INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS (IMCI) PRACTICE BY TRAINED HEALTH WORKERS (A BASELINE STUDY)

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DECLARATION

I hereby declare that this dissertation represents my own work and has not been presented either wholly or partially or in part for a degree at the University of Zambia or any other university.

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APPROVAL

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ACRONYMS

ARI	Acute Respiratory Infections
BASICS	Basic Support for Institutionalizing Child Survival
CHD	Child Health and Development
CSO	Central Statistics Office
DHMT	District Health Management Team
HFS	Health Facility Survey
HW	Health Worker
IMCI	Integrated Management of Childhood Illnesses
OPD	Out Patient Department
ORS	Oral Rehydration Salts
ORT	Oral Rehydration Therapy
UNICEF	United Nations Children`s Fund
UTH	University Teaching Hospital
WHO	World Health Organisation
ZDHS	Zambia Demographic Health Survey

ABSTRACT

In Zambia, one in ten children dies before the first birthday, and one in five before their fifth birthday. To reduce this unacceptable high under five mortality the IMCI strategy was introduced in Zambia in 1995 by the Central Board of Health (CBOH) in collaboration with other cooperating partners, WHO, UNICEF and BASICS.

The strategy combines improved management of childhood illness with aspects of nutrition, immunization, and several other important influences on child health, including maternal health. Using a set of interventions for the integrated treatment and prevention of major childhood illnesses, the IMCI strategy aims to reduce death and the frequency and severity of illness and disability, and to contribute to improved growth and development. This approach is calculated to be able to prevent up to 14% of the global burden of disease if appropriately applied in low–income countries.

IMCI training alone does not sustain improved health worker performance. Periodic evaluations coupled with feedback is essential for understanding the difficulties in the implementation and sustaining its effectiveness.

The main objective of the study was to assess the knowledge and clinical performance of the health workers trained in IMCI with a view to identify operational difficulties and propose remedial measures to sustain the implementation of the IMCI strategy.

The study was conducted in four districts(Chipata, Kafue, Kitwe and Luanshya) and among 38 IMCI trained health workers who attend to sick children in 30 health centres. Three checklists were used to observe and interview health workers managing 141 sick children aged two months up to five years presenting with at least any of the major IMCI targeted symptoms. Along with this, an inventory of facility infrastructure was undertaken to review the health facility on the availability of services and supplies. Besides the above, an interview was conducted with the health workers at the facilities to discuss supervision and the difficulties met in the implementation of IMCI.

The study was conducted between November 25 and December 18, 1998, by the Principal Investigator with the help of six health workers trained in IMCI based in Lusaka. The case management observation focused on the assessment of vital information, general danger signs, the major IMCI complaints, malnutrition and feeding assessment. 91(65%) out of 141 caretakers were asked whether the visit was initial or follow-up. 134(95%) and 125(89%) of the sick children who attended the facilities had their weight and temperature measured respectively due to non availability of the tools at some health facilities. Of the 141 sick children, 121(86.5%) were fully assessed for the presence of general danger signs. 86(92.2%) out of 107 children with the complaint of the cough or difficult breathing were fully assessed. Although 105 children presented with fever, only 65(62%) of them were fully assessed. The ear problem was well assessed in 79% of the children. 79(56%)children out of all the 141 who were seen in all the facilities had full assessment of malnutrition and anemia. Although 105 caretakers were breastfeeding, the health workers asked 68(65%) of them about the frequency of breastfeeding and other complementary foods. Despite most

of the caretakers having received counseling, only 94(67%) of them were asked checking questions to confirm the understanding of instructions and advice given.

Out of the 30 health facilities visited 10(30%) had no functioning refridgerators /cool box and sterilizers and did not offer immunization services daily. The distances between the nearest referral centre/hospital ranged from 2 to 60 kilometres. One third of health centres had no proper record keeping and most of the health facilities had shortages of IMCI recommended drugs. Although, almost every centre confirmed the visit by the Course Director or Facilitators after the IMCI training, the local DHMT's members visited only half of the facilities in their respective districts. The supervisors concentrated on facility review than observation of health workers managing sick children. Health workers from two thirds of the facilities received feedback from the DHMT supervisors during the visit.

Majority of health workers trained in IMCI were able to assess the sick children correctly and communicate to their caretakers satisfactorily. Their performance was nevertheless affected by the non availability of basic tools, essential IMCI listed drugs, inadequate communication facilities and lack of supportive supervision.

.For the success of IMCI regular supervision, periodic evaluations of health worker

performance in conjunction with feedback, and provision of essential drugs and supplies are necessary.

CHAPTER ONE

1.0 Introduction

About 12.4 million children under the age of 5 years die every year in developing countries (1). Seven in ten of these deaths are due to acute respiratory infections (mostly pneumonia), diarrhoea, measles, malaria or malnutrition (2-6), and often to a combination of these conditions (7). In Zambia, one in ten children dies before the first birthday, and one in five before their fifth birthday (8).

The evidence that a large proportion of childhood morbidity and mortality in the developing world is caused by just five conditions does not in itself argue for an integrated approach to the management of the childhood illness. However, most sick children present with signs and symptoms related to more than one of these conditions and this overlap means that a single diagnosis may be neither possible nor appropriate. A single diagnosis for a sick child is often inappropriate because it identifies only the most apparent problem, and can lead to an associated and potentially life-threatening condition(s) being overlooked. Treatment of childhood illness may also be complicated by the need to combine therapy for several conditions. An integrated approach to managing sick children is, therefore, indicated as is the need for child health programmes to address the sick child as a whole and not as single disease entities. The challenge is to combine these lessons into a single, more efficient and effective approach to managing childhood illness. A number of programmes in WHO division of child health and development (CHD), in collaboration with ten other WHO programmes, UNICEF, the World Bank and numerous other agencies and institutions, have responded to this challenge and developed an approach called the integrated management of childhood illness (IMCI) strategy.(9,10). The IMCI strategy was introduced in Zambia in 1995 by the Central Board of Health (CBOH) in collaboration with WHO, UNICEF, and other collaborating partners(11). To date the IMCI strategy has been integrated through the health reforms in four provinces.

The strategy combines improved management of childhood illness with aspects of nutrition, immunization, and several other important influences on child health, including maternal health. Using a set of interventions for the integrated treatment and prevention of major childhood illnesses, the IMCI strategy aims to reduce death and the frequency and severity of illness and disability, and to contribute to improved growth and development. This approach is calculated to be able to prevent up to 14% of the global burden of disease if appropriately applied in low –income countries(1).

The core of the IMCI strategy is a set of guidelines for integrated case management of the five most important causes of childhood deaths and it involves several steps.

The health worker first assesses the child by identifying any danger signs, asking about the four main symptoms in all children (ie cough or difficult breathing, diarrhea, fever, and ear problem), carrying out further assessment if a main symptom is reported, and reviewing the nutritional and immunization status in all children. The health worker then classifies the child's illness. Each illness is classified according to whether it requires: Urgent referral, Specific medical treatment and advice; or Simple advice on home management. Action-oriented classifications, rather than exact diagnoses, are used.

After classification, specific treatments are identified. If the child has to be referred urgently to a hospital, the health worker gives only essential treatment before departure. Practical treatment instructions are carried out, including how to teach the mother to administer oral drugs, to increase fluid intake during diarrhoea, and to treat local infections at home. The mother is advised on the signs which indicate that the child

should immediately be brought back to the clinic and when to return for routine follow-up. Feeding is assessed and counselling of the mothers on feeding problems is provided. Follow-up instructions for various conditions are given when the child returns to the clinic.

Training for the integrated management of childhood illness (IMCI) includes both initial skill acquisition and reinforcement. The 11-day IMCI course is designed to help first level health workers acquire new skills to manage sick children more effectively. Health workers may find that it is difficult, however, to begin using these skills when they see children in their health facilities. They often need help to transfer what they have learned in the course to their own work situation.

