Essential Services for Health in Ethiopia
&
Oromia Regional Health Bureau

Health Facility Survey

2004

Addis Ababa

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Acronyms

ARI	Acute Respiratory Infections
BCC	Behavioral Change and Communications
BCG	Bacillus Calmette-Guerin
CAH	Child and Adolescent Health Division
DD	Diarrheal Disease
DPT	Diphtheria, Pertusis, Tetanus Toxoid
EPI	Expanded Program of Immunization
ESHE	Essential Services for Health in Ethiopia
HFS	Health Facility Survey
HMIS	Health Management Information System
IEC	Information, Education and Communication
IMCI	Integrated Management of Childhood Illness
IRT	Integrated Refresher Training
ITNs	Insecticide Treated Nets
JSI	John Snow, Inc.
MOH	Ministry Of Health
NGO	Non-Governmental Organization
OPD	Out-patient Department
OPV	Oral Polio Vaccine
OR	Operations Research
ORS	Oral Rehydration Salt
PHOs	Public Health Officers
RHB	Regional Health Bureau
RR	Respiratory Rate
SPA	Service Provision Assessment
TT	Tetanus Toxoid
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
Vit. A	Vitamin A
WC	Water Clauset
WHO	World Health Organization

Executive Summary

This report describes the Health Facility Survey (HFS) undertaken by the Essential Services for Health in Ethiopia (ESHE) Project in coordination with the Ministry of health and the Regional Health Bureau of Oromiya Region in four zones of the Region from June - July, 2004. The purpose of the survey was to collect data on facility based child health services that could be used for making further improvements to services in the region. The survey determined: (1) how sick children are managed in health facilities; (2) caretaker's perception of services and understanding of instructions given during consultation; (3) the presence or absence of critical materials and supplies necessary for the care of children; (4) knowledge and skills of health workers in child health; (5) facility-community links.

The methodology for this survey adapted from the World Health Organization's Division of Child and Adolescent Health (WHO-CAH) Health Facility Survey (HFS). The sampling frame was defined as all health facilities in the 20 ESHE focus woredas offering outpatient curative services to children under five years of age. The survey team revised the complete list of facilities using the following criteria: (1) facilities that did not provide sick child services; (2) facilities that were not functional during the time of the survey; and (3) facilities that saw less than three children per day. Finally 40 facilities were selected from a sampling frame1work of 107 facilities.

Main Findings

Results are organized into five broad categories: (1) Facility indicators; (2) Case management indicators; (3) Caretaker indicators; (4) Health worker knowledge indicators; and (5) Facility-community Links indicators.

It should be noted that none of the health workers managing sick children on the day of survey were trained in IMCI in the 20 woredas of Oromiya where ESHE will be assisting of quality. Therefore this survey represents a baseline of child care prior to IMCI interventions in these areas.

1. Facility Indicators (40 facilities)
   - The principal providers of case management for sick children under five attending outpatient departments are the health assistants (40%), senior nurses (28%) and junior nurses (25%). Only 8% (7/86) of health workers who usually manage sick children are trained in IMCI in 20 woredas of surveyed.
   - Eighty percent of the facilities are open five or more days a week to offer vaccination services.
   - In 20 percent of the facilities, all essential IMCI equipment and materials were available on the day of the survey.
   - In 80 percent of the facilities, all EPI materials and supplies essential for carrying out routine immunization services were available.
   - Five percent of the facilities had at least one dose of supplementary foods for underweight children at the facilities.
   - There are insufficient numbers of pamphlets and cards to support the education of mothers at home or on a one-to-one basis.
   - Supervision was carried out in 45% of health facilities in last 3 months; however, observation of case management was included in only 2.5% (1/40) visits.

2. Case Management Indicators (167 cases were observed)
   - The checking of all three danger signs was observed in none of the cases.
   - Less than 13 percent of children under two years of age assessed for nutritional status.
   - Supervisors found 5.8 classifications per case on average whereas health workers made 1.6 classifications per case (missed 72% of the classification).
   - Prescription of an antibiotic or anti-malaria tended inappropriate dosages and schedules. In 50% of cases antibiotics were used inappropriately.

3. Caretaker Indicators
   - Caretaker knowledge about diseases prevented with vaccines was generally low.

- When a child prescribed ORS, the mother who can give it accurately is 4% of cases; when antibiotics prescribed, 2% percent of cases could say accurately how to give it.
- In only 7 percent of cases, the caretakers were advised on how to administer the treatment that was prescribed.
- In only 20 percent of cases, the caretakers were advised to give extra fluids and continue feeding during illness.
- In only 16 percent of cases, the caretakers of children under two years of age were given nutritional counseling.

4. Health Worker Knowledge Indicators (based on three case scenarios)
   - The health workers tended to recommend urgent referral, but failed to treat the severely ill child with a pre-referral treatment and failed to initiate other actions that may assist the child in transit such as keeping an infant warm or preventing low blood sugar.

5. Community and Facility Links indicators
   - Eighty percent of the surveyed facilities have some form of contact with community-based persons working in health. All facilities reported that they conducted at least one community outreach activity in the last three months.

Recommendations

In order to have maximum impact on solving child health problems work should be implemented to (1) improve health worker knowledge and skill; (2) improve capacity of the health system in terms of essential drugs, equipment's, HMIS, planning and management, and supervision and follow-up; and (3) to improve the household and community practices of child health.

1. Priority should be given by woreda and facility health managers to utilize any health workers trained in IMCI to manage the care of sick children. Usually senior and junior nurses and health assistants manage sick children.
2. IMCI orientation for health managers should also be given to enable them to make efficient utilization of trained staff.
3. IMCI follow-up supervision with case observation and supportive supervision for other activities at all levels should be initiated.
4. Essential IMCI materials should be present at facilities to implement and monitor IMCI.
5. Every effort should be put to improve the availability of both oral and injectable pre-referral drugs.
6. MOH, RHB and other partners need to work to ensure sustainable availability of vaccines at all facilities for successful EPI activities.
7. All facilities should regularly be supplied with equipment and supplies to improve the immunization services.
8. Facilities should be enabled and strengthened to give both static and outreach vaccination activities.
9. There should be promotion and supply of ITNs for effective malaria prevention activities.
10. Develop and produce IEC and BCC materials to strengthen the community IMCI for interpersonal health education.
11. Strengthen HMIS by training health workers and revising record and report formats.
12. The IMCI training should include the specialized module on 'when referral is not possible'.
13. Promote community health volunteers and equip health workers with skills required to work with the community.
14. Low performance in classification, treatment and care taker counseling should be considered in IMCI training.
15. Use IEC/BCC and strengthen community IMCI to improve caretaker's perception on child illness.
16. Integrated Refresher Training (IRT) for health workers and provision of quick reference materials on selected health topics would help to improve their knowledge of case management for sever illness.

