Washington

APPENDIX B
List of Participants of the Course

**PARTICIPANTS OF IMCI COMPLEMENTARY COURSE FIELD TEST FOR
HEALTH WORKERS IN EASTERN PROVINCE HELD AT ANDREWS MOTEL
17 SEPTEMBER - 3 OCTOBER 1997
CLINICAL SESSIONS**

NAME	STATION	POSITION	DISTRICT
Irene Mangánda	Mwase, Lundazi RHC	ZEN/ZEM	Lundazi
Alison C. Phiri	Chipangali RHC	ZEN	Chipata
Trifonia Daka	Lumezi M.R.H.C.	ZEN	Lundazi
Jolly Mtonga	Madzimawe RHC	S/ZEN	Chipata
Hellen P. Banda	Jerusalem RHC	ZEN	Chipata
M.C. Mulenga	Chasefu	ZEN	Lundazi
Lywell Mbale	Kanyanga RHC	ZEN	Lundazi
Mary I. K. Sakala	Chiparamba RHC	ZEN	Chipata
Sebah Mwale	Kwenje RHC	Z/ZEM	Chipata
Febster Ngámbi	Tembwe RHC	ZEN/FHN	Chama
Rita Banda	Kapata UBC	ZEN	Chipata
Grace Chibanga	Muzeyi	ZEN/ZEM/FHN	Chipata
Alice Banda	Magwero	ZEN/ZEM/FHN	Chipata
Hilda Mandauka	Namseche	ZEN	Chipata
Elikana Ngoma	Sitwe	EHT	Chama
Hacent Mumba	Chilubanama	EHT	Chama
Mutale Chulu Banda	Kambombo	ZEN	Chama

APPENDIX C
Summary Report on the Site Audits Visits for
IMCI Complementary Course Participant Selection

SUMMARY REPORT ON THE SITE AUDIT VISITS FOR IMCI COMPLEMENTARY PARTICIPANT SELECTION IN EASTERN PROVINCE, 3 - 10 AUGUST 1997

INTRODUCTION

The selection process for the IMCI complementary course participants was done in Chama, Lundazi and Chipata districts of Eastern Province from 3 to 10 August 1997. In total 24 health centres were visited in the three districts.

TEAM COMPOSITION

1. Mary Kaoma - HTA/BASICS.
2. Martha Mwendafilumba - IMCI National Facilitator and Tutor for Chainama College of Health Sciences.
3. DHMT - Member of each district.

CRITERIA FOR PARTICIPANT SELECTION

The following criteria was used to select participants:

1. **Level of academic education**
Participants had to be form three (grade 9) or below.
2. **Professional background**
Participants had to be Enrolled Nurses or Environmental Technicians with minimal or no inservice training.
3. **Daily activities of the employee**
Participants had to be the ones involved in assessing and treating sick children.

PARTICIPANT SELECTION PROCESS

The selection process of the potential participants for the IMCI complementary course field test begun with the pre-selection by district directors followed by site audit visits to individual participants to collect additional personal data and to verify adherence to selection criteria. After the completion of the visits in each district, final selection was made together with the DHMT and the visiting team reviewing all the key aspects of the questionnaire.

COMMENTS/OBSERVATIONS ON THE VISITS

1. In Chama District, all EHTs who assess and treat children were all grade twelves. The two EHTs were however chosen on the basis of the fact that they were running the health centres and responsible for assessing and treating children and operated in very remote health centres. The selecting team decided to use the opportunity to improve their knowledge and skills in managing children with common childhood diseases as they had no exposure to any inservice training since they qualified.
2. Most of the potential candidates who were either form three (grade 9) or below had more than 10 years and above of professional service. Most of them are about to retire from service.
3. There were two contrast groups in terms of previous inservice training. There were participants who had attended at least more than two and others who had none at all in the 20 years or more of their service.
4. Most health centres received drug kits and a variety of news letters quite regularly.
5. Most participants interviewed had access to work-related reading materials e.g. quarterly news letters, various technical guidelines or manuals. However, some of them had no time to read. Places where ZENs were running a health centre, they took the initiative of reading medical books to revise materials on clinical aspects.
6. Two of the districts had one DHMT member trained in IMCI (Chipata and Lundazi districts). The presence of these trained staff would provide support to the IMCI-CC trained personnel.
7. Most health workers interviewed seemed to have seen various management charts but very few use them.

PROPOSED PARTICIPANTS FOR THE IMCI COMPLEMENTARY COURSE

1. Chama District

Mr. H. Mumba - EHT - Chilubanyama RHC.
Mr. E. Ngoma - EHT - Sitwe RHC.
Mr. F. Ng'ambi - ZEN - Tembwe RHC.
Mrs. M. C. Banda - ZEN - Kambombo RHC.

2. **Lundazi District**

Mary Mulenga - ZEN - Chasefu RHC.
Joyce Nyirenda - ZEN - Malandula RHC.
Irene Mang'anda - ZEN - Mwase, Lundazi.
Trifonia Daka - ZEN - Lumezi RHC.
Kateya kamanga - ZEN - kanyanga Zonal RHC.

3. **Chipata District**

Mrs. Mary Sakala - ZEN - Chiparamba RHC.
Ms. Sebah Mwale - ZEN - Kwenje RHC.
Mrs. Helen P. Banda - ZEN - Jerusalem RHC.
Mrs. Agnes G. Chirwa - ZEM - Kapara RHC.
Mr. Alison Chepesani Phiri - ZEN - Chipangali RHC
Ms. Rita Banda - ZEN - Kapata RHC.
Mrs. Grace Chibanga Mugogo - ZEN - Muzeyi RHC.
Mr. Joley Mutonga - ZEN - Madzimawe RHC.
Ms. Alice Banda - ZEN - Magwero RHC.
Ms. Hilda Mandauka - ZEM - Namuseche/Prisons Clinic.

CONCLUSION

The process of site audit visits to interview the potential participants in their respective environment was highly appreciated. The process provided additional information on the personality of participants with the working environment, including work output, and capacity to be trained. Summary of the key site audit findings are annexed to the report.