A follow-up visit, the second component in the training of first-level health workers, is designed to reinforce the transfer of new skills. At least one follow-up visit should be conducted soon after the course, within one month, in order to help health workers apply what they have learned to their routine responsibilities. District supervisors and IMCI facilitators, who have been trained in IMCI, facilitation skills, and follow-up tasks, conduct the visits (12).

CHAPTER TWO

2.0 Current Situation Analysis in Zambia

Several number of child health programmes existed in the country before the introduction of the IMCI strategy. These included the Control of Diarrhoeal Diseases(CDD), the Acute Respiratory Infections(ARI), and Malaria Control programmes. The impact of these programmes was evidenced by the decline in the infant mortality rate(IMR) from 147 per 1000 live births in 1969 to around 100 per 1000 in 1980(13). Data by the Zambia Demographic Health Survey(ZDHS) in 1992 and 1996 indicates that child survival has deteriorated since the mid 1980s. The trend has been linked to effects of the deteriorating economy as well as the impact of the Acquired Immune Deficiency Syndrome(AIDS). Currently one in 10 children dies before the first birthday, whereas one in five children dies before the fifth birthday(14). The main causes of death, after the neonatal period, are pneumonia, diarrhoea, measles, malaria and often to a combination of these conditions(7).

Prior to the introduction of IMCI in the country, in 1996, the Ministry of Health and the USAID-funded BASICS Project conducted a baseline health facility survey (HFS) in Lusaka urban, Kafue, Chongwe and Kitwe .The survey revealed that half of the health providers attended at least some training in diarrhoea or Acute Respiratory Infections (ARI) or malaria case managements, although there seemed to be a gap between their knowledge and their practice. Health providers and sick child caretakers' interaction was very limited or inappropriate. More than half of the providers did not know the key

messages to tell the caretakers. Immunization services for the sick children were inadequate. On the day of the study, only twelve percent (12%) of the sick children who were due for immunization received appropriate vaccinations. Most of the providers required training in counselling and communication. Majority of the health providers did not assess for general danger signs. Only two percent of all caretakers were asked about all general danger sign questions while only 10% of sick children with cough or difficult breathing had a respiratory rate count. Although the level of Oral Rehydration Salts (ORS) prescription was high, the assessment of the degree of dehydration in children with diarrhoea had still some problems. Only one-third of children with fever were given an antimalarial treatment. In addition, health providers did not check for stiff neck in children with fever, and determined the weight-for-age status for only 16% of sick children. Health workers had asked similar proportion of caretakers about complementary feeding of sick children over six months of age(14).

Evaluations carried out by BASICS in 1998 during the follow-up health facility surveys in the same districts showed that health worker performance improved significantly soon after the training but started declining over the next six to twelve months. There was an improved rational use of drugs. However, the counselling and communication skills of the health workers appeared to be lower than that of the clinical skills(11).

The World Health Organization recommends that after the initial follow-up visits, the district teams should integrate IMCI supervision into the existing supportive supervision format. Since routine supervision format varies from country to country, it is not possible

to suggest one format. In Zambia, the Central Board of Health created a common checklist for the six health thrusts(Reproductive Health, Child Health, HIV/AIDS/STD/TB/Leprosy, Malaria, Nutrition, Water and Sanitation) in 1997, but after several shortfalls in three pilot districts it was not practical(11). The current supervision of IMCI in general is therefore infrequent and not standardized. During supervisory visits, district staff focus largely on administrative issues. Without adequate records, supervisors find it difficult to keep track of the health workers that have been adequately supervised during the previous visits. It is evident that in Zambia supervisors are uncertain of how to support quality of care. Supervisors rarely observe health workers providing care to patients. The health worker therefore is working unsupervised and has no adequate feedback on performance, resulting in the deterioration of quality of care after training(15). Periodic evaluations of health worker performance are essential for understanding the difficulties in implementation and for sustaining its effectiveness. The present study tries to answer these crucial issues.

CHAPTER THREE

3.0 Literature Review

The information and work about the IMCI strategy is mainly due to the studies done by the World Health Organization. The WHO and UNICEF have been working on the strategy since 1994. Significant progress has been made since 1995. Technical support to countries has been and continues to be given in their preparation for and implementation of IMCI. The guidelines for the IMCI strategy are based on both expert clinical opinion and research results.

In Zambia much work about IMCI was mainly conducted by USAID/Zambia BASICS project. The level and trend in infant and child mortality in Zambia continue to increase as shown and it has become a national concern requiring urgent intervention(10).

Table 1: Trends in infant and child mortality, Zambia 1984-1996

Indicator (reference period)	Infant mortality rate	Under 5 mortality rate
1990 (census 1984)	90	167
1992 ZDHS (1987-1991)	107	191
1996 ZDHS (1992-1996)	109	197

Projections based on the global burden of disease analysis completed in 1996 indicate that the five conditions (ARI, diarrhoea, measles, malaria and malnutrition) will continue to be major contributors to child deaths in the year 2020, unless significantly greater

efforts are made to control them(15). Implementation of the IMCI strategy improves the case management skills of the staff, the health system, and family and community practices. The strategy systematically addresses the most important causes of childhood death and illness. At least three out of four of the children who seek health care every day suffer from one of the five conditions that are the focus of IMCI. The 1993 World Bank Development Report, Investing in Health, estimated integrated management of childhood illness to be the group of interventions with the potential to have the greatest impact on the global burden of disease. IMCI also provides the opportunity for, and emphasizes, important preventive interventions such as immunization and improved infant and child nutrition, including breastfeeding. Investing in Health ranked IMCI among the 10 most cost-effective interventions in both low-and middle-income countries. The approach alone is calculated to be able to prevent up to 14% of the global burden of disease if appropriately applied in the low-income countries. Inappropriate management of childhood illness wastes scarce resources. IMCI strategy will result in cost savings. While nearly all children in the developed world have ready access to simple and affordable preventive and curative care which protects them from death , millions of children in the developing world do not have access to this same life-saving care. The IMCI strategy addresses this inequity in global health care(1).

The 1997 Central Statistics Office Report indicates that health services in Zambia seem inadequate. The interaction between the service providers and caretakers of sick child was limited. More than 50% of the providers did not know key messages to tell caretakers and that very few providers had received IMCI training. The case management

of sick children was inappropriate. The recommendations highlighted in the same report were that IMCI training should be expanded and that CBOH should strengthen the supervision and supply of essential drugs (14).

The Zambia Situation analysis Study(1997) stated that performance of health providers is assessed using various observable indicators. Specifically health providers' skills are assessed during interaction between the sick child caretaker and the health provider by the observer in the setting. In addition to the clinical management of the childhood illnesses, the ability of the heath provider to communicate and counsel the caretaker and the sick children is also observed. Improving the counselling and communication skills of the health providers plays an important role in IMCI.

In addition, Blumenfeld (1990) recognises that although both caretakers and health providers are important to the effort of improving child health, the latter play a double role. Not only are health providers expected to diagnose and treat or refer effectively, in many situations they are also expected to communicate the information needed by the caretakers to recognise the problem and respond appropriately before the child enters the service system. Thus their performance at the point of contact with the caretaker is critical(17).

The effectiveness of the training in IMCI of the health providers, plus subsequent refresher training and provision of new information and skills is a major determinant of their performance as service providers. Effectiveness is a combination of appropriate

substantive content and presentation for lessons that allow the health worker to grasp and retain the material and skills. Competence-based training is thought to be the most effective approach to training health workers in IMCI. Competency-based assessment is considered the most reliable way to ensure that health workers are ready to assume their responsibilities in the field(17).

The IMCI training protocol requires that an initial IMCI follow-up be conducted six weeks after training to assess performance of the trained health providers. The follow-up also helps to re-enforce the skills of the trained health providers by identifying and solving problems faced by health providers in implementing IMCI in their own setting.