Table A: IMCI Priority Indicators

No.	Indicator	Value
1.	Child checked for three danger signs	0%
2.	Child checked for the presence of cough, diarrhea and fever	37%
3.	Child weight checked against a growth chart	22%
4.	Child vaccination status checked	11%
5.	Index of integrated assessment (max 10)	4
6.	Child under two years of age assessed for feeding practices	3%
7.	Child needing an oral antibiotic and/or oral anti-malaria is prescribed the drug correctly	1%
8.	Child needing an oral antibiotic prescribed the antibiotic correctly	5%
9.	Caretaker of sick child is advised to give extra fluids and continue feeding	21%
10	Child who received all the needed vaccination	34%
11a.	Caretaker of child who is prescribed ORS knows how to give treatment	4%
11b.	Caretaker of child who is prescribed an antibiotic knows how to give treatment	2%
11c.	Caretaker of child who is prescribed an anti-malaria knows hot to give treatment	33%
12.	Child needing referral is correctly referred	17%
13.	Health facility received at least one IMCI supervisory visit that included observation of case management during the previous three months	2%
14.	Index of availability of essential IMCI oral treatment (out of 7)	6
15.	Index of availability of injectable drugs for pre-referral treatment (out of 5)	1
16.	Health facility has the equipment and supplies to support full vaccination services	80%
17.	Index of availability of four vaccines (out of 4)	3
18	Health facilities with at least one health worker trained in IMCI	12%

Table B: IMCI Supplemental Indicators

No	Indicator	Value
1.	Child checked for other problems	48%
2.	Child correctly classified	20%
3.	Child with very low weight assessed for feeding problems	0%
4.	Child with very low weight correctly classified	0%
5a.	Child is correctly classified for pneumonia	49%
5b.	Child is correctly classified for severe malnutrition	50%
5c.	Child is correctly classified for malaria	86%
5d.	Child is correctly classified for diarrhea with some dehydration	30%
6.	Child with pneumonia correctly treated	3%
7.	Child with dehydration treated correctly	38%
8.	Child with malaria correctly treated	6%
9.	Child with anemia correctly treated in high malaria risk area	0%
10.	Child receives first doses at facility	0%
11.	Child checked for lethargy	100%(1/1)
12.	Sick child whose caretaker is advised on when to return immediately	1%
13.	Child with very low weight whose caretaker received correct counseling	23%
14.	Child leaving the facility whose caretaker was given or shown a mother's card	0%
15.	Health facility has essential equipment and materials	20%

Chapter

1

Health Facility Survey 2004

Assessment of Child Health Services in Oromia

Introduction

The Essential Services for Health in Ethiopia (ESHE) Project in coordination with the Ministry of Health and the Regional Health Bureau of Oromia Region conducted a health facility survey (HFS) of child health services in 4 zones of the Oromia Region; which included 18 of the 20 project focus woredas. The survey was conducted in June 2004. The survey determined: (1) how sick children are managed in health facilities; (2) caretaker's perception of services and understanding of instructions given during consultation; (3) the presence or absence of critical materials and supplies necessary for the care of children; (4) knowledge and skills of health workers in child health; and (5) facility-community links. The HFS serves to establish a baseline of health worker skills and health facility capacity before the design and implementation of the Oromia child health services strategy that will be developed with the ESHE-JSI project.

The survey used a methodology recommended by the World Health Organization's Child and Adolescent Health Department (WHO-CAH) with adaptations for the Ethiopian context. Resources for the survey came from the USAID-funded ESHE-JSI project and the Oromia Regional Health Bureau. This report illustrates the findings of the Oromia 2004 HFS.

Chapter

2

Methodology

Survey goals and objectives

The HFS had four main goals: (1) serve as a project baseline of health worker knowledge and practices prior to implementation and design of the Oromia child health strategy; (2) provide formative information for the strengthening of training, supervision and IEC activities related to IMCI; (3) improve the case management and preventive services received by children under five years of age in Oromia; (4) strengthen capacity in the development and implementation of health facility surveys for IMCI within Ethiopia.

The specific objectives of the HFS were to:

- Calculate priority indicators for evaluating baseline status of program goals and targets of the USAID-funded ESHE II project;
- Determine current quality of care delivered to sick children at outpatient health facilities;
- Provide information to improve training of health workers;
- Provide information to develop strategies to improve supervision and monitoring activities;
- Prioritize strategies for improving quality of care at outpatient health facilities, including; staffing and clinic organization, counseling practices, case management practices, drug supplies, and equipment needs.

Indicators

The source of indicators used in the HFS was the list of priority and supplemental indicators for IMCI developed by WHO-CAH. The WHO-CAH indicators will allow results from Ethiopia to be globally comparable as WHO compiles results from all health facility surveys conducted globally.

For this HFS, several new indicators were developed for health facility-community links. A sixth form was added to this HFS to assess the level of interaction between the facilities and communities.

A complete list of indicators and definitions are found in Annexes A and B of this report, respectively.

Data collection instruments

The 2004 HFS used nine instruments for the survey. Instruments were adapted during the training of surveyors, from the WHO-CAH generic instruments. The adaptations incorporated the suggestions of the MOH and the surveyors, who were experienced IMCI-trained health providers in the Ethiopian public health system. Form 2, the Exit Interview with the caretaker was translated into Amharic to ensure a standard way of asking the questions during interviews with caretakers.

In the HFS, Form 6: Health Facility-Community Links was added to assess basic health facility and community interactions.

Table 1.1 contains a list of instruments, their description and the responsible surveyor for the specific forms. Instruments for this survey can be found in Annex D.

Table 1.1 Tools for data collection

Tool	Description	User
Informed consent	Obtain permission from caretaker for participation in the survey	Supervisor
Enrollment card	Given to caretakers of children who meet the criteria for inclusion in survey and used to follow children through the facility	Supervisor
List of children attending health facility	List of all children and their presenting complaints presenting at the health facility.	Supervisor
Form 1: Observation checklist	Used for observation of health worker case management in facilities. It evaluates health worker skills in assessment, classification (diagnosis), treatment and counseling.	Surveyor 1
Form 2: Exit interview	For determining what decisions were made in seeking care at the health facility and assessing how much of the consultation was understood by the caretaker and to assess caretaker satisfaction.	Supervisor
Form 3: Re-examination of sick child	Checklist used for re-examining child and establishing a “gold” standard classification and treatment.	Supervisor
Form 4: Equipment, supply and services checklist	To assess the availability of supplies and materials needed for good quality child health care.	Surveyor 2
Form 5: Health worker interview	To assess health provider knowledge of case management of diseases	Surveyor 1
Form 6: Health Facility-Community Links	To assess basic health facility and community interactions	Surveyor 2

Sample design

The sampling frame was defined as all health facilities in the 20 ESHE focus woredas offering outpatient curative services to children under five years of age. All health stations, health centers, and hospitals were included as long as they had outpatient departments (OPD) providing services to sick children.

A complete list of all facilities was obtained from Oromia Regional Health Bureau. According to the list, there were a total of 110 health facilities out of which there were 85 health stations, 20 health centers, and 5 hospitals in the 20 ESHE focus woredas. The survey team further revised the list of facilities eliminating other facilities based on the following criteria: (1) facilities that did not provide sick child services (virtually there was no such facility); (2) facilities that were not functional during the time of the survey; (3) facilities that saw less than three children per day; and (4) facilities that were used for practice during the training.

A total of 107 facilities were ultimately included in the sampling framework. Based on the WHO-CAH recommendations to obtain significant results with an adequate number of observed cases, a total number of 40 facilities were selected from the framework. As health stations, health centers and hospitals comprise 77, 18 and 5 percent of the 107 facilities, respectively, this proportion was maintained to draw the 40 facilities from these three strata. The 40 facilities were then comprised of 30 health stations, 8 health centers, and 2 hospitals. List of surveyed facilities is found in Annex C.

Observation of case management was conducted in all facilities in the sample. A list of sampled facilities can be found in Table 1.2.