SUMMARY OF FINDINGS ON THE IMCI-CC PARTICIPANTS

	Name	No. Of years in education	Designation	Years in profession	No. Of yrs screening children	Previous in-service training	Personal hobbies	Access to reading material
1.	Joyce Nyirenda	9 yrs	ZEN	23 yrs	8 yrs	NIL	Reading.	No
2.	Ms. Sarah M. Phiri	9 yrs	ZEM	15 yrs	10 yrs	- Safe motherhood. - Psycho-social counselling. - Breastfeeding counselling. - RPR course.	Reading, cooking, church prayers.	None
3.	Ms. Alice Banda	9 yrs	ZEN/ZEM	13 yrs	6 1/2 yrs	- STD management. - Psycho-social home based counselling. - Quality Assurance. - One-day orientation to IMCI.	Netball player, church, singing.	Yes
4.	Mr. Alison C. Phiri	9 yrs	Male ZEN	20 yrs	20 yrs	- Surgical/medical emergencies. - Nutrition management. - Essential drug management.	Reading and music.	Yes
5.	Agnes G. Chirwa	9 yrs	ZEM	16 yrs	12 yrs	- HIV/AIDS home based care. - RPR. - Safe motherhood.	Watching soccer, organizing women groups.	Yes
6.	Ms. Helen Banda	9 yrs	ZEN	17 yrs	13 yrs	- Surgical/medical emergencies. - Safe motherhood. - PHC training.	Church attendance, reading.	Yes
7.	Ms. Sebah Mwale	9 yrs	ZEN/ZEM	16 yrs	3 yrs	- Cholera preparedness. - NIDs seminar. - Management training.	Radio listening, church attendance.	Yes

	Name	No. Of years in education	Designation	Years in profession	No. Of yrs screening children	Previous in-service training	Personal hobbies	Access reading materia
8.	Mary Mulenga	9 yrs	ZEN	27 yrs	4 yrs	NIL	Knitting, sewing and reading.	Yes
9.	Ms. Irene Mang'anda	9 yrs	ZEN	13 yrs	6 yrs	NIL	Reading	Yes (Religiou
10.	Ms. Trifonia Daka	9 yrs	ZEN	22 yrs	8 yrs	NIL	House work	Yes (Religiou
11.	Kateya Kamanga	11 yrs	ZEN	5 yrs	5 yrs	- Safe motherhood. - Health reforms.	Reading, knitting, tailoring.	Yes
12.	Mr. H. Mumba	10 yrs	EHT	8 yrs	8 yrs	Essential drugs.	Reading	Yes
13.	Mr. E. Ngoma	11 yrs	EHT	10 yrs	10 yrs	Essential drugs training.	Reading.	NIL
14.	Mr. F. Ng'ambi	9 yrs	ZEN	16 yrs	10 yrs	NIL	Church.	NIL
15.	Mrs. M. C. Banda	9 yrs	ZEN	12 yrs	9 yrs	NIL	Church.	NIL
16.	Esther B. Chirwa	9 yrs	ZEM	28 yrs	28 yrs	- Family Planning. - STD Counselling.	Singing.	Yes
17.	Rita Banda	9 yrs	ZEN	22 yrs	8 yrs	- RPR	Cooking, watching movies.	Yes
18.	Mr. Jolley Mtonga	9 yrs	ZEN	15 yrs	15 yrs	- CDD. - Home based care.	Health education.	Yes
19.	Grace Chibanga Mugogo	9 yrs	ZEN	23 yrs	22 yrs	- Family Planning. - Safe motherhood. - Management training.	Cooking, music.	Yes

	Name	No. Of yrs in education	Designation	Years in profession	No. Of yrs screening children	Previous in-service training	Personal hobbies	Access to reading materials
20.	Ms. Bester Mbewe	9 yrs	ZEN	28 yrs	14 yrs	- Family Planning. - RPR. - CDD, TBA, TOT.	Knitting, sewing, reading.	Yes
21.	Hellen N. Mpunda	9 yrs	ZEM	32 yrs	9 yrs	NIL	Cooking, house work.	No
22.	Maureen Zwakamae	9 yrs	ZEN	23 yrs	4 yrs	- EPI management.	Church activities.	Yes
23.	Jean Nyirenda Mtonga	9 yrs	ZEN	25 yrs	10 yrs	- EPI. - Job descriptions.	Reading.	Yes
24.	Enala Kasabali	12 yrs	ZEN	14 yrs	14 yrs	- Planning and Management. - CDD. - Family planning. - Safe motherhood.	Sewing, knitting.	Yes
25.	Rosemary Tembo	9 yrs	ZEN	23 yrs	23 yrs	- Health reforms. - EPI management.	Knitting, sewing, church.	Yes
26.	Theophister M. Phiri	12 yrs	ZEN	15 yrs	6 yrs	- AIDS course. - Nutrition surveillance.	Reading, cooking.	Yes
27.	Romanus Tembo	10 yrs	ZEN	18 yrs	7 yrs	- Immunization. - Cold chain.	Reading and fishing.	No
28.	Benjamin Phiri	12 yrs	EHT	4 yrs	4 yrs	- Cholera preparedness. - NID. - CDD. - IMCI orientation.	Reading, football.	Yes
29.	Esnart Nkhata Phiri	12 yrs	EHT	3 yrs	3 yrs	- Meat inspection.	Singing, cooking.	Yes

	Name	No. Of yrs in education	Designation	Years in profession	No. Of yrs screening children	Previous in-service training	Personal hobbies	Access reading material
30.	Ms. Hilda Mandauka	9 yrs	ZEM	10 yrs	10 yrs	- Safe motherhood. - RPR.	Reading	No