Literature strongly emphasizes the importance of addressing the issue of the ever increasing infant and child deaths in developing countries. Good performance of the health providers is primary to case management of the child illnesses and in the reduction of the child deaths. The impact of reducing child illnesses and deaths can only be achieved if all frontline health staff are trained in IMCI.

The availability of drugs and their rational use are essential for the successful implementation of IMCI. A problem in many countries, particularly in Sub-Saharan Africa, is the irregular or lack of access to essential drugs at health facilities. Distribution is often characterized by a public system in which drugs are free but not available, and a private system in which drugs are available but not affordable to a large proportion of the population.

The availability of IMCI drugs for children who need them is related to: national drug policies, particularly those affecting drugs in the first-level facilities; the management of drug supplies(the procurement, distribution and monitoring of drugs); rational practices in the prescription and dispensing of the drugs; and correct use of the drugs in treatment. Since none of these areas affecting the availability of drugs is unique to IMCI, coordinated approaches are often required to avoid parallel systems or the duplication of activities among different health care activities and programmes(12).

According to the IMCI Information overview, the Integrated Management of Childhood Illness is a broad strategy encompassing interventions at home and in the health system, and whose implementation involves three phases: Introduction, Early implementation and Expansion. By August 1998, fifty-one countries were at different stages of implementation and at least thirteen others had expressed interest but had not yet started activities. Nineteen countries were in the process of introducing IMCI; twenty-five had successfully introduced the strategy and had moved on to preparation for and implementation of initial activities in selected districts. Seven countries had moved from early implementation to expansion of activities. This group includes Tanzania, Uganda and Zambia.

CHAPTER FOUR

4.0 Study Justification

IMCI training alone does not sustain improved health worker performance. Periodic evaluations coupled with feedback is essential for understanding the difficulties in the implementation and sustaining its effectiveness. The performance of health workers trained in IMCI has deteriorated with time mainly due to inadequate supervision. Supervision of IMCI is usually infrequent and not standardized. The DHMT supervisors focus mainly on administrative issues. Supervisors rarely evaluate health workers examining patients. The health worker is therefore working unsupervised and has no adequate feedback(15).

In spite of the obviously positive impact of IMCI training on health worker performance, there was a trend towards a refractory response in some places, particularly the urban areas. This trend needs to be checked and corrective responses instituted. The knowledge gained during the training needs to be reinforced from time to time.

The results of this study, once properly documented and disseminated, will contribute significantly to policy/planning as it relates to IMCI implementation in the country.

CHAPTER FIVE

5.0 Aims and Objectives

5.1 Main Objective

To assess the clinical performance of the health workers trained in IMCI with a view to identify operational difficulties and propose remedial measures to sustain the implementation of the IMCI strategy.

5.1.1 Operational Aim: Information obtained will be assessed and recommendations made to the IMCI working group.

5.2 Specific Objectives

5.2.1. To assess whether the IMCI procedures are correctly implemented during the examination of children by the health workers trained in IMCI.

5.2.2 To evaluate the facilities conducting the IMCI strategy.

5.2.3 To interview the health workers about supervision and the operational difficulties.

5.2.4 To recommend remedial measures for sustainable IMCI implementation.

CHAPTER SIX

6.0 Methodology

6.1 Study design

In order to undertake the study, a descriptive cross sectional survey was carried out. Three types of research instruments were used in the survey. The first checklist (See Appendix ii) was used to observe health workers trained in IMCI while managing sick children aged two months up to five years presenting with at least any of the major IMCI complaints(cough, diarrhoea, fever and ear problem). The second checklist(See Appendix iii) was used to conduct an inventory of the health facility infrastructure and availability of services and supplies. The third checklist(See Appendix iv) was a short interview with health workers who manage sick children.

During the case management observation the research assistants observed quietly and without interference how the health workers conducted the assessment of 141 sick children. All the health workers were informed about of the study purpose. The 141 sick children were accompanied by 141 caretakers. The information collected included the vital information of the patient, assessment of the general danger signs, major IMCI complaints, malnutrition and feeding assessment. The study also looked at the counseling and interaction practices of health workers with caretakers.

6.2 IMCI Indicators Measured

6.2.1 Proportion of sick children weighed and temperature measured by the health worker.

6.2.2 Proportion of caretakers asked whether the visit was initial or follow-up.

6.2.3 Proportion of caretakers asked the reason for the visit by the

health worker trained in IMCI.

6.2.4 Proportion of sick children fully assessed for the presence of general danger signs.

6.2.5 Proportion of sick children fully assessed for cough or difficult breathing.

6.2.6 Proportion of sick children fully assessed for diarrhoea.

6.2.7 Proportion of sick children fully assessed for fever.

6.2.8 Proportion of sick children fully assessed for ear problem.

6.2.9 Proportion of sick children fully assessed for malnutrition and anemia.

6.2.10 Proportion of caretakers who received feeding assessment.

6.2.11 Proportion of caretakers counselled.

6.3. Facility Evaluation Indicators

6.3.1 Assessment of the clinical examination area.

6.3.2. Assessment of the Oral Rehydration Therapy(ORT) area.

6.3.3. Assessment of the immunization area.

6.3.4. Assessment of the clinical and referral services offered at the health facility.

6.3.5. Assessment of the record keeping

6.3.6. Assessment of the availability of drugs and other supplies

6.4 Study area

The study was conducted in four districts implementing the IMCI strategy namely: Chipata, Kafue, Kitwe and Luanshya. The study sites were selected by random sampling. District criteria included a minimum of 10 health workers trained in IMCI per district; one health worker per health centre; and at least one District Health Management Team(DHMT) member trained in IMCI.

6.5 Study population

The study population included 38 IMCI trained health workers managing 141 sick children accompanied by 141 caretakers in 30 health centres.

6.6 Inclusion criteria

The study population included caretakers with sick children aged two months up to five years presenting with at least any of the major IMCI complaints(cough, diarrhoea, fever and ear problem); and IMCI-trained health workers using the IMCI strategy.

6.7 Exclusion criteria

Caretakers with sick children aged two months up to five years presenting with non IMCI complaints and health workers not trained in the IMCI strategy. Caretakers with children below two months and above five years of age.

6.8 Study procedure

The study was conducted between November 25 and December 18, 1998 by the Principal Investigator with the help of a research team of six health workers trained in IMCI based in Lusaka. A verbal consent was obtained from the caretakers who had children who met the criteria for admission into the study. Permission was obtained from all the DHMTs in which the study was conducted. The checklists were then filled in by the research assistants after the procedures.

6.9 Data Management

The data was entered into an EPI INFO data base. The preliminary analysis was done in Statistical Package for Social Sciences Windows Version 7.5.

6.10 Ethical Consideration

The research proposal was presented to and approved by the University of Zambia ethical committee and written permission was also obtained from the DHMTs in Chipata, Kafue, Kitwe and Luanshya.

CHAPTER SEVEN

7.0 Results

The findings are presented in three categories: (1) case management observation; (2) facility survey; (3) health worker interview.

7.1 Case Management Observation

Ninety-one out of 141 caretakers(65%) were asked whether the visit was initial or follow-up. 134(95%) and 125(89%) of the sick children who were attended to by health workers had their weight and temperature measured respectively. The main reason for not taking the measurements were due to non availability of the facilities such as thermometer and weighing scales at the health centres.

Table 2: Study Population: Health Workers, Health Facilities, and Number of Observed Sick Children with Caretakers.