Table 1.2 Health Facilities Sampled In Oromia

No.	Zone	Woreda	Facility Name	Type
1	West Hararge	Chiro	Kunni	Health Center
2	West Hararge	Chiro	Fugnan Dimo	Health Station
3	West Hararge	Chiro	Gawgaw	Health Station
4	West Hararge	Chiro	Kaseja	Health Station
5	West Hararge	Chiro	Sogido	Health Station
6	West Hararge	Masala	Bala Bukis	Health Station
7	West Hararge	Masala	Choma	Health Station
8	West Hararge	Masala	Goro Ra'e	Health Station
9	West Hararge	Guba Koricha	Hardim	Health Station
10	West Hararge	Habro	Wachu	Health Station
11	West Hararge	Daro Labu	Gadulo	Health Station
12	West Hararge	Daro Labu	Sakina	Health Station
13	East Hararge	Dadar	Soka	Health Center
14	East Hararge	Dadar	Kara Makala	Health Station
15	East Hararge	Dadar	Laga Gaba	Health Station
16	East Hararge	Gursum	Fugnan Hujuba	Health Station
17	East Hararge	Gursum	Kubi Jara	Health Station
18	East Hararge	Haromaya	Haromaya	Health Center
19	East Hararge	Haromaya	Awaday	Health Station
20	East Hararge	Haromaya	Sharif Kalid	Health Station
21	East Hararge	Meta	Goro Muti	Health Station
22	East Hararge	Meta	Muti	Health Station

No.	Zone	Woreda	Facility Name	Type
23	East Hararge	Meta	Wayber	Health Station
24	East Hararge	Fedis	Midaga	Health Station
25	North Shoa	Gerar Jarso	Fiche	Hospital
26	North Shoa	Wara Jarso	Gohatsion	Health Center
27	North Shoa	Wara Jarso	Filikik	Health Station
28	North Shoa	Wucahle	Ayda Jaleta	Health Station
29	North Shoa	Wucahle	Mukaturi	Health Station
30	North Shoa	Kuyu	Kare Ta'a	Health Station
31	East Shoa	Ada'aLiben	Bushoftu	Hospital
32	East Shoa	Ada'aLiben	Adulala	Health Center
33	East Shoa	Ada'aLiben	Kusaye	Health Station
34	East Shoa	Ada'aLiben	Wanber	Health Station
35	East Shoa	Boset	Walanchity	Health Center
36	East Shoa	Boset	Dengore Chale	Health Station
37	East Shoa	Gimbichu	Chafe Donsa	Health Center
38	East Shoa	Gimbichu	Dobi	Health Station
39	East Shoa	Siraro	Aje	Health Center
40	East Shoa	Siraro	Rophi	Health Station

Implementation

Coordinating Team

The coordinating team was headed by Dr. Fekadu Adugna, Dr. Hailemariam Legesse and Dr Tadele Bogale. Other team members included consultant Misun Choi from the John Snow, Inc. (JSI) Center for Child Health and Dr. Ali Hassen, an independent consultant. The responsibilities of the coordinating team included definition of indicators, development of tools, testing of instruments, training of surveyors and field supervision.

Field Teams and Training

A total of five teams for data collection were organized. Each team had one supervisor and two surveyors. Supervisors were IMCI-trained public health officers (PHO) and surveyors were IMCI-trained nurses and PHOs. Supervisors were responsible for filling forms 2 and 3 (i.e. Exit Interview and Re-Examination) and responsible for assuring that all forms were completed correctly at the end of each day. One surveyor was responsible for using forms 1 and 5 (i.e. Observation Checklist and Health Worker Knowledge), while the other surveyor was responsible for filling forms 4 and 6 (i.e. Equipment, Supply and Services Checklist and Health Facility-Community Links).

In this survey, most team personnel were trained in IMCI and had fair experience in this area. As it was not necessary to train the surveyors in IMCI, five days of training were dedicated to adapting the survey instruments, field testing and using the instruments. From the field tests and discussions, a list of rules and agreements was made on how to complete each form. Surveyor guidelines were developed that included all the instructions on how to carry out the survey. The list of rules was included in the text of the guidelines. On the last day of training, surveyors were assigned specific responsibilities to fill forms.

Training of surveyors was held from May 31 – June 4, 2004 at Debre Zeit management training center.

Field Work and Logistics

A logistics plan was designed after the sampling was completed. Sampled facilities were randomly assigned to each of the teams and eight facilities were assigned per team. The coordinating team, Dr. Tadele Bogale and Dr. Ali Hassen were assigned to 2 and 3 teams, respectively and they followed their teams throughout the data collection period to answer any questions, deal with logistical issues, ensure that forms were completed correctly, correct any mistakes and omissions, and collect completed forms for timely data entry. Each team was assigned a four-wheel drive vehicle and a driver.

In most cases, the survey teams visited one facility per day from 8:00am to 120:30pm and observed as many child management cases as possible within that timeframe. At the end of each day, each team supervisor was responsible for ensuring the accuracy and completeness of the survey forms. In some cases, some facilities began work earlier, in which case the survey teams attempted to reach the facilities as early as possible, depending on travel time to the facilities. In other cases, due to the beginning of the rain season, facilities began work at 10:00am or later where the surveyors stayed until approximately 3:00pm in the afternoon to complete the instruments. If the facilities were closed due to the rain, the teams re-visited the facility at a later date. In the cases where there were no under five children, the facility was closed or the facility was inaccessible mainly due to the rain, the surveyors were instructed to go to a selected replacement facility of the same type, same zone, and same woreda, if possible.

Field data collection was completed from June 7 – June 17, 2004.

Data Quality and Management

Databases and data entry screens were prepared with Epi Info 2004 for Windows (Version 3.2, February 4). Eight views (two views for Forms 1 and 4, one view for Forms 2, 3, 5, and 6) were prepared in a single database. Two views were created for Forms 1 and 4 (Observation Checklist and Equipment, Supply and Services Checklist) due to the number and size of the variables and to ensure that all variables were attached to a unique identifier (Questionnaire Number or Facility Code). Each view can be identified by form number (1-6) and contains a page for each module (Assessment Module, Treatment Module, EPI Module, etc.) in the various forms.

Completed forms were arranged by facility with the list of children presenting at the facility on top and then followed by the survey forms in numeric order (i.e. 1, 2, 3, 4, 5, and 6). The packets of completed forms were given to a member of the coordinating team to deliver to Addis Ababa office where there was a data entry personnel. Each team was provided feedback on all forms and any errors were corrected before collecting the forms. The forms were again checked for accuracy, completeness, and consistency by the data entry man before data entry. Data was then entered in Addis Ababa. Once the data was entered into the database, frequencies of all variables were run, consistency checks performed, and data cleaned. Ten percent of all forms were sampled and re-sampled to check for accuracy and consistency.

An analysis plan was created from the indicator definitions recommended by WHO-CAH. The charts and tables have been presented in this report. Frequencies and tables of other variables have also been included in this report to add context to or clarify some indicators. Several supplementary WHO indicators have also been calculated for this survey.

Chapter

3

Results

Results are organized into five broad categories: (1) Facility indicators; (2) Case Management Indicators; (3) Caretaker Indicators; (4) Health Worker Indicators; and (5) Facility-Community Links Indicators.

General Information

A total of 40 facilities were surveyed in this survey. Health workers at all 40 facilities were observed and interviewed. The gender breakdown of health workers was 79 percent male and 21 percent female. A total of 167 children were observed during the survey. Of the observed cases 66 (40 percent) were seen by health assistants, 25 percent by junior nurses, 28 percent by senior nurses and 7 percent by either public health officers or physicians. None of the health workers managing the observed cases were trained in IMCI. The gender breakdown of children seen was 53 percent male and 47 percent female. Median age of children seen was 15 months. In 87 percent of cases, the person who brought the child to the facility was the child's mother and 9 percent were brought by the father. The median time of consultation was 7 minutes. These general results will be further explored in this report.