APPENDIX D
Course Schedule for Classroom Work

**WEEK ONE:
IMCI COMPLEMENTARY COURSE SCHEDULE**

SESSION	MON	TUE	WED	THUR	FRI	SAT
A.M. 08:00- 12:30	Plenary: Introduction to Course Work Groups: Introduction Part I: What Health Workers Know and Do	Work Groups: Introduction to IMCI: Part 4 Recording Form Work Groups: ASSESS COUGH OR DIFFICULT BREATHING	Clinical Practice Sessions: ASSESS & CLASSIFY COUGH OR DIFFICULT BREATHING	Clinical Practice Sessions: ASSESS & CLASSIFY DIARRHOEA	Clinical Practice Sessions: ASSESS & CLASSIFY FEVER	Clinical Practice Sessions: ASSESS & CLASSIFY EAR PROBLEM
			Debrief in Vehicle	Debrief in Vehicle	Debrief in Vehicle	Debrief in Vehicle
12:30- 14:00	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
P.M. 14:00- 17:00	Work Groups: Introduction to IMCI: Part 2 Case Management Process Introduction to IMCI: Part 3 Concepts of IMCI; ACSC Wall Chart & Chart Booklet	Work Groups: CLASSIFY COUGH OR DIFFICULT BREATHING Counsel the Caretaker Part 1: Intro to Good Communication Skills Orientation to Clinical Practice	Andrews Motel Work Groups: ASSESS & CLASSIFY DIARRHOEA	Andrews Motel Work Groups: ASSESS & CLASSIFY FEVER	Andrews Motel Work Groups: ASSESS AND CLASSIFY EAR PROBLEM ASSESS MAL-NUTRITION & ANAEMIA	Andrews Motel Work Groups: CLASSIFY NUTRITIONAL STATUS Counsel the Caretaker Part 2: ASSESS FEEDING PROBLEMS with focus on Counseling Skills
			Facilitator's Meeting	Facilitator's Meeting	Facilitator's Meeting	Facilitator's Meeting
	*Tutorial	Tutorial	Tutorial	Tutorial	Tutorial	Off

Tutorial Sessions: In the evening, as needed.

*IMCI Complementary Course
Schedule
14 September 1997/WEI*

WEEK TWO: IMCI COMPLEMENTARY COURSE SCHEDULE							
SESSION	MON	TUE	WED	THUR	FRI	SAT	SUN
A.M.	Clinical Practice Session ASSESS AND CLASSIFY MALNUTRITION & ANAEMIA	Clinical Practice Session IDENTIFY TREATMENT	Andrews Motel Work Groups IDENTIFY TREATMENT	Clinical Practice Session TREAT THE CHILD	Clinical Practice Session TREAT THE CHILD	OFF	OFF
	Debrief in Vehicle	Debrief in Vehicle	TREAT THE CHILD	Debrief in Vehicle	Debrief in Vehicle		
	Lunch	Lunch	Lunch	Lunch	Lunch		
P.M.	Andrews Motel Work Groups Continue ACSC: Immunize and Vitamin A IDENTIFY TREATMENT	Andrews Motel Work Groups IDENTIFY TREATMENT	Andrews Motel Work Groups TREAT THE CHILD	Andrews Motel Work Groups TREAT THE CHILD	Andrews Motel Work Groups TREAT THE CHILD		
	Facilitator Meeting	Facilitator Meeting	Facilitator Meeting	Facilitator Meeting	Facilitator Meeting		
	Tutorial	Tutorial	Tutorial	GIVE FLUIDS: ORT CORNER	Tutorial		

Tutorial Sessions In the evening, as needed.

*IMCI Complementary Course
Schedule
14 September 1997/WEL*

WEEK THREE: IMCI COMPLEMENTARY COURSE SCHEDULE						
SES- SION	MON	TUE	WED	THUR	FRI	SAT
A.M.	Andrews Motel Work Groups	Clinical Practice Session	Clinical Practice Session MSYI	Work Groups MSYI	Andrews Motel Plenary: SYNTHESIS & APPLYING LEARNING TO WORKPLACE	Facilitator's Meeting: Debrief Field Test
	FOLLOW- UP	Debrief in Vehicle	Debrief in Vehicle			
	Lunch	Lunch	Lunch	Lunch	Lunch	
P.M.	Andrews Motel Work Groups FOLLOW- UP	Andrews Motel Work Groups MSYI	Andrews Motel Work Groups MSYI	Andrews Motel Work Groups MSYI		
	Facilitator Meeting	Facilitator Meeting	Facilitator Meeting	Facilitator Meeting		
	Tutorial	Tutorial	Tutorial			

Tutorial Sessions: In the evening, as needed.

APPENDIX E
Course Schedule for Clinical Sessions

**IMCI COMPLEMENTARY COURSE FIELD TEST FOR H/WORKERS IN EASTERN
PROVINCE 17TH SEPTEMBER - 3RD OCTOBER, 1997 CLINICAL SESSIONS**

DAY & DATE	GROUP	ANDREWS MOTEL	U.T.H.	KANYAMA H/CENTRE	TEA BREAK	KAMWALA H/CENTRE	KABWATA H/CENTRE
WED. 17~9	A	1130 ~ 1230	0800~0900	-	0900~0910	0925 ~ 1125	-
	B	0800 ~ 0845	1115~1215	-	1100~1110	-	0900~1100
	C	1125 ~ 1230	1000~1100	0800 ~ 0945	1100~1110	-	-
THURS 18 ~ 9	A	0800 ~ 0845	1115~1230	-	1100~1110	-	0900 ~ 1100
	B	1125 ~ 1230	1000~1100	0800 ~ 0945	1100~1110	-	-
	C	1130 ~ 1230	0800~0900	-	0900~0910	0925 ~ 1125	-
FRID 19 ~ 9	A	1125 ~ 1230	1000~1100	0800 ~ 0945	1100~1110	-	-
	B	1130 ~ 1230	0800~0900	-	0900~0910	0925 ~ 1125	-
	C	0800 ~ 0845	1115~1215	-	1100~1110	-	0900 ~ 1100
SAT 20 ~ 9	A		0830~0930	-	0930~0940	-	-
	B		1000~1100	-	1100~1110	-	-
	C		1100~1200	-	1000~1010	-	-
MON 22 ~ 9	A	0800 ~ 0845	1115~1215	-	1100~1110	-	0900~1100
	B	1125 ~ 1230	1000~1100	0800 ~ 0945	1100~1110	-	-
	C	1130 ~ 1230	0800~0900	-	0900~0910	0925 ~ 1125	
TUES 23 ~ 9	A	1125 ~ 1230	1000~1100	0800 ~ 0945	1100~1110	-	-
	B	1130 ~ 1230	0800~0900	-	0900~0910	0925 ~ 1125	
	C	0800 ~ 0845	1115~1215	-	1100~1110	-	0900~1100