	N(%)				
Category	**Districts**				**Total**
	Chipata	**Kitwe**	**Luanshya**	**Kafue**	
No. of Health Facilities Visited	10(33)	5(17)	10(33)	5(17)	30(100)
No. of Health Workers Observed	13(34)	7(19)	10(26)	8(21)	38(100)
No. of Sick Children Observed With Caretakers	48(34)	22(16)	46(32)	25(18)	141(100)

7.1.1 Assessment of general danger signs and the major IMCI Complaints

Among 141 sick children observed, 121(85.8%) children had full assessment of the general danger signs. Out of the 93 children who presented with cough or difficult breathing, 86(92.2%) of them were fully assessed. Only 50 children(74.6%) among the 67 who presented with diarrhoea were checked according to the IMCI recommendations. 48 children with diarrhoea were offered some fluids to check if thirsty or drinking poorly. Although 104 children presented with fever, only 65(62%) of them had full assessment done. The ear problem was fully assessed in 112(79%) of the children. 79(56%)children were fully assessed for malnutrition and anemia. (Figure 1 and Table 3, 4, 5)

Caretakers with children aged two years and below who had feeding problems, malnutrition, anemia or growth faltering had feeding assessment done. Although 105 caretakers were asked whether their children were breastfeeding, only 68(65%) of them were asked about the frequency of breastfeeding and other complementary foods(Table 6).

7.1.2 Counselling and Interaction with Caretakers

This study assessed whether health workers asked caretakers the reasons for seeking care, how to give prescribed medicine at home and when to return immediately and for follow-up. The was good interaction between the health workers and caretakers. Most of the caretakers were counselled on how to give medicine at home(88%); on when to return for

follow-up(90%); on when to return immediately(78%); and how to use the food box. However, only 94(67%) out of the total of 141 caretakers were asked checking questions to find out if they understood the instructions and advice given(Figure 2).

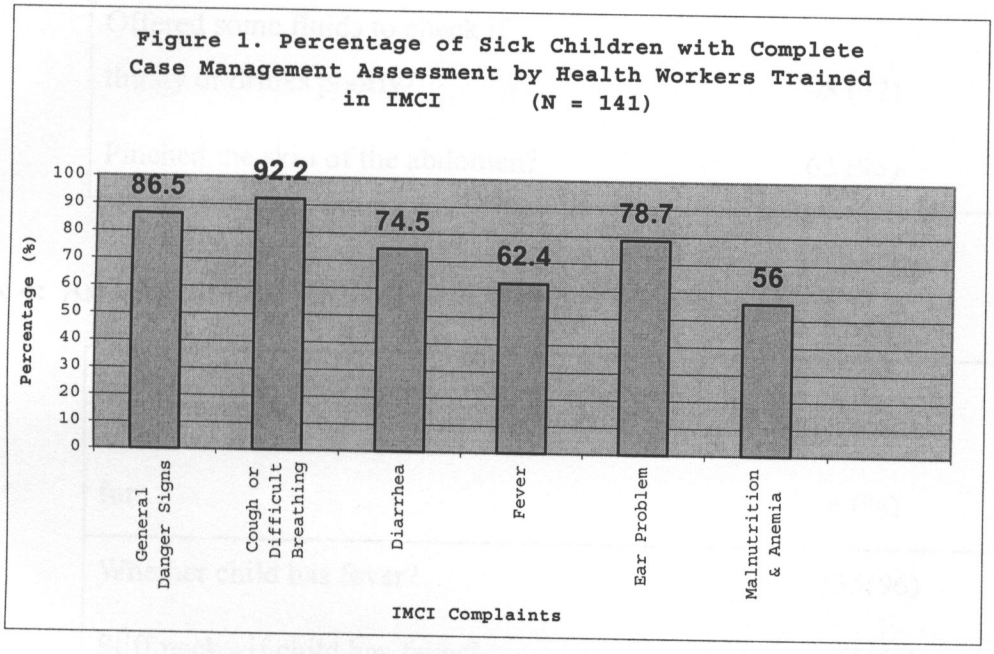


Table 3: Assessment of Diarrhoea by Health Workers trained in IMCI

Number of Care Takers asked:	Yes n (%)
Whether child has diarrhoea?	125 (89)
If there is blood in the stool?	61 (91)
Offered some fluids to check if thirsty or drinks poorly?	48 (72)
Pinched the skin of the abdomen?	63 (95)

Table 4: Assessment of fever by Health Workers trained in IMCI

Number of Care Takers asked or Children checked for:	Yes n (%)
Whether child has fever?	135(96)
Stiff neck - if child has fever?	65(62)
Generalized rash by undressing?	77(73)

Table 5: Assessment of malnutrition by Health Workers trained in IMCI

Number of Children checked for:	Yes n (%)
Undressed to look for severe wasting?	85 (60)
Checked for Palmar Pallor?	106 (75)
Determined weight for age?	109 (77)

Table 6: Feeding Assessment by Health Workers trained in IMCI

Number of Care Takers Asked:	**Yes** n (%)
Whether the child is on breast milk?	105(88)
The frequency of breast feeding?	68(65)
Whether the child receives other foods?	86(74)
The frequency of other foods?	71(69)

Figure 2. Percentage of Care Takers Counselled by Health Workers after Examination