Facility Indicators

Facility indicators were mainly computed from Form 4 (Equipment, Supplies and Services Checklist). The availability of materials, drugs and supplies are essential to deliver appropriate care to sick children. The absence of essential materials can also act as barriers to health worker skills. The main purpose of the facility indicators is to assess the presence of essential materials and supplies and to assess the type of services offered by the facilities.

Table 2.1 lists the main indicators for the facility. Of the 40 facilities included in the survey, 18 (45 percent) were visited by a supervisor in the last three months and in 1 of them (2.5 percent) case management of sick children was observed by the supervisor.

The results in this section are presented in four large overarching categories: (1) health personnel; (2) health services; (3) equipment and supplies; and (4) drugs.

Table 2.1 Facility-based Indicators

Indicator	Percentage
F1. Facilities that have received at least one supervisory visit that included case observation in the last three months	2.5%
F2. Facilities with up-to-date immunization and patient registers	2.5%
F3. Index of availability of IMCI essential oral drugs (max. 7)	5.7
F4. Facilities with no stock-outs of any essential oral drugs in the previous month	20%
F5. Index of availability of injectable drugs for pre-referral treatment (max 5)	1.3
F6. Facilities with equipment and supplies to support full vaccination services	80%
F7. Index of availability of four vaccines (max. 4)	1.4
F8. Facilities with essential equipment for IMCI activities	20%

Health Personnel

The principal providers of case management for sick children under five attending outpatient departments are the health assistants (40 percent), senior nurses (28 percent) and junior nurses (25 percent) as seen in Figure 2.1. Together, these categories of workers provide 93 percent of care given to sick children at facilities. Public health officers and doctors provide considerably less care (7 percent).

Figure 2.1
Providers of child case management

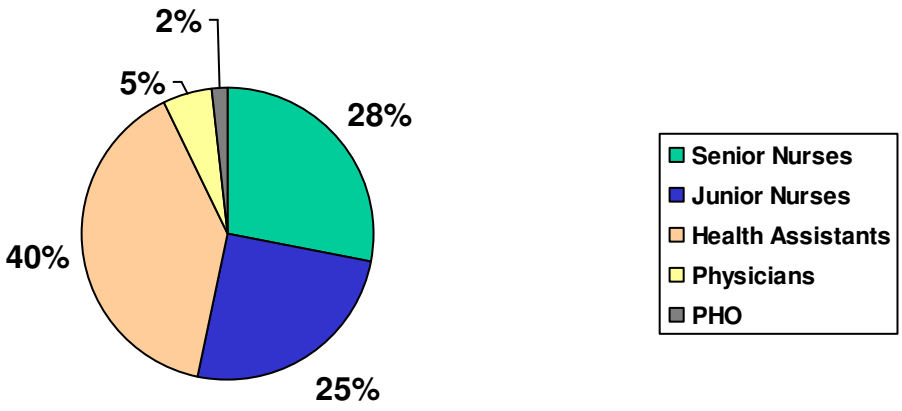


Table 2.2 also shows the characteristics of health workers found in the 40 surveyed facilities. This table again shows that health assistants are the principal providers of child case management, yet only 4 percent of health assistants have been trained in IMCI.

Table 2.2 Characteristics of health workers with case management responsibilities

Category	No. assigned to facility	No. usually manage children	No. managing children present today	No. managing children IMCI trained	No. IMCI trained present today	No. IMCI trained observed managing cases today
Physician	15	6	1	1	0	0
PHO	10	6	2	0	1	0
Sr. Nurse	85	21	16	4	2	0
Jr. Nurse	36	15	11	1	0	0
Health Assistant	74	24	17	1	0	0
Pharmacist	13	14	7	0	0	0
Total	233	86	54	7	3	0

Health Services

All the 40 facilities are open 5 or more days a week to provide child health services. Seventy one percent of the facilities have a growth monitoring promotion program and **80 percent (32 facilities) offer vaccination services for 5 or more days a week at static sites.** Five facilities offer vaccination services **only for one day a week** due to various reasons. Health workers continue to maintain all appropriate paperwork up to date for reporting to higher levels. Patient registers, immunization registers and GMP tallies were kept up to date in 90 percent, 78 percent, and 63 percent of facilities, respectively. Fifty eight percent of the surveyed facilities have a designated ORT corner

The facilities surveyed had a **median** of 273 sick **patient visits** during the previous month. Hospitals had average patient loads of 3499 in the previous month, whereas health centers ranged from 669 to over 8893 patients. Surprisingly, health stations had a median of 155 patients, ranging from 34 to a little over 898 patients in a few facilities. Visits made by sick children under 5 years of age comprised up to 14 percent of all patient visits in the previous month. Forty-four percent of the under five children were female children.

Of the 40 facilities surveyed,18 (45 percent) facilities were visited by a supervisor in the last three months and only 2.5 percent of them (1 facility) was for **IMCI follow-up supervision** in combination with other types of supervision. In the only facility that received IMCI follow-up supervision, the supervisor observed case management of sick children. Other types of supervision that were received were reproductive health, EPI and supervision for IEC.

Of the surveyed facilities, 22 (55 percent) referred to the nearest hospital or health center run by the MOH. Only 58 percent of referral facilities were within 2 hours from the surveyed facility using available transport in the community. In this assessment, there were **20 percent of primary facilities that were located more than 3 hours from the nearest referral facility**. Twenty seven facilities (68 percent), responded that on occasion they had been unable to refer a severely ill child in the past and in **96 percent of these cases, lack of money and/or transportation were the primary reason for not being able to refer the**

child. However, when asked if they had to refer ten children, how many they believed would actually make it to a referral facility, only 13 percent of them believed that all of ten patients would reach a referral site. Only 28 percent of facilities had referral slips to give to patients when making a referral and 3 percent of the surveyed facilities had an ambulance for transport of patients.

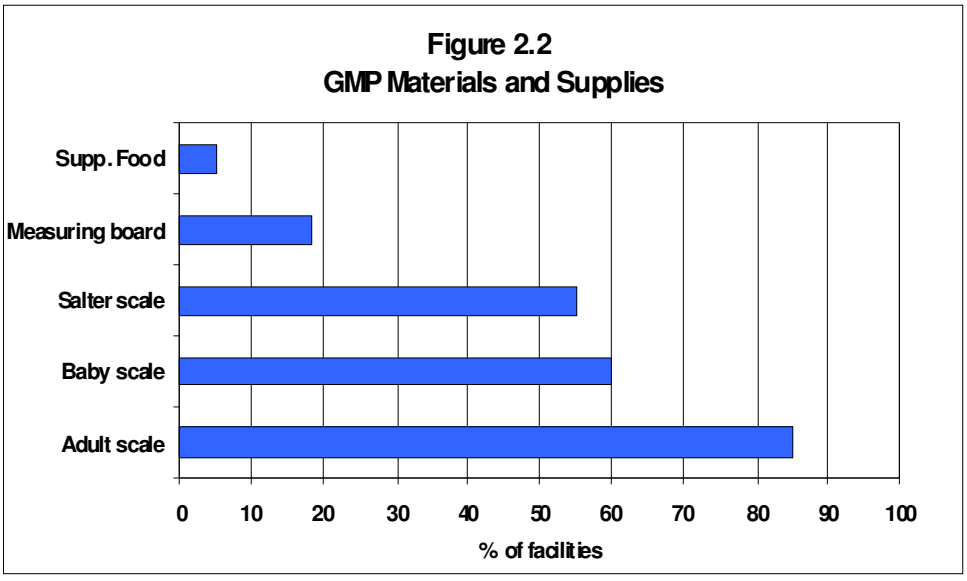
Most of the surveyed facilities (93 percent) have a latrine or working WC. Those who reported not having a working latrine or WC are health stations. Almost 55 percent of facilities have access to tap water and 23 percent have access to well water. Twelve (30 percent) of the surveyed facilities have electricity as primary source of power while 28 (70 percent) do not have power at all. Of the facilities with no power source 3 were health centers while 25 were health stations. Only 15 percent of surveyed facilities reported having a working phone or short-wave radio at the facility and of the 34 facilities that reported having no working phone or radio, only 9 percent had access to an emergency means of communication. Most facilities offered a shaded area for waiting (88 percent), and adequate sitting arrangements (78 percent).