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THURS 25 ~ 9	A	1130 ~ 1230	0800~0900	-	0900~0910	0925 ~ 1125	-
	B	0800 ~ 0845	1115~1215	-	1100~1110	-	0900~1100
	C	1125 ~ 1230	1000~1100	0800 ~ 0945	1100~1110	-	-
FRID 26 ~ 9	A	0800 ~ 0845	1115~1215	-	1100~1110	-	0900~1100
	B	1125 ~1230	1000~1100	0800 ~ 0945	1100~1110	-	-
	C	1130 ~ 1230	0800~0900	-	0900~0910	0925 ~ 1125	-
TUES 30 ~ 9	A	1125 ~ 1230	1000~1100	0800 ~ 0945	1100~1110	-	-
	B	1130 ~ 1230	0800~0900	-	0900~0910	0925~1125	-
	C	0800 ~ 0845	1115~1215	-	1100~1110	-	0900~1100
WED 1 ~ 10	A	0800 ~ 0845	1115~1215	-	1100~1110	-	0900~1100
	B	1125 ~ 1230	1000~1100	0800 ~ 0945	1100~1110	-	-
	C	1130 ~ 1230	0800~0900	-	0900~0910	0925~1125	-

APPENDIX F
Form to Capture Opportunities to Improve the Draft

***OPPORTUNITIES**

Component # _____

Activity # _____

Facilitator or Observer: _____

OPPORTUNITY: I Saw This Happen, and an Improvement Needs to be Made	IMPROVEMENTS: How Can This Improvement be Made Explicit in the Course Design?	WHY I THINK A CHANGE IS NECESSARY:

APPENDIX G
Summary Wall Checklist

Group A

GROUP CHECKLIST OF CLINICAL SIGNS Sick Child Age 2 Months Up To 5 Years

<p>Not able to drink or breastfeed</p> <p>AP MC SM</p>	<p>Vomits everything</p> <p>AP T.D. MC SM AP</p>	<p>History of convulsions (with this illness)</p> <p>T.D. MC SM EN MC EN</p>	<p>Lethargic or unconscious</p> <p>T.D. AP MC SM</p>
<p>Fast breathing</p> <p>AP MC T.D. EN MC SM AP MC MC EN SW T.S.</p>	<p>Chest indrawing</p> <p>AP EN MC AP EN MC T.D. EN SM MC EN EN</p>	<p>Stridor in calm child</p> <p>T.D. EN AP MC SM</p>	<p>Restless and irritable</p>
<p>Sunken eyes</p> <p>EN T.D. MC EN SM MC EN</p>	<p>Drinking poorly</p> <p>AP</p>	<p>Drinking eagerly, thirsty</p> <p>EN EN MC EN</p>	<p>Very slow skin pinch</p> <p>AP EN MC MC SM EN</p>
<p>Slow skin pinch</p> <p>EN EN MC T.D. AP MC SM EN</p>	<p>Stiff neck</p> <p>T.D. AP MC EN AP SM</p>	<p>Runny nose</p> <p>D.T. MC AP MC SM</p>	<p>Generalized rash of measles</p> <p>T.D. EN EN MC SM AP</p>
<p>Red eyes</p> <p>T.D. AP SM MC EN</p>	<p>Mouth ulcers</p> <p>T.D. MC MC AP SM EN</p>	<p>Deep and extensive mouth ulcers</p>	<p>Pus draining from eye</p> <p>EN MC SM EN</p>
<p>Clouding of the cornea</p>	<p>Pus draining from ear</p> <p>AP MC EN T.D. MC SM T.D. T.D. EN EN</p>	<p>Tender swelling behind the ear</p>	<p>Visible severe wasting</p> <p>EN EN MC SM MC T.D. MC AP</p>
<p>Severe palmar pallor</p> <p>AP T.D. AP MC</p>	<p>Some palmar pallor</p> <p>T.D. EN EN EN MC MC SM SM MC</p>	<p>Oedema of both feet</p> <p>EN T.D. EN T.D. MC SM MC</p>	

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GROUP CHECKLIST OF CLINICAL SIGNS