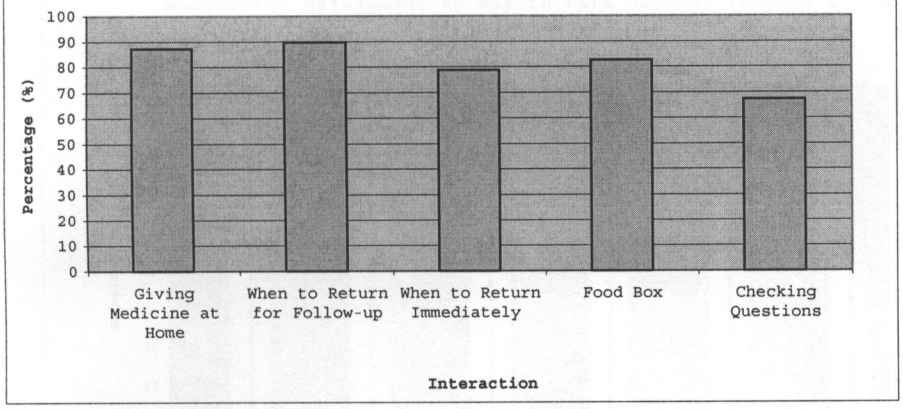
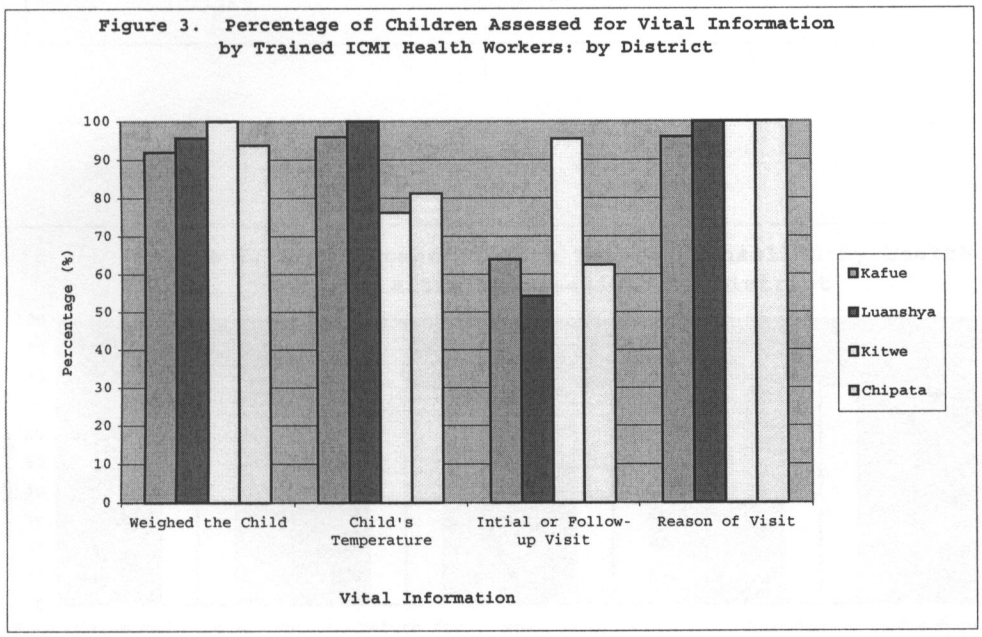
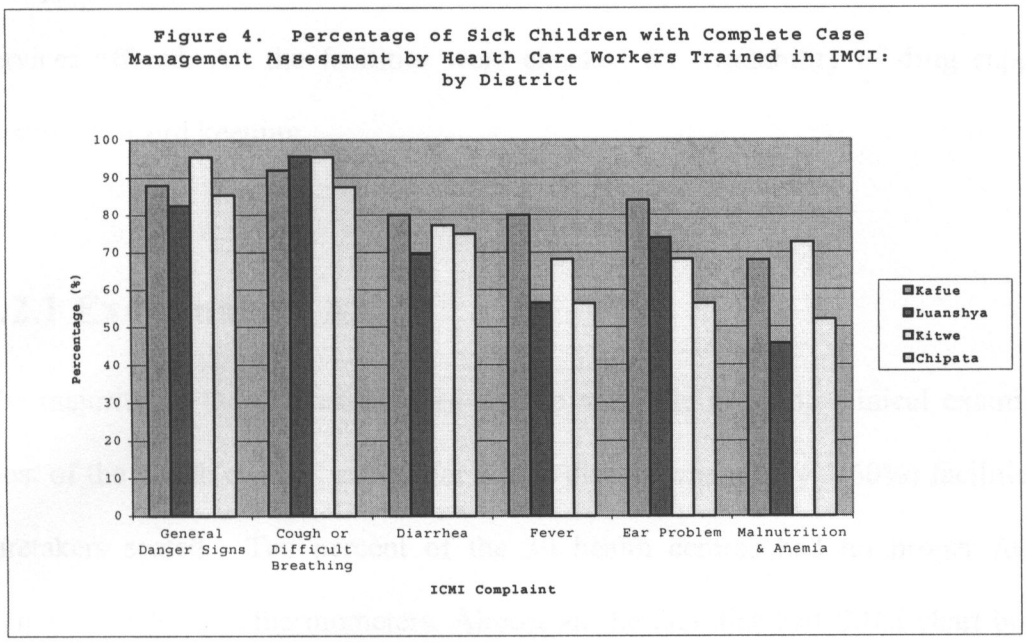
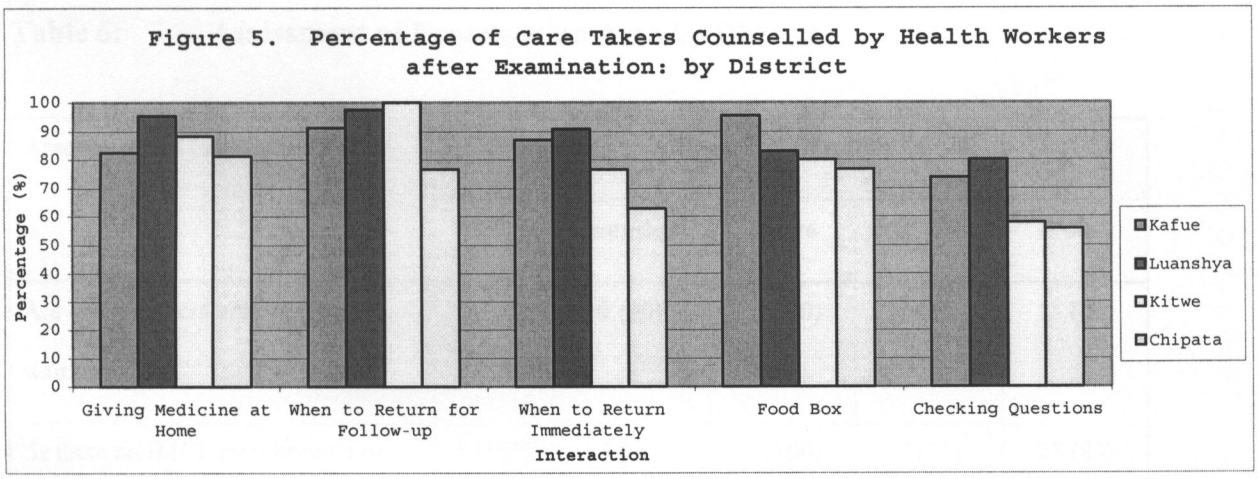


Figure 3. Percentage of Children Assessed for Vital Information by Trained ICMI Health Workers: by District







7.2 Health Facility Survey

The research team conducted a health facility survey upon completion of the case management observations in all the thirty health facilities participating in the survey. This included assessment of the consultation rooms(examination area), the oral re-hydration

therapy (ORT) and immunization areas. They also discussed the clinical and referral services offered. All the facilities were checked for availability of drug supplies and quality of record keeping.

7.2.1 Examination Area

The majority of the caretakers were able to sit while awaiting clinical examination in most of the health centres, except for Kafue district where only 3(60%) facilities had all caretakers seated. Ten percent of the 30 health centres had no proper functioning weighing scales and thermometers. Almost all the facilities had IMCI chart booklets as opposed to laminated recording forms available in 57% of the facilities only(Table6).

Table 6: Assessment of Examination Area by District

Assessment of examination area	Yes n (%)				
	Kafue	Luanshya	Kitwe	Chipata	Total
Are all caretakers able to sit while waiting?	3 (60)	9 (90)	5 (100)	8 (80)	25 (83)
Is there an IMCI chart booklet or ITG in examining room?	5 (100)	3 (60)	5 (100)	7 (70)	25 (83)
Are there laminated recording forms and mothers cards?	1 (20)	4 (40)	4 (80)	8 (80)	17 (57)

7.2.2 Oral Rehydration Therapy(ORT) Area

26 health centres had an health worker assigned to the ORT corner as well as enough space for demonstration and administration of oral rehydration salts(ORS). 27(90%) of the facilities reported to have had a clean source of water supply. Children with some dehydration received plan B hydration treatment in the majority(87%) of the facilities (Table 7).

Table 7: Assessment of ORT Area by District

Assessment of ORT area	Yes n (%)				
	Kafue	**Luanshya**	**Kitwe**	**Chipata**	**Total**
Do children with some dehydration get ORS solution at facility?	5 (100)	8 (80)	4 (80)	9 (90)	26 (87)
Is there a table for mixing ORS solution or for demonstrations?	5 (100)	8 (80)	4 (80)	6 (60)	8 (80)
Is there a source of clean drinking water?	5 (100)	8 (80)	5 (100)	9 (90)	27 (90)
Are there ORT corner supplies (i.e., cups, spoons, jars, buckets)?	5 (100)	7 (70)	4 (80)	8 (80)	24 (80)
Is there a health worker assigned to the ORT corner?	5 (100)	9(90)	4 (80)	8 (80)	26 (87)

7.2.3 Immunization Area

Four of the facilities had no functioning refrigerators and did not offer immunization services daily (Table 8).

Table 8: Assessment of Immunization Area by District

Assessment of Immunization area	Yes n (%)				
	Kafue	**Luanshya**	**Kitwe**	**Chipata**	**Total**
Is space adequate for Immunizing children?	2 (40)	7 (70)	4 (80)	8 (80)	21 (70)
Is there a functioning refrigerator/ice pack freezer?	5 (100)	7 (70)	5 (100)	9 (90)	26 (87)
Is there a functioning sterilizer?	4 (80)	8 (80)	4 (80)	7 (70)	23 (77)
Is correct vaccine condition maintained (2-8 degrees)?	5 (100)	6 (60)	5 (100)	10 (100)	26 (87)

7.2.4 Clinical and Referral Services

Twenty-two(73%) facilities offered daily immunization services. The distance from the nearest referral centres ranged from 2 to 60 kilometres away. In Luanshya 5(50%) of the facilities were located within a radius of three kilometres; while in Kitwe 4(80%) were within 8 kilometres from the referral centre. Chipata had 6(60%) of the facilities located

more than 24 km away; whereas Kafue had 3(60%) of them at least 48km away from the referral centres. Only 14(47%) facilities had radio/telephone communication with their DHMT or the hospital. (Table 9).