Equipment and Supplies

This section on equipment and supplies as been grouped into categories of: (1) Nutrition; (2) IMCI; (3) Malaria; (4) EPI-Plus; and (5) other. Some supplies cut across categories.

Nutrition

Figure 2.2 shows the presence of standard equipment and supplies necessary to carry out growth monitoring and promotion activities in the facilities. Only two of the surveyed facilities (5 percent) had at least one dose of supplementary food for underweight children on the day of the survey. Since Salter scales are considered to be difficult to use with young children when they are crying or restless, more facilities are using baby scales. Most facilities had either a working Salter scale or baby scale.

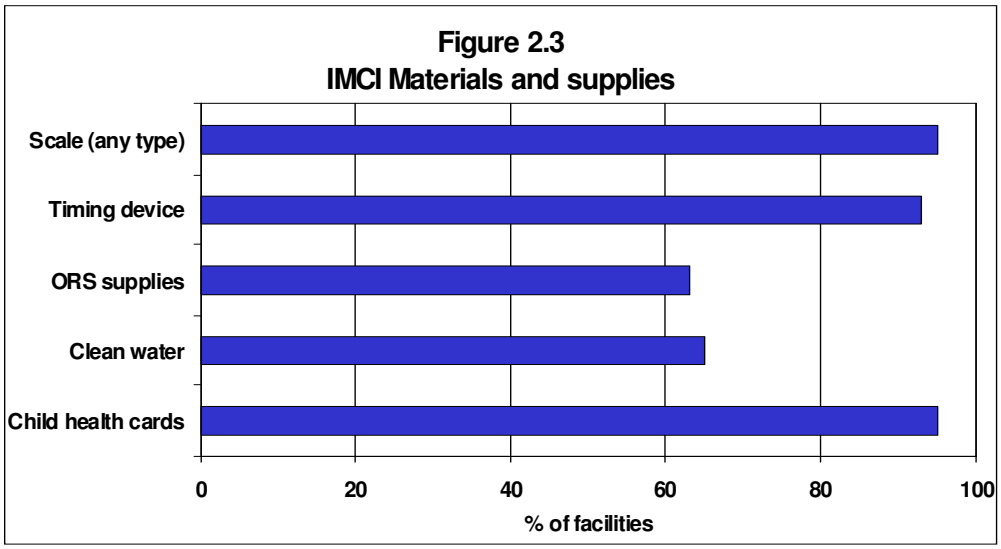


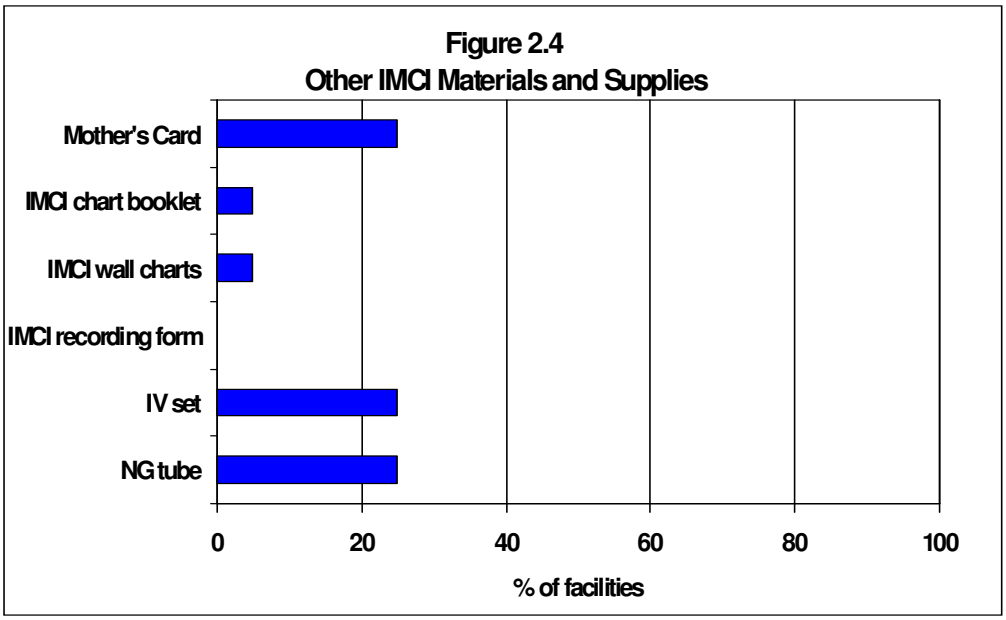
During the survey, equipment was checked to ensure that all scales were in working order. The presence of measuring boards in the facilities was low, but they do not constitute an integral part of nutrition activities in facilities nor do the IMCI guidelines require them.

IMCI

The materials essential for implementing the tasks of the IMCI strategy are defined by WHO-CAH as: (1) Accessible and working weighing scales for adults and children; (2) Timing device to count respiration; (3) Child health cards; (4) Source of clean water; and (5) ORS materials (spoons, cups, and jugs).

In 20 percent of health facilities, all essential IMCI equipment and materials were available on the day of the survey. Figure 2.3 shows availability of IMCI materials and supplies. Although guidelines do not call for demonstrating how to prepare and give ORS, the number of facilities that had ORS supplies was 63 percent, which included cups and spoons to mix and prepare ORS.





The presence of other IMCI materials and supplies that are considered essential in Ethiopia are shown in Figure 2.4. The presence of mother's card is essential for the counseling of mothers, as well as the IMCI chart booklets and/or wall charts. The presence of pre-referral supplies was also checked, which included intravenous set (canulas and butterfly needles) and nasogastric tubes. The presence of these materials is generally low and IMCI recording form is not available in any of the surveyed facilities.

Malaria

The survey also checked for materials and supplies necessary for the malaria control program. At a minimum, facilities should have bed nets for distribution, chemicals for impregnating bed nets and measuring cups for chemicals. In addition, certain facilities should also have a microscope, lancets, slides and distilled water for laboratory diagnosis of malaria. Figure 2.5 shows the presence of these materials in facilities.

The presence of bed nets and chemicals to re-impregnate them was 8 percent and 3 percent, respectively. The overall presence of microscopes is low probably because health stations do not have microscopes. Microscopes were found in all hospitals and 7 out of 8 health centers. The presence of supplies necessary for malaria is generally low.