Sick Child Age 2 Months Up To 5 Years

<p>Not able to drink or breastfeed</p> <p>M.I.C.S. S.C.C.</p> <p>GMC HM</p>	<p>Vomits everything</p> <p>M.I.C.S. HG LM</p> <p>GMC</p>	<p>History of convulsions (with this illness)</p> <p>LM HM</p> <p>M.I.C. GMC HG</p>	<p>Lethargic or unconscious</p> <p>LM HM</p> <p>HM d.m.c.s.</p> <p>GMC</p>
<p>Fast breathing</p> <p>HM GMC</p> <p>G.M.R.</p> <p>HM</p> <p>H.M. H.G.</p> <p>HM M.I.C.S.</p>	<p>Chest indrawing</p> <p>LM M.I.C.</p> <p>GMC HM</p> <p>H.M. LM</p> <p>HM</p>	<p>Stridor in calm child</p> <p>LM</p> <p>GMC HG</p> <p>M.I.C.S.</p> <p>HM</p>	<p>Restless and irritable</p> <p>HM</p> <p>GMC</p> <p>M.I.C.S.</p>
<p>Sunken eyes</p> <p>M.I.C.S.</p> <p>HM GMC</p> <p>M.I.C.S. S.C.C.</p> <p>H.M. LM</p>	<p>Drinking poorly</p> <p>M.I.C.S. S.C.C.</p> <p>HM</p> <p>H.M. LM</p> <p>GMC</p>	<p>Drinking eagerly, thirsty</p> <p>LM LM</p> <p>GMC GMC</p> <p>H.G. HM</p> <p>HM</p>	<p>Very slow skin pinch</p> <p>LM I.C.S. HM</p> <p>GMC HM</p>
<p>Slow skin pinch</p> <p>M.I.C.S. S.C.C.</p> <p>HM</p> <p>GMC HG</p>	<p>Stiff neck</p> <p>GMC HG</p> <p>M.I.C.S.</p> <p>LM</p> <p>HM</p>	<p>Runny nose</p> <p>M.I.C.S. S.C.C.</p> <p>HM</p> <p>GMC HG</p>	<p>Generalized rash of measles</p> <p>LM I.C.S.</p> <p>HM HG</p> <p>GMC LM</p>
<p>Red eyes</p> <p>M.I.C.S. S.C.C.</p> <p>LM HM</p> <p>H.G.</p> <p>GMC</p>	<p>Mouth ulcers</p> <p>M.I.C.S. S.C.C.</p> <p>HM HG</p> <p>GMC</p>	<p>Deep and extensive mouth ulcers</p> <p>H.G. LM</p> <p>GMC</p>	<p>Pus draining from eye</p> <p>GMC LM</p> <p>M.I.C.S. LM</p> <p>HM</p>
<p>Clouding of the cornea</p>	<p>Pus draining from ear</p> <p>M.I.C.S. LM</p> <p>HM GMC</p> <p>H.G.</p>	<p>Tender swelling behind the ear</p>	<p>Visible severe wasting</p> <p>LM HM</p> <p>GMC HG</p> <p>M.I.C.S.</p> <p>GMC LM</p>
<p>Severe palmar pallor</p> <p>GMC</p> <p>H.G.</p>	<p>Some palmar pallor</p> <p>HM M.I.C.S. S.C.C.</p> <p>HM HG</p> <p>GMC HM</p>	<p>Oedema of both feet</p> <p>HM M.I.C.S. S.C.C.</p> <p>HM HG</p> <p>GMC LM</p> <p>M.I.C.S. LM</p>	

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Group C

GROUP CHECKLIST OF CLINICAL SIGNS

Sick Child Age 2 Months Up To 5 Years

Not able to drink or breastfeed <i>AS</i>	Vomits everything <i>AS</i>	History of convulsions (with this illness) <i>AS</i>	Lethargic or unconscious <i>AS</i>
Fast breathing <i>AS</i>	Chest indrawing <i>AS</i>	Stridor in calm child <i>AS</i>	Restless and irritable <i>AS</i>
Sunken eyes <i>AS</i>	Drinking poorly <i>AS</i>	Drinking eagerly, thirsty <i>AS</i>	Very slow skin pinch <i>AS</i>
Slow skin pinch <i>AS</i>	Stiff neck <i>AS</i>	Runny nose <i>AS</i>	Generalized rash or measles <i>AS</i>
Red eyes <i>AS</i>	Mouth ulcers <i>AS</i>	Deep and extensive mouth ulcers <i>AS</i>	Pus draining from eye <i>AS</i>
Clouding of the cornea <i>AS</i>	Pus draining from ear <i>AS</i>	Tender swelling behind the ear <i>AS</i>	Visible severe wasting <i>AS</i>
Severe palmar pallor <i>AS</i>	Some palmar pallor <i>AS</i>	Oedema of both feet <i>AS</i>	<i>AS</i>

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Group A

ADDITIONAL SIGNS IN YOUNG INFANTS

Age 1 Week up to 2 Months

(Note: These signs may also be observed in older infants and children age 2 months up to 5 years.)

<p>Mild chest indrawing in young infant (normal)</p> <p>SM TD EW mc</p>	<p>Fast breathing in young infant</p> <p>SM TD mc EW</p>	<p>Severe chest indrawing in young infant</p> <p>SM EW mc mc</p>	<p>Nasal flaring</p> <p>mc EW</p>
<p>Grunting</p> <p>TD SM mc</p>	<p>Bulging fontanelle</p> <p>EW mc SM</p>	<p>Umbilical redness extending to the skin</p>	<p>Red umbilicus or draining pus</p>
<p>Many or severe skin pustules</p>	<p>Skin pustules</p> <p>mc TD SM</p>	<p>Lethargic or unconscious young infant</p> <p>SM mc EW</p>	<p>Less than normal movement</p> <p>TD mc SM</p>
<p>No attachment at all</p> <p>SM TD EW</p>	<p>Not well attached to breast</p> <p>EW SM</p>	<p>Good attachment</p> <p>mc SM TD</p>	<p>Not suckling at all</p> <p>SM EW</p>
<p>Not suckling effectively</p> <p>SM TD EW</p>	<p>Suckling effectively</p> <p>mc TD</p>	<p>Thrush</p>	

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Group B

ADDITIONAL SIGNS IN YOUNG INFANTS Age 1 Week up to 2 Months

(Note: These signs may also be observed in older infants and children age 2 months up to 5 years.)

<p>Mild chest indrawing in young infant (normal)</p> <p>M.K.S. H.G. H.M. G.M.C. L.M.</p>	<p>Fast breathing in young infant</p> <p>H.G. H.M. M.I.K.S. L.M. G.M.C. L.M.</p>	<p>Severe chest indrawing in young infant</p> <p>H.G. M.I.K.S. H.M. L.M. G.M.C.</p>	<p>Nasal flaring</p> <p>H.G. M.K.S. H.M. L.M. G.M.C.</p>
<p>Grunting</p> <p>M.K.S. H.G. H.M. L.M. G.M.C.</p>	<p>Bulging fontanelle</p> <p>H.M. L.M. M.K.S. H.M. G.M.C. H.G.</p>	<p>Umbilical redness extending to the skin</p>	<p>Red umbilicus or draining pus</p>
<p>Many or severe skin pustules</p> <p>G.M.C.</p>	<p>Skin pustules</p> <p>H.G. M.K.S. H.M. L.M. G.M.C. L.M.</p>	<p>Lethargic or unconscious young infant</p> <p>M.K.S. H.G. G.M.C. H.M. L.M.</p>	<p>Less than normal movement</p> <p>H.G. M.K.S. L.M. G.M.C. M.I.K.S. H.M.</p>
<p>No attachment at all</p> <p>H.M. L.M. G.M.C. M.I.K.S.</p>	<p>Not well attached to breast</p> <p>H.M. H.G. M.I.K.S. L.M.</p>	<p>Good attachment</p> <p>H.M. L.M. G.M.C. M.I.K.S. H.G.</p>	<p>Not suckling at all</p> <p>H.M. L.M. G.M.C. L.M. M.I.K.S. H.G.</p>
<p>Not suckling effectively</p> <p>H.G. G.M.C. H.M. L.M. M.I.K.S.</p>	<p>Suckling effectively</p> <p>M.K.S. H.G. G.M.C. L.M. H.M.</p>	<p>Thrush</p>	