Table 9: Assessment of Clinical and Referral Services by District

Assessment of Clinical and Referral Services	Yes n (%)				
	Kafue	**Luanshya**	**Kitwe**	**Chipata**	**Total**
Are immunization services available everyday?	5 (100)	7 (70)	4 (80)	6 (60)	22(73)
Are all sick children weighed before assessed?	5 (100)	7 (70)	3 (60)	8 (80)	23 (77)
Is temperature measured far all children before assessment?	5 (100)	10 (100)	3 (60)	8 (80)	26 (87)
Is there radio communication with DHMT or hospital?	5 (100)	3 (30)	3 (60)	3 (30)	14 (47)

7.2.5 Quality of Record Keeping

Twenty facilities(67%) had individual patient records or registers maintained showing assessment results, therapy offered and follow-ups.

7.26 Health Centre Staff and IMCI Training

Two facilities(7%) reported to have had all sick children attended by the IMCI- trained staff. Almost all the IMCI trained staff shared the knowledge and involved the non-trained in conducting IMCI tasks.

7.2.7 Availability of Drugs and Other Supplies.

The study revealed that most of the facilities had shortages of drug supplies, especially antibiotics(Nalidixic acid was available in 4(13%) facilities only). Fansidar and quinine were available in half of the facilities. Vitamin A and iron were the most abundant drugs (Table 10).

7.3 Health Worker Interview

After the observation of the case management and facility review, a short interview was conducted with the health workers in all the 30 facilities. Ninety-seven percent of them confirmed the visit by the course director or facilitators after the IMCI training. However after the initial followup, the local DHMT visited 17(57%) facilities only.

Health workers from 11(37%) facilities reported that the DHMT member observed them while managing sick children during the last supervisory visit. Health workers in 70% of the facilities preferred their supervisors to observe them while managing sick children (Table 11).

Table 10: Availability of Drugs found in stocks by District (Table 10)

Name of drugs	Kafue	Luanshya	Kitwe	Chipata	Total
Cotrimoxazole	3 (60)	6 (60)	1 (20)	9 (90)	19 (63)
Amoxycillin	4 (80)	2 (20)	1 (20)	7 (70)	14 (47)
Fansidar	2 (40)	Out of stock	1 (20)	9 (90)	12 (40)
Erythromycin	4 (80)	Out of stock	3 (60)	2 (20)	9 (30)
Nalidixic acid	2 (40)	Out of stock	out of stock	2 (20)	4 (13)
Quinine Injectable	4 (80)	6 (60)	2 (40)	5 (50)	17 (57)
Gentamycin	3 (60)	4 (40)	3 (60)	5 (50)	15 (50)
Benzylpenicillin	4 (80)	2 (20)	1 (20)	10 (100)	17(57)
Chloramphenicol lnjectable	out of stock	3 (30)	1 (20)	6 (60)	10 (33)
Iron	5 (100)	10 (100)	2 (40)	10 (100)	27 (90)
Paracetamol	4 (80)	1 (10)	1 (20)	10 (100)	16 (53)
ORS	3 (60)	2 (20)	5 (100)	9 (90)	19 (63)

Table 11: Health Worker Interview by District.

Health Worker interview about supervision	Yes n (%)				
	Kafue	**Luanshya**	**Kitwe**	**Chipata**	**Total**
Did DHMT visit your health centre after the IMCI initial follow up?	4 (80)	4 (40)	3 (60)	6 (60)	17 (57)
During the last visit, did DHMT member observe you managing sick children?	4 (80)	1 (10)	3 (60)	3 (30)	11 (37)
Health facilities not visited	1 (20)	6 (60)	2 (40)	4 (40)	13 (43)
Do you prefer your supervisor to observe you while managing sick children?	1 (20)	9 (90)	3 (60)	8 (80)	21 (70)

CHAPTER 8

Discussion

In this study the commonest reasons for bringing the children to the health facilities were cough, fever and diarrhoea. The above findings are consistent with the findings of the study by Perkins et al in Kenya, in which the same three complaints were the most common(18). These presenting complaints volunteered by the mothers are covered by the IMCI strategy, which is designed to include the majority of the childhood conditions leading to the high morbidity and mortality seen in the developing countries.

Overall, the results show that the health workers were able to assess correctly, and that most were able to provide adequate counselling to the caretaker. It was observed that most of the health workers made use of the IMCI job aids(chart booklets and laminated recording forms) available in the examination rooms as guidelines during the case management observation process. Evidence from research evaluation indicates that consistent use of the IMCI job aids can ensure compliance to IMCI clinical standards(19). Therefore, the use of job aids may have possibly contributed to the complete assessment the IMCI indicators like the general danger signs and cough/difficult breathing. However, some of the health workers interviewed reported that it was not a daily practice to use the job aids when managing the sick children. They even confirmed that they would make a lot of mistakes without the job aids and that they had forgotten much of the IMCI strategy. The health workers complained that they spent too much time when using the IMCI strategy leading to prolonged queues. But Simoes E.A.F et al, in a study done in Gondar, Ethiopia observed that the time taken with each child improved slowly

from 20 minutes at the start of the study to about 18 minutes at the end of the third week. Three months constant working with the charts made the health workers become more familiar and the health workers could complete the case management of one child in five to ten minutes(20).

In spite of the obviously positive impact of the IMCI training on the health worker performance , there was a decrease in the knowledge as well as in the performance of the health workers on some indicators(11). The current study observed that only 65% of the caretakers were asked if the visit was initial or follow-up. 59% of the caretakers were asked about the frequency of breastfeeding. Furthermore health workers rarely performed certain tasks which involved the skills as evidenced by:

- 40% of the 141 sick children were not undressed to check for the signs of wasting;
- 38 % of the 101 sick children with fever were not checked for neck stiffness
- 28 % of the 67 sick children with diarrhoea were not offered some fluid to check if they are thirsty or drinking poorly.

These tasks play a significant role in the classification of the childhood illnesses, and so the reduction of high mortality. Some health workers stated that not offering fluids in the examination room was a common practice as they were alot of sick children to attend to. Health workers depended on what the caretakers informed them about their children's ability to drink. They felt there was therefore no need to counter check.

Effective communication between the caretakers and health workers is very important in the process of diagnosing children's illnesses. To assess the child correctly, health workers must use the language familiar to the caretakers and must ask all relevant questions. The health workers adviced on appropriate treatment and when to return for follow-up, but they did not check the understanding in 38% of the caretakers.

The incidence of drug shortages was very high in most health centres, especially the urban areas. Zambia has a National Drug Policy that ought to support the implementation of the IMCI strategy. In reality, the Pharmaceutical management system has not brought improvements in the effective implementation of the IMCI strategy. The critical shortages and high unit costs of IMCI drugs impinge on the effective implementation of the strategy, particularly for urban health facilities that do not receive donated drugs. Gabra and Hazemba have noted in their study on Drug Management for Childhood Illness Assessment in Zambia that the poor management and accountability of the supplies in most health facilities resulted in wastage and pilferage, which contributed to financial losses. IMCI guidelines were not effectively adhered to during case management, particularly in the use of antibiotics, anti-diarrhoeal preparations and anti-malarials. This resulted to an incremental effect on the financial losses and morbidity and mortality of the children from treatable childhood illnesses(21).

In this study, majority of the health workers (97%) confirmed the initial follow-up visit after training by the Course Director or Facilitators. However, after the initial follow-up the local DHMT visited 17(57%) facilities. The DHMT supervisor only managed to observe the health workers assessing the sick children in 11health facilities. Health workers in 70% of facilities preferred their supervisors to observe them while managing the sick children.