Figure 2.5
Malaria Materials and Supplies

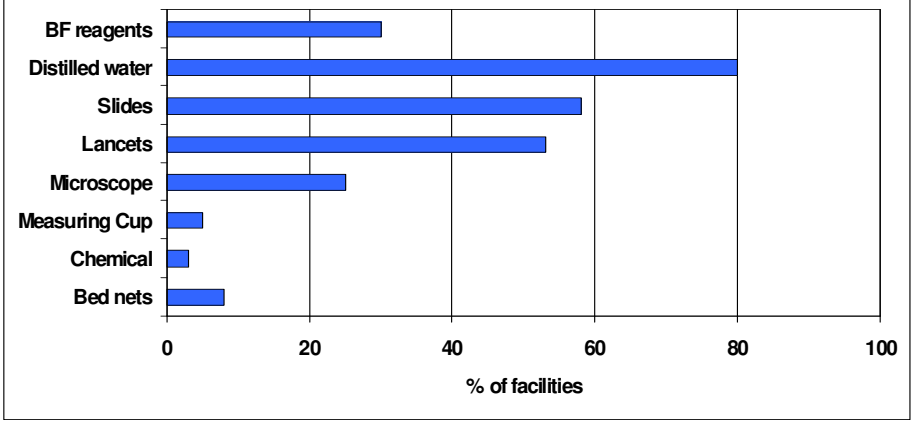


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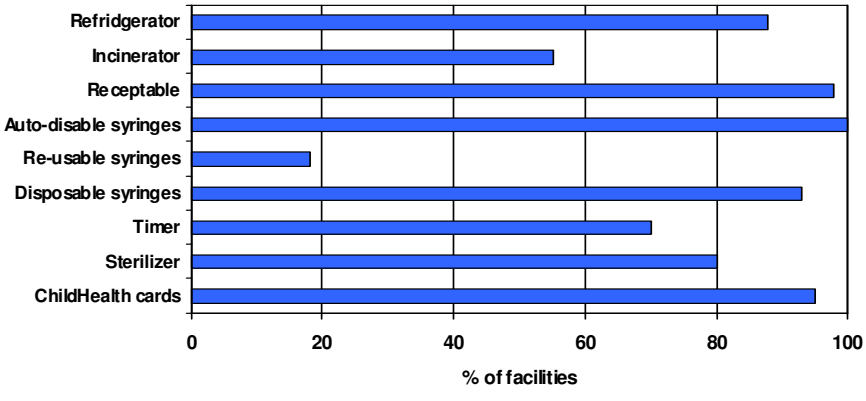
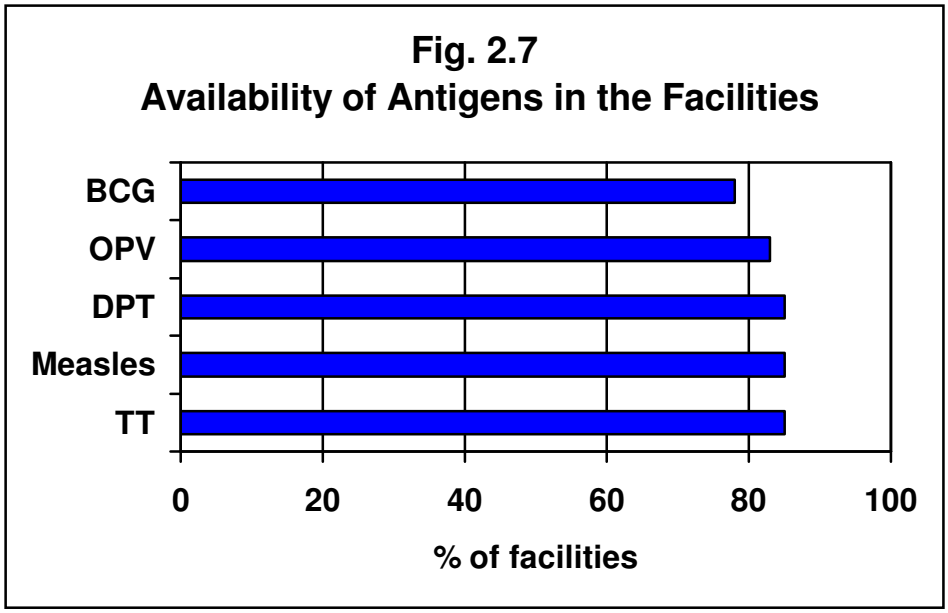
Figure 2.6
EPI Materials and Supplies



EPI-Plus

All EPI materials and supplies essential for carrying out routine immunization services were available in 80 percent of all surveyed facilities. Ninety eight percent of facilities had the proper receptacles for sharps deposits. Eighteen percent of facilities had re-usable syringes, 100 percent had auto-disable syringes, and 93 percent had disposable syringes. Functional sterilizers and sterilizer timers are found in 80 and 70 percent of the facilities, respectively. A functioning refrigerator was present in 35 out of 40 facilities (88 percent) and all were powered either by oil (71 percent) or electricity (29 percent). In 90 percent of the facilities, vaccines were either correctly rotated or were of the same batch

Figure 2.7 shows the availability of vaccines in the facilities on the day of the survey. Twenty two percent of the facilities did not have BCG antigen. Fifteen percent (6 facilities, all of them health stations) did not have any of the four vaccines for EPI during the survey. All facilities had ice packs and/or cold boxes and all facilities either return or destroy expired vaccines. Stock outs in the last six months were reported for BCG (58 percent), OPV (28 percent), DPT (33 percent), Measles (20 percent), and TT (20 percent). EPI balance sheets were kept up to date in only 43 percent of facilities.



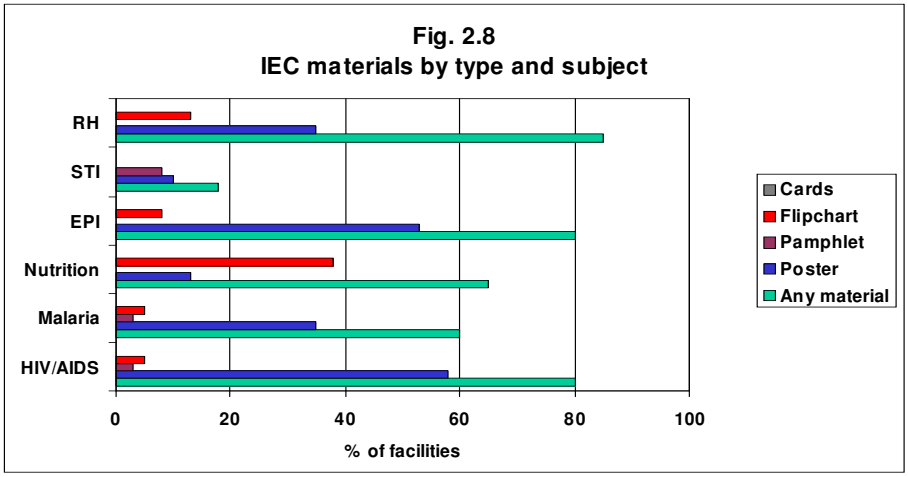
Thirty six out of the 40 facilities (90 percent) conducted outreach vaccination to communities. When asked if they had any problems in conducting outreach in the past 3 months, 53 percent of facilities reported having problems. The primary reasons for outreach problems were lack of transport, fridge not working and not enough personnel.

Other materials

Other materials and supplies necessary for good quality service provision are supplies for washing hands (i.e. wash basin, soap and towels), receptacle for decontamination, gloves for aseptic techniques and the Standard Treatment Guidelines. Sixty eight percent, had access to supplies needed for hand washing. Almost 63 percent of facilities had a receptacle for decontamination and chlorine or any other disinfectant was present in 98 percent of facilities. Gloves were found in 98 percent of facilities.