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APPENDIX H
Evaluation Tool for Outpatient Practice

(Follow-up too!) outpatient

OBSERVING HEALTH WORKER IN MANAGEMENT OF THE SICK CHILD AGE 2 MONTHS UP TO 5 YEARS

HW name: _____; facility: _____; District: _____; Reviewer: _____; Begin consultation: _____
Circle all signs HW finds to be present. Tick box if HW asks the question or looks for any sign. Let the HW complete assessment, classification & treatment. Then using another color pen, cross-out box, circle signs which HW missed & write down your classification if different from that of HW.
Child's Name: _____ Age _____ Weight: _____ Temperature _____
ASK: What are the child's problems? _____ Initial visit: _____ or Follow-up visit: _____

CHECK FOR GENERAL DANGER SIGNS (Tick if HW looked or asked, circle if condition is present) <input type="checkbox"/> NOT ABLE TO DRINK OR BREASTFEED <input type="checkbox"/> VOMITS EVERYTHING <input type="checkbox"/> CONVULSIONS <input type="checkbox"/> LETHARGIC OR UNCONSCIOUS	HW's decision: General danger sign present? Yes ___ No ___ Not done
---	--

DOES THE CHILD HAVE COUGH OR DIFFICULT BREATHING? Yes ___ No ___ <input type="checkbox"/> For how long? ___ days <input type="checkbox"/> Count the breaths in one minute ___ breaths per minute: ___ <input type="checkbox"/> Fast breathing? <input type="checkbox"/> Look for chest indrawing Look and listen for stridor and wheezing	Circle HW's classification: <input type="checkbox"/> Severe pneumonia or VSD <input type="checkbox"/> Pneumonia <input type="checkbox"/> Cough or cold <input type="checkbox"/> NOT classified
---	--

DOES THE CHILD HAVE DIARRHOEA? Yes ___ No ___ <input type="checkbox"/> For how long? ___ days <input type="checkbox"/> Is there blood in the stool? <input type="checkbox"/> Look at the child's general condition. Is the child: Lethargic or unconscious? Restless and irritable? <input type="checkbox"/> Look for sunken eyes <input type="checkbox"/> Offer the child fluid. Is the child: Not able to drink or drinking poorly? Drinking eagerly, thirsty? <input type="checkbox"/> Pinch the skin of the abdomen. Does it go back. Very slowly, longer than 2 seconds? Slowly?	<input type="checkbox"/> Severe dehydration <input type="checkbox"/> Some dehydration <input type="checkbox"/> No dehydration <input type="checkbox"/> Severe persistent diarrhea <input type="checkbox"/> Persistent diarrhea <input type="checkbox"/> Dysentery <input type="checkbox"/> NOT classified
--	---

DOES THE CHILD HAVE FEVER? By history, feels hot, temperature 38°C or above Yes ___ No ___ <input type="checkbox"/> For how long? ___ days <input type="checkbox"/> If more than 7 days, has fever been present every day? <input type="checkbox"/> Has child had measles within the last 3 months? <input type="checkbox"/> Look or feels for stiff neck Look for runny nose Look for signs of MEASLES <input type="checkbox"/> Generalized rash and One of these: cough, runny nose, or red eyes	<input type="checkbox"/> Very severe febrile disease <input type="checkbox"/> Malaria <input type="checkbox"/> NOT classified
---	---

<input type="checkbox"/> Has the child had measles now or within the last 3 months? <input type="checkbox"/> Look for mouth ulcers How are they, deep and extensive? <input type="checkbox"/> Look for pus draining from the eye <input type="checkbox"/> Look for clouding of the cornea	<input type="checkbox"/> Severe complicated measles <input type="checkbox"/> Measles with complications <input type="checkbox"/> Measles <input type="checkbox"/> NOT classified
---	---

DOES THE CHILD HAVE AN EAR PROBLEM? Yes ___ No ___ <input type="checkbox"/> Is there ear pain? <input type="checkbox"/> Is there ear discharge? <input type="checkbox"/> If Yes, for how long? ___ Days <input type="checkbox"/> Look for pus draining from the ear <input type="checkbox"/> Feel for tender swelling behind the ear.	<input type="checkbox"/> Mastoiditis <input type="checkbox"/> Acute/Chronic ear infection <input type="checkbox"/> No ear infection <input type="checkbox"/> NOT Classified
---	--

THEN CHECK FOR MALNUTRITION AND ANAEMIA <input type="checkbox"/> Look for visible severe wasting <input type="checkbox"/> Look for palmar pallor? Severe palmar pallor? Some palmar pallor? <input type="checkbox"/> Look for oedema of both feet <input type="checkbox"/> Determine weight for age Very low ___ Not Very Low ___ Growth faltering ___ No growth faltering ___	<input type="checkbox"/> Severe malnutrition/anaemia <input type="checkbox"/> Anaemia or very low weight & growth faltering <input type="checkbox"/> No anaemia & not very low weight & growth not faltering <input type="checkbox"/> NOT classified
--	---

CHECK THE CHILD'S IMMUNIZATION STATUS (Circle immunizations & vitamin A needed today) BCG <input type="checkbox"/> OPV 0 <input type="checkbox"/> DPT 1 <input type="checkbox"/> DPT 2 <input type="checkbox"/> DPT 3 <input type="checkbox"/> Measles <input type="checkbox"/> Vitamin A Supplementation <input type="checkbox"/> OPV 1 <input type="checkbox"/> OPV 2 <input type="checkbox"/> OPV 3	Return for next: <input type="checkbox"/> Immunization: <input type="checkbox"/> Vitamin A: <input type="checkbox"/> Did NOT inform or specify
---	--