Experience to date indicates that issues such as drug availability, vaccine policies, and supervision need to be considered early in the planning process. The Tanzanian Essential Health Intervention Project(TEHIP) report in the IMCI Newsletter states that each district has to plan how it wants to implement and support IMCI. For example, a district might start in an area with relatively higher mortality than others, or in a remote area where health services are in greater need. Whatever the case, financial availability and an established human resource and supervisors are essential for the success of IMCI implementation(22).

8.1 Limitations of the study

- The presence of an observer might have influenced the health worker to perform better than they would normally have done.
- Some of the health workers trained in IMCI were not available for the cross-sectional survey thus affecting the outcome estimates.
- The use of job aids during the survey period only might have resulted in false reflection of the performance.
- Uncertainty about the consequences of the performance outcome made some health workers express unwillingness to participate possibly leading to a negative outcome.
- The absence of an exit interview might have lead to a possible bias in the assessment of the counselling and interaction of the health workers with the caretakers.

CHAPTER 9

Conclusion

In this study majority of health workers trained in IMCI were able to assess the sick children correctly and communicate to their care takers satisfactorily, However their performance was affected by non availability of basic tools and IMCI listed essential drugs. Although the Course Director/Facilitator initial follow-up visit after training was very good, subsequent supervisory visits by the DHMT staff members were inadequate.

It is evident that IMCI training alone dose not sustain the implementation of the strategy. For the success of implementation, regular supervision, provision of essential drugs and other supplies as well as periodic evaluations coupled with feedback to the health workers is essential.

CHAPTER 10

Recommendations

For sustainable IMCI implementation the following measures should be undertaken:

- IMCI trained health workers should be supported by basic tools such as weighing scales, thermometers, job aids and essential drugs.
- Supervision should be regular, supportive and integrated.

  -Supervision of IMCI should be done by IMCI trained health workers with adequate clinical experience who must always carefully observe the health workers managing sick children.

  -The DHMT supervisors and the health facilities should have structured IMCI supervisory record books for future references and follow-up and progress reporting.

  -Supervisors should discuss the underlying key problems identified and develop consensus on practical steps to address the problems.

  -Clinical care supervision should be emphasized as an essential and integral part of routine supervision.

- District staff should meet once or twice in a year to discuss the difficulties in the use of the checklists and therefore update if necessary. Health centre and DHMT staff should emphasize a team problem solving approach

- All the IMCI trained health workers should only be reallocated with a view to continue their participation in the IMCI activities.

- Improved communication will yield better referral services where possible.

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Appendices

Appendix i

The Research Team

1.	J. Musole	Chelston Health Centre
2.	E. Mulungushi	Mandevu Health Centre
3.	T. Ilunga	Matero Reference
4.	A. Zulu	Chawama Health Centre
5.	J. Nonde	Chipata Health Centre
6.	L. Nkamba	Civic Centre clinic

Observation of Assessment of the Sick Child

Make sure that the health worker knows that you are not there to evaluate him/her. Sit in an angle of the room where you can easily observe the interaction between the caretaker and the health worker without interrupting the process. Tick or cross out appropriate boxes as quickly as possible. After the health worker finishes with the sick child, ask or look for any task which the health worker missed.

Health Worker *(full name)*	Health Centre	District	Date trained (IMCI) (MM/YY)	Date of Survey
_____	_____	_____	__ __ / __ __	__ /__ __ / __ __ __

Record time consultation begins: __ __ : __ __

Age of child: __ __ months

I. General Information

Q.	**Does the health worker or a member of the staff:**	**Circle appropriate code:** 1= yes; 2= no 3= Uncertain/not applicable	*If HW asked or did the task, write answer. If he/she did not ask or do it, do it yourself ONLY when HW finishes assessment:*
1.	weigh the child?	1 2 3	__ __.__ kgs
2.	take child's temperature?	1 2 3	__ __ : __ ° C
3.	ask if visit is initial/follow-up?	1 2 3	1=initial 2=follow-up
4.	ask the reason of the visit?	1 2 3	
5.	what reasons has the caretaker given for bringing the child today?	*Circle all that apply:* 1= cough or difficult breathing 2= diarrhea 3= fever/body hotness/malaria 4= ear problem 5= eye problem 6= rash or skin infection 7= other: (specify) _____ _____	

II. General Danger Signs

Q.	**Does the health worker ask the caretaker whether child:**	**Circle appropriate code:** 1= yes; 2= no 3= Uncertain/not applicable	*If HW asked the question(s), circle caretakers answer. If he/she did not ask, do it yourself ONLY when HW finishes assessment:* 1= present; 2= no present
6.	Is not able to drink or breastfeed?	1 2 3	1 2
7.	Is vomiting everything?	1 2 3	1 2
8.	Has had convulsions at home?	1 2 3	1 2

III. Cough or Difficult Breathing

Q.	**Does the health worker ask or look for whether the child:**	**Circle appropriate code:** 1= yes; 2= no 3= Uncertain/not applicable	*If HW asked the question(s), circle caretakers answer. If he/she did not ask, do it yourself ONLY when HW finishes assessment:* 1= present; 2= not present
9.	Has cough or difficult breathing?	1 2 3	1 2
10.	Has fast breathing by counting breaths per minute?	1 2 3	1 2
11.	Has chest indrawing by lifting up dress/shirt?	1 2 3	1 2

D. Diarrhea

Q.	Does the health worker ask or look for:	Circle appropriate code: 1= yes; 2= no 3= Uncertain/not applicable			If HW asked the question(s), cle caretakers answer. If he did not ask, do it yourself ON when HW finishes assessmer 1= present; 2= not prese	
13.	Whether the child has diarrhea?	1	2	3	1	2
14.	If there is blood in the stool *(if child has diarrhea)*?	1	2	3	1	2
15.	Offer some fluids to check if thirsty or drinks eagerly or poorly?	1	2	3	1=thristy 3=eagerly	2=not thirsty 4=poorly
16.	Pinch the skin of the abdomen?	1	2	3	1=slowly	2=very slow

E. Fever

Q.	Does the health worker ask or look for:	Circle appropriate code: 1= yes; 2= no 3= Uncertain/not applicable			If HW asked the question(s), cle caretakers answer. If he did not ask, do it yourself ON when HW finishes assessmer 1= present; 2= not prese	
17.	Whether the child has fever?	1	2	3	1	2
18.	Stiff neck - *if child has fever*?	1	2	3	1	2
19.	Generalized rash by undressing the child? *- if child has fever.*	1	2	3	1	2

F. Ear Problem

Q.	Does the health worker ask or look for whether the child:	Circle appropriate code: 1= yes; 2= no 3= Uncertain/not applicable			If HW asked the question(s), cle caretakers answer. If he did not ask, do it yourself ON when HW finishes assessme 1= present; 2= not prese	
20.	Has an ear problem?	1	2	3	1	2
21.	Has an ear pain - if caretaker reports ear problem?	1	2	3	1	2
22.	Ear discharge - *if there is ear problem*?	1	2	3	1	2

G. Malnutrition and Anemia

Q.	Does the health worker:	Circle appropriate code: 1= yes; 2= no 3= Uncertain/not applicable			If HW asked the question(s), cle caretakers answer. If he did not ask, do it yourself ON when HW finishes assessme 1= present 2=not prese	
23.	Undress child to look for severe wasting?	1	2	3	1	2
24.	Check the palms for pallor?	1	2	3	1	2
25.	Determine weight for age?	1	2	3	1	2

H. Feeding Assessment for children less than 2 years or have malnutrition/anemia/very low wt for age/growth faltering

Q.	Does the health worker ask:	Circle appropriate code: 1= yes; 2= no 3= Uncertain/not applicable			If HW asked the question(s), cle caretakers answer. If he did not ask, do it yourself ON when HW finishes assessmer 1= yes 2= no	
26.	whether the child is on breastmilk?	1	2	3	1	2
27.	The frequency of breastfeeding?	1	2	3	____ times	
28.	whether the child receives other foods?	1	2	3	1	2
29.	the frequency of other foods?	1	2	3	____ times	

I. Classifications: When the health worker finishes the consultation, ask him/her classifications including General Danger Signs. Write what he/she tells you and circle the appropriate code if agreed or disagreed. If you disagree, write your decisions on the case in the space provided.