IEC materials

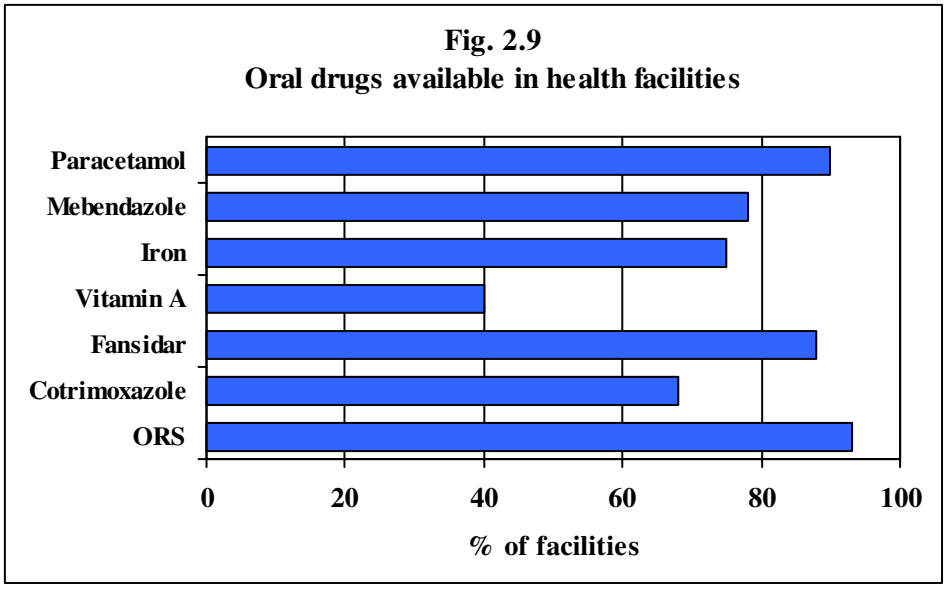
All the 40 facilities had some forms of IEC materials, ranging from posters, pamphlets, or flipcharts. None of the facilities had take-home cards on the day of the survey. Figure 2.8 shows the materials that were available in the facilities. The figure shows the distribution of materials by subject. Posters were the most commonly found material in most facilities. Very few, if any, pamphlets were observed. These numbers are not sufficient to support the education of mothers at home or on a one-to-one basis. During observation of case management, none of the caretakers were given or shown the mother's card.



Drugs

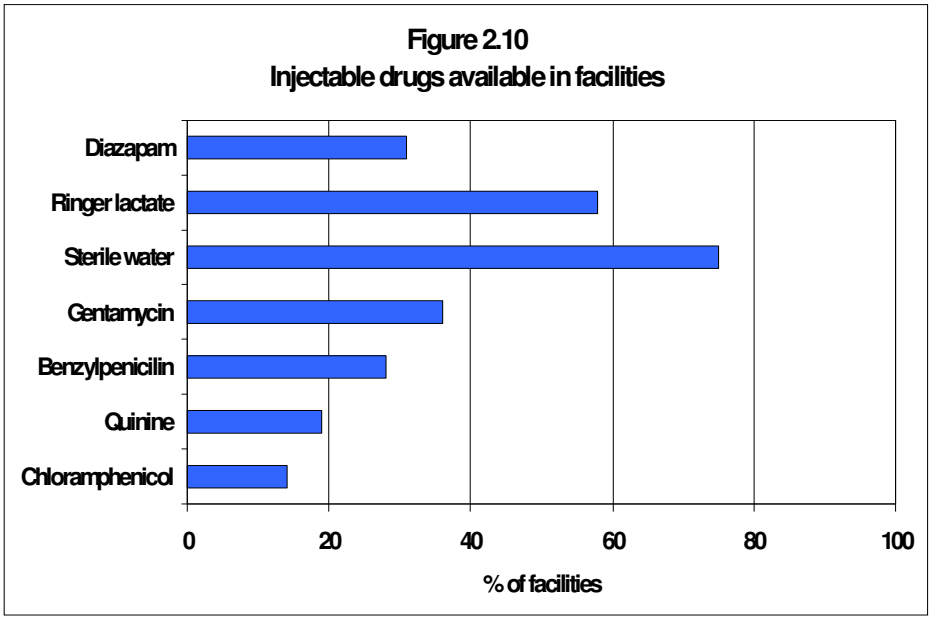
Oral Drugs

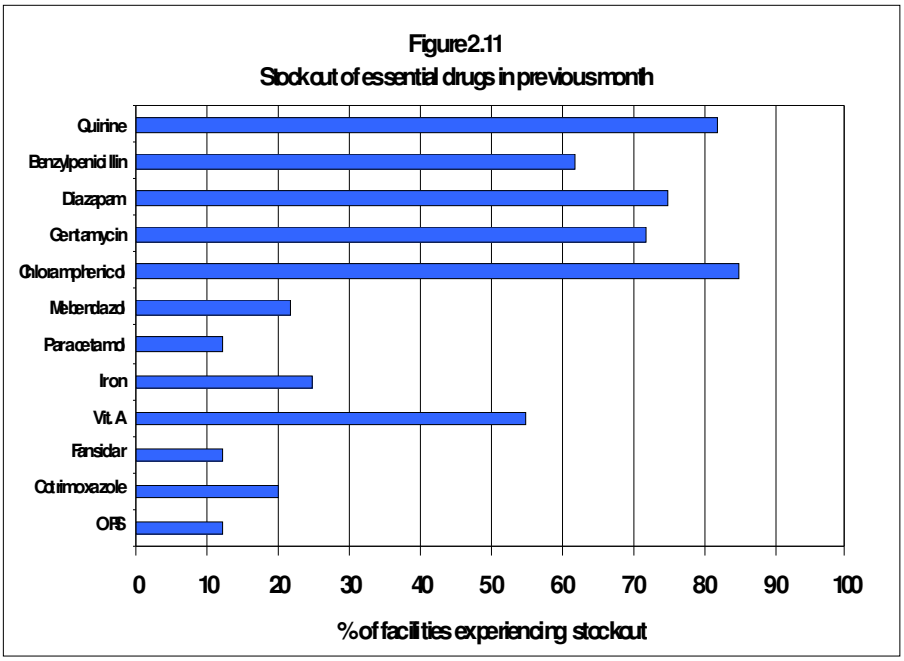
Oral drugs are one of the key elements of the management of child diseases and the success of the IMCI strategy. The Ethiopian adaptation of the WHO-CAH essential drug index includes ORS, cotrimoxazole, Fansidar, Vitamin A, iron, mebendazole, and paracetemol. Only 20 percent of facilities had all the essential IMCI oral drugs available on the day of the survey. Most often, Vitamin A was the oral drug that was not available. A drug was considered to be present if at least one full treatment was available in the facility on the day of the survey.



Injectable drugs

The initiation of injectable therapy for severely ill children when referred to a higher-level facility is an essential element of treatment under the IMCI guidelines. The importance of injectable drugs is magnified when referral is not possible and health workers must treat the severely-ill child at the facility. The essential injectable drugs are quinine, gentamicine, benzylpenicillin, chloramphenicol, diazepam, water for injection and intravenous fluid. None of the facilities had all IMCI injectable essential drugs on the day of the survey. Health stations had a higher likelihood of not having injectable drugs than health centers or hospitals.





Stock outs

Stock out status of the essential oral and injectable drugs was also assessed for the month proceeding the day of the survey. Figure 2.11 shows percent of facilities that experienced stock outs of essential IMCI drugs in the month before the survey. As expected, oral medications were stocked out less frequently than injectable drugs.

Case Management Indicators

A total of 167 cases were observed in this assessment. Thirty four percent of observed cases were children between two months and one year of age. Fifty three percent of observed cases were male while 47 percent were female. The two tools used to calculate case management indicators were Form 1: Observation Checklist and Form 3: Re-examination. The observation checklist was based on IMCI guidelines for assessment, classification and treatment. The supervisor of each team, who was IMCI trained, performed re-examination of all observed cases that were not referred by the health worker. The 'gold standard' used for determining appropriate assessment and treatment is defined by the classifications made during the re-examination. When evaluating this section it is important to remember that none of the cases were seen by an IMCI-trained health worker.