ASSESS CHILD'S FEEDING if child has ANAEMIA OR VERY LOW WEIGHT or less than 2 years old. Do you breastfeed your child? Yes ___ No ___ If Yes, <input type="checkbox"/> how many times in 24 hours ___ times. <input type="checkbox"/> Do you breastfeed during the night? Yes ___ No ___ Does the child take any other food or fluids? Yes ___ No ___ <input type="checkbox"/> If yes, what food or fluids? _____ <input type="checkbox"/> How many times per day? ___ times. What do you use to feed the child? _____ <input type="checkbox"/> If very low weight for age: How large are servings? _____ <input type="checkbox"/> Does the child receive his own serving? ___ <input type="checkbox"/> Who feeds the child and how? _____ During this illness, has the child's feeding changed? Yes ___ No ___ If Yes, how? _____	Feeding Problems <input type="checkbox"/> No exclusive breastfeeding <input type="checkbox"/> Child gets < than 5 meals <input type="checkbox"/> Child gets thin porridge <input type="checkbox"/> Difficulty breastfeeding <input type="checkbox"/> Use of bottle feeding <input type="checkbox"/> Lack of active feeding <input type="checkbox"/> Not feeding well when sick <input type="checkbox"/> Unable to identify problems
--	--

ASSESS OTHER PROBLEMS:

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TREATMENTS

<i>If Referral:</i>	<input type="checkbox"/> advised caretaker about reason for referral <input type="checkbox"/> pre-referral treatment (specify: _____)
<i>If pneumonia:</i>	<input type="checkbox"/> Appropriate antibiotic: (specify _____) <input type="checkbox"/> Explained how to give the antibiotic at home.
<i>If cough/cold:</i>	<input type="checkbox"/> Advised safe remedy: <input type="checkbox"/> referred for assessment if coughing > 30 days
<i>If Some Dehydration:</i>	<input type="checkbox"/> Plan B; <input type="checkbox"/> explained to keep child in clinic for 4 hrs
<i>If no dehydration:</i>	<input type="checkbox"/> Plan A <input type="checkbox"/> Explained ORT
<i>If persistent diarrhea:</i>	<input type="checkbox"/> vitamin A <input type="checkbox"/> Advised on feeding
<i>If dysentery:</i>	<input type="checkbox"/> Appropriate antibiotic: (specify _____) <input type="checkbox"/> Explained how to give drug at home
<i>If malaria:</i>	<input type="checkbox"/> Appropriate antimalarial: (specify _____) <input type="checkbox"/> Explained how to give antimalarial at home:
<i>If fever > 7 days:</i>	<input type="checkbox"/> referred for further assessment
<i>If complicated measles:</i>	<input type="checkbox"/> vitamin A; <input type="checkbox"/> TEO for pus in the eye; <input type="checkbox"/> GV for mouth ulcers
<i>If measles:</i>	<input type="checkbox"/> vitamin A
<i>If ear infection:</i>	<input type="checkbox"/> Appropriate antibiotic (specify _____) <input type="checkbox"/> explained how to give drug at home <input type="checkbox"/> Did ear tick and showed how to do it <input type="checkbox"/> Performed ear drop
<i>Anemia</i>	<input type="checkbox"/> Iron (if available) <input type="checkbox"/> Mebendazole if Diarrhea <input type="checkbox"/> Assess feeding & counsel <input type="checkbox"/> Appropriate antimalarial (specify _____) <input type="checkbox"/> Asked checking questions to know how to give iron tablet.
<i>Low or low weight</i>	<input type="checkbox"/> Assess feeding & counsel
<i>No anemia (or low weight)</i>	<input type="checkbox"/> Assess feeding and counsel (if child is ill)
	<input type="checkbox"/> administered required vaccines <input type="checkbox"/> administered required vitamins
	<input type="checkbox"/> Feeding advice according to the food plan <input type="checkbox"/> Asked checking questions on feeding advice
	<ul style="list-style-type: none"> • Did HW explain when to return immediately? Tick all that applies
	Any sick child? <input type="checkbox"/> Not able to drink breastfeed <input type="checkbox"/> Becomes drier <input type="checkbox"/> Develops fever
	If child has cough or cold: <input type="checkbox"/> develops fast breathing; <input type="checkbox"/> develops difficult breathing if child has diarrhea: <input type="checkbox"/> develops blood in stool; <input type="checkbox"/> Drinks poorly
	<ul style="list-style-type: none"> • Did HW explain when to return for follow-up? <input type="checkbox"/> yes <input type="checkbox"/> no • Did HW ask appropriate checking questions to caretaker? <input type="checkbox"/> yes <input type="checkbox"/> no
	End of Consultation time: _____ Duration of Consultation: _____ minutes

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APPENDIX I
Evaluation Tool for Inpatients

CLINICAL COMPETENCE AS OBSERVED BY CLINICAL INSTRUCTOR:

steps followed in assessing a clinical sign whether present or not.

Child's Name <
Identification Number ##

> Participant's Name <
Date <DD/MM/YY>

1. Correct steps followed to decide on lethargic or unconscious [Y] [N]
2. Counted breaths for a full minute? [Y] [N]
3. Correct steps used to look for chest indrawing ? [Y] [N]
4. Correctly looked and listened for stridor or wheeze ? [Y] [N]
5. Performed skin pinch correctly? [Y] [N]
6. Correctly assessed for neck stiffness ? [Y] [N]
7. Correctly looked for visible severe wasting ? [Y] [N]
8. Used correct procedure to decide bipedal oedema? [Y] [N]
9. Correct steps used to determined weight for age by using the chart? [Y]

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EVALUATION TOOL TO ASSESS PARTICIPANT CONCORDANCE WITH CLINICAL INSTRUCTOR
ON CLINICAL SIGNS

Child's name < _____ > Participant's name < _____ >
 Age in months ## Identification number ## Date <DD/MM/YY>