Q. 30	Health Worker's CLASSIFICATIONS "A"	Circle: 1= agreed 2= disagreed; "B"	If you disagree, write your classification below "C"
30.1		1 2	
30.2		1 2	
30.3		1 2	
30.4		1 2	
30.5		1 2	
30.6		1 2	

J. Treatments: Ask the health worker what treatments (including referral and pre-referral) he/she decided to give. Write what he/she tells you and circle the appropriate code if agree or disagree. If you disagree, write your decisions in the space provided.

Q. 30	Health Worker's TREATMENTS "A"	Circle: 1= agreed 2= disagreed; "B"	If you disagree, write your treatments & dosages below "C"
30.1		1 2	
30.2		1 2	
30.3		1 2	
30.4		1 2	
30.5		1 2	
30.6		1 2	

K. Health Worker and Caretaker Interaction:

Q.	During or after the consultation did the health worker or someone in the clinic explain to the caretaker:	Circle appropriate code: 1= yes; 2= no 3= Uncertain/not applicable		
31.	how to give prescribed medicines at home?	1	2	3
32.	when to return for FOLLOW-UP?	1	2	3
33.	when to return IMMEDIATELY?	1	2	3
34.	about the Food box when appropriate?	1	2	3
35.	Asked checking questions?	1	2	3

Record time consultation ends:
__ __:__ __
Duration of consultation:
__ __ minutes

Facility Review

Facility: _____ District: _____ Reviewer: _____ Date: /

Introduce yourself to the in-charge of the facility. Tell her/him that the purpose of the visit is to gather some information that will support you in the strengthening of the quality of services for the sick child. For this reason, tell him/her that you would like to ask some general questions about the clinic. Please assure the in-charge that this is NOT an inspection.

Assess and observe the following conditions and services		Circle: 1=yes 2= no	
A. Examination Area			
1	Are all caretakers able to be seated while waiting?	1	2
2.	Is there enough space to see and examine patients?	1	2
3.	HW and caretaker sitting on the same side of the table?	1	2
4.	Is there functioning weighing scale for sick children?	1	2
5.	Is there a watch with second hand or a timer?	1	2
6.	Is there a functioning thermometer?	1	2
7.	Is there an IMCI chart booklet in examining room?	1	2
8.	Are there laminated recording forms and mother's cards?	1	2
9.	Are there supplies for assessing (i.e., water, cup, spoon)?	1	2
B.	**ORT Area**		
10.	Do children with some dehydration get ORS solution at facility?	1	2
11.	Is there adequate space to give ORT (ORT corner)?	1	2
12.	Is there a table for mixing ORS solution or for demonstrations?	1	2
14.	Are there chairs or clean space for the caretakers to sit?	1	2
15.	Is there a source of clean drinking water?	1	2
16.	Are there ORT corner supplies (i.e., cups, spoons, jars, buckets)?	1	2
17.	Is there a health worker assigned to the ORT corner?	1	2
C.	**Immunization Area**		
18.	Is space adequate for immunizing children?	1	2
19.	Is there a table for vaccination supplies?	1	2
20.	Is there a functioning refrigerator/ice pack freezer?	1	2
21.	Is there a functioning refrigerator thermometer?	1	2
22.	Is there a functioning sterilizer?	1	2
23.	Is there enough supply of immunization cards?	1	2
24.	Is correct vaccine condition maintained (2 - 8 degrees)?	1	2
25.	Are all vaccines available (BCG, OPV, DPT, measles and TT)?	1	2
D.	**Clinic and Referral Services**		
26.	Are immunization services available everyday Monday-Friday?	1	2
27.	Are all sick children weighed before assessed?	1	2
28.	Is temperature measured for all sick children before assessed?	1	2
29.	Is there an updated and well kept register for referrals?	1	2
30.	How far away is the nearst referral facility?	_____ kms	
31.	Is there a radio communication with the DHMT or hospital?	1	2

Assess and observe the following conditions and services		Circle: 1=yes 2= no
E.	**Quality of Record Keeping**	
32.	Are there individual patient records or registers maintained?	1 2
If yes, select 10 sick children records and assess whether:		
33.	How many have assessment results (positive signs & symptoms)?	___ /10
34.	How many have records of treatments?	___ /10
35.	How many have records of date of follow-up?	___ /10
F.	**Clinic Staff and IMCI Training**	
36.	What is the total number of HWs who manage sick children?	_____ health workers
37.	Are all sick children attended by an IMCI-trained HW?	1 2
38.	Did the IMCI-trained HW briefed other HWs in the facility?	1 2
39.	Does the IMCI-trained HW share/involve others in some IMCI tasks?	1 2

G. Availability of Drugs and Other Supplies

Are the following items in stock on the day of the survey? Drugs in bold are the most esseential drugs for IMCI.

	Drug	Circle: 1= in stock 2=out of stock			Drug/Supplies	Circle: 1=in stock 2=out of stock	
40.	**Cotrimoxazole**	1	2	50.	**Vitamin A capsules**	1	2
41.	Amoxycillin	1	2	51.	**Iron**	1	2
42.	**Chloroquine**	1	2	52.	Mebendazole	1	2
43.	Fansidar	1	2	53.	Paracetamol	1	2
44.	Erythromycin	1	2	54.	**ORS**	1	2
45.	Nalidixic acid	1	2	55.	IV fluids	1	2
46.	**Quinine IM**	1	2	56.	Giving sets	1	2
47.	**Gentamycin IM**	1	2	57.	Gentian violet	1	2
48.	**Benzylpenicillin**	1	2	58.	Sterile syringes & needles	1	2
49.	Chloramphenicol IM	1	2	59	Water for injections	1	2

Appen...

Short Interview About ... quarterly Supervision

... is short interview form to know about routine supportive supervision for IMCI-trained helath workers. First, sit ... IMCI-trained health worker at the health centre and ask him to respond to questions 1 - 10. Then on your way ... talk with the DHMT/IMCI supervisor to respond to questions 11-15.

...lth Worker Code	Health Centre Code	District Code	Interviewer Code	Date
__________	__________	__________	__________	___/___/___

Description of the questions	Circle appropriate code
In the last 3 months, has a DHMT member visited this health centre for IMCI supportive supervision purposes?	1= yes 2= no (jump to Q. 9)
If yes, how many times did that supervisor visit this health centre?	____ times
When was the last time that the supervisor visited this clinic?	mm/yy: ___/___
Were you present during this visit?	1= yes 2= no (jump to Q. 9)
During the last visit, did that person observe you managing sick children?	1= yes 2= no
Did that person check the availability of supplies and equipments in the clinic?	1= yes 2= no
Did that person discuss the findings of the visit with you and/or other clinic staff before going back?	1= yes 2= no
Did he/she leave any summary of findings and recommendations of the visit for future reference?	1= yes 2= no
Do you prefer your supervisor to observe you while managing sick children?	1= yes 2= no

...w visit the DHMT office and kindly ask for the IMCI supportive supervision book. Ask and check the ...owing questions regarding supportive supervision for IMCI.

In the past 3 months, did a DHMT team member visit this health centre?	1= yes 2= no
If no, ask for reasons why the supervisory visit was not conducted? *{prompt health worker by asking what else?}*	1= too busy doing other things 2= transportation was not available 3= Not in the district plan 4= Others {specify:__________ __________} **STOP HERE**
How many times did a DHMT memeber visit this health centre?	____ times
How many times did a DHMT member observe an IMCI-trained health worker while managing a sick child in this health centre?	1= yes 2= no
How many times did a DHMT member reviewed this health centre for supplies, equipments and services?	1= yes 2= no
How many times did a DHMT member leave behind a summary of problems identified with recommendations for this clinic?	1= yes 2= no