Case management indicators have been grouped into the four parts of IMCI evaluation: (1) Assessment; (2) Classification; (3) Treatment, and (4) Counseling.

Assessment Indicators

Of the 167 observed cases, 40 percent were seen by a health assistant, 28 percent by senior nurses, 25 percent by junior nurses, 5 percent by physicians and 2 percent by PHOs. None of the observed cases were seen by an IMCI trained health worker. The median time for consultation by health workers was 7 minutes. When broken down by health worker type, there were no real differences in consultation time for nurses, health assistants and physicians, ranging from 5 minutes for physicians to 9 minutes for senior nurses. However, the median consultation time for PHO is 24 minutes.

Before the child enters the consulting room, the child is usually weighed and the temperature of the child is checked (see Table 2.3). Forty seven percent of children were weighed. Temperature was measured for only 3 percent of observed cases. Health workers also assessed the presence of fever by either asking or feeling for fever in 83 percent of all observed cases.

Table 2.3 Assessment Indicators

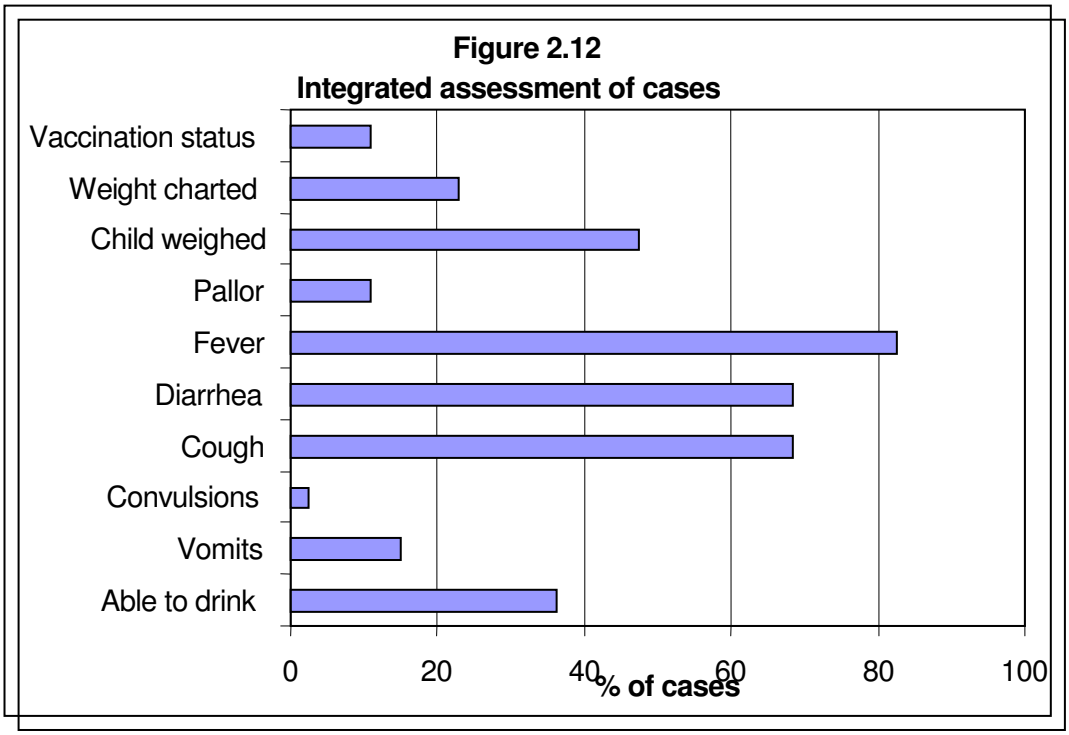
Indicator	Percentage
A1. Children checked for three danger signs	0%
A2. Index of integrated assessment (max 10)	4.0%
A3. Children checked for cough, diarrhea and fever	37%
A4. Children under two years assessed for feeding practices	8.4%
A5.Index of children under two years assessed for feeding practices (max 3)	1.0
A6. Underweight children who are assessed for feeding problems	0%
A7.Children whose weight is checked against a growth chart	22%
A8. Children whose vaccination status is checked	11%

One of the critical assessment tasks in the IMCI guidelines is to check for general danger signs (i.e. convulsions, inability to drink or breastfeed, and vomiting everything) of all sick children presenting at the facility. These general danger signs have been shown to be essential factors in determining whether a child is severely ill and needs referral. A child in whom at least one general danger sign is detected should be immediately referred to a higher-level facility. **The checking of all three danger signs was observed in none of the cases**

An arithmetic mean of ten assessment tasks was developed to measure the degree of integration of assessment tasks. These ten tasks included: (1-3) checking for the three danger signs; (4-6) checking for cough, fever, and diarrhea; (7) child weighed; (8) child's weight checked against a growth chart; (9) checking for palmar pallor; and (10) check for vaccination status. **An average of 4 integrated tasks were performed by health workers per case seen (N=167).** Figure 2.12 shows the different degrees in which the ten assessment tasks were conducted.

Figure 2.12

Integrated assessment of cases



The IMCI guidelines require that the nutritional status of all children under two years of age, regardless of presenting complaint, be assessed. This includes: (1) asking about breastfeeding; (2) asking about other foods/fluids; and (3) assessing if feeding changed during the illness. There were **less than 13 percent of children under two years of age assessed for nutritional status.** Other required nutritional assessment tasks based on the guidelines are assessing for severe wasting and edema of feet. Only four percent of children less than two years of age were checked for visible severe wasting and six percent were checked for edema.

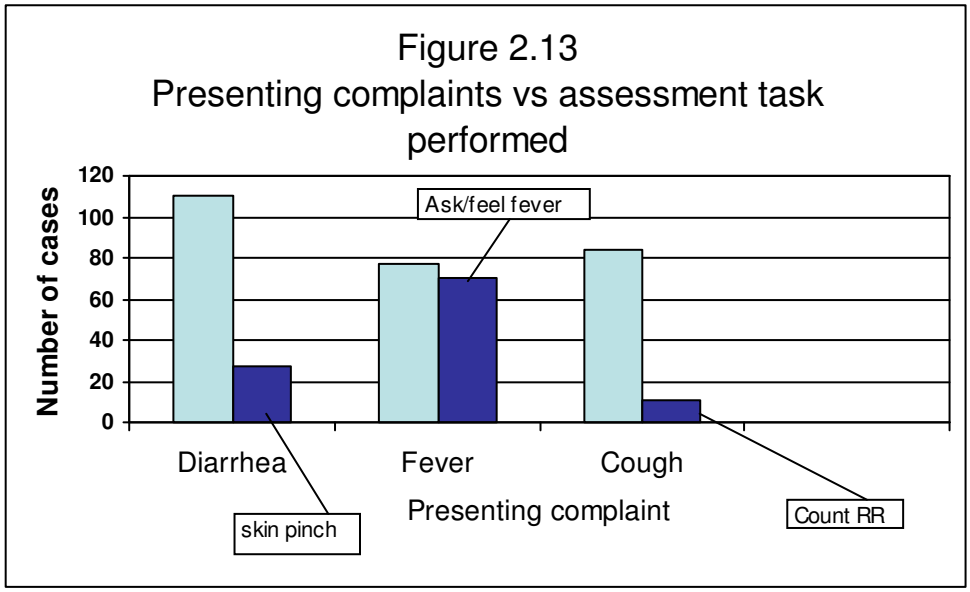