- | | |
|---|---------------------|
| 1. Lethargic or unconscious [Y] [N] | Facilitator [Y] [N] |
| 2. Fast breathing [Y] [N] | Facilitator [Y] [N] |
| 3. Chest indrawing [Y] [N] | Facilitator [Y] [N] |
| 4. Stridor [Y] [N] | Facilitator [Y] [N] |
| 5. Wheeze [Y] [N] | Facilitator [Y] [N] |
| 6. Restless or irritable [Y] [N] | Facilitator [Y] [N] |
| 7. Sunken eyes [Y] [N] | Facilitator [Y] [N] |
| 8. Not able to drink [Y] [N] | Facilitator [Y] [N] |
| 9. Drinking eagerly [Y] [N] | Facilitator [Y] [N] |
| 10. Skin pinch very slow [Y] [N] | Facilitator [Y] [N] |
| 11. Skin pinch slow [Y] [N] | Facilitator [Y] [N] |
| 12. Stiff neck [Y] [N] | Facilitator [Y] [N] |
| 13. Measles rash [Y] [N] | Facilitator [Y] [N] |
| 14. Mouth ulcers [Y] [N] | Facilitator [Y] [N] |
| 15. Deep/extensive mouth ulcers [Y] [N] | Facilitator [Y] [N] |
| 16. Eyes pus draining [Y] [N] | Facilitator [Y] [N] |
| 17. Clouding of the cornea [Y] [N] | Facilitator [Y] [N] |
| 18. Ears pus draining [Y] [N] | Facilitator [Y] [N] |
| 19. Tender swelling behind ear [Y] [N] | Facilitator [Y] [N] |
| 20. Visible severe wasting [Y] [N] | Facilitator [Y] [N] |
| 21. Palmar pallor severe [Y] [N] | Facilitator [Y] [N] |

22. Palmar pallor some	[Y] [N]	Facilitator	[Y] [N]
23. Oedema bipedal	[Y] [N]	Facilitator	[Y] [N]
24. Very low weight	[Y] [N]	Facilitator	[Y] [N]
25. Growth faltering	[Y] [N]	Facilitator	[Y] [N]

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APPENDIX J
Evaluation Tool of Course by Participants

**SAMPLE
EVALUATION QUESTIONNAIRE FOR
MANAGEMENT OF CHILDHOOD ILLNESS**

To enable us to improve this course, please fill out this questionnaire.

1. What are your responsibilities in your clinic or health centre?

14 health /workers involved in screening patients (adult and children)

1. *MCH activities.*
2. *In charges.*

2. For each module or activity listed in the left column, tick the box which you think best describes it.

	Very useful	Useful	Somewhat useful	Useless	Nothing
Introduction	6	2	0	0	9
Assess and Classify the Sick Child Age 2 months up to 5 years	16	1	0	0	-
Identify Treatment	16	1	0	0	-
Treat the Child	15	1	0	0	2 not sure
Counsel the Mother	14	2	0	0	1
Management of the Sick Young Infant	14	3	0	0	
Follow-up	8	9	0	0	
Outpatient Sessions	13	4	0	0	
Inpatient Ward Sessions	16	1	0	0	
Videos	9	8	0	0	
Photograph examples and exercises	10	6	1		

3. Which module or part of a module, if any, did you find especially difficult to understand? Why?

- 9 - *No problems, facilitators explained very well.*
- 2 - *Diarrhoea section due to 3 classifications.*
- 3 - *Video sessions - Not able to exchange words and some parts not clear, especially on chest indrawing.*
- 1 - *Palmar pallor - How to differentiate types.*
- 2 - *Nothing.*

4. Which case management steps or skills did you find especially difficult to understand or learn to do? What would have helped you learn the skill more easily? (For example, more photographs? More clinical practice?).

- 4 - *Non, 2 nothing written.*
- Check feeding problems x 2.*
- A/C sick young infant x 2.*
- Plan on how to calculate ORS needed x 1.*
- Palmar pallor x 1.*
- Counselling caretaker x 1.*

- Chest indrawing - 1)*
- Lethargic and unconsciousness x 1) More clinical*
- Check umbilical redness x 1) practice*
- More clinical practice x 2)*

5. What was good about the course? What was not good and should be improved or left out for future courses?

Provided more nursing tools and knowledge on how to manage childhood illness.

English simple x 5.

Very helpful using step by step process.

In future hand outs should be compiled in booklet form for future reference.

Need more time.

Need practicals on how to insert NG tube and IV line.

Learnt how to refer urgently and use of appropriate drugs.

6. Are there any skills that you need in managing childhood illness that you think should be added to the course? What are they?

Laboratory test x 1, cut downs x 1, inserting NG tubes and IV lines x 1.

Good attitude and use of appropriate language x 1.

2 nothing written.

11 none.

7. Do you have any other comments or suggestions for improvement of the content of the course or the way in which it was conducted?

Course too short.

Course to run for 4 - 8 weeks.

More funds to train others.

Course to run for 4 weeks but first 2 weeks at training site then participants go to practice and come back for another 2 weeks to present problems encountered.

Good course, to continue.

Handouts to be in booklet x 4, provide wall charts for teaching other staff.

Course rushed in third week.

Needed more time to practice on real children, otherwise course very good and sistematic.

Need pharmacology book where formulas are simple.

Keep it up.

8. For each activity listed below, tick one box to indicate whether you thought the time spent on that activity was too short, adequate or too long.

Type of Activity	Time spent was:			
	Too short	Adequate	Too long	Nothing
Written exercises followed by individual discussions of your work with a facilitator	1	9	0	7
Photo exercises	2	14	0	1
Video exercises	5	11	0	1
Role plays	5	11	0	1
Group discussions	0	16	0	1
Oral drills	1	14	0	2
Outpatient sessions	3	12	1	1
Inpatient sessions	4	12	0	1
Entire course	9	7	0	1

9. Are there health care practices that you will do differently when you return to your clinic as a result of what you learned in this course? If so, what are they?

Follow IMCI process i.e. start assessing/classifying.

Counselling mothers about feeding and giving oral drugs.

Nothing different.

Refer urgently.

Learned about first and second line drugs.

Spend more time on child and reduce mortality.

No wastage of drugs.

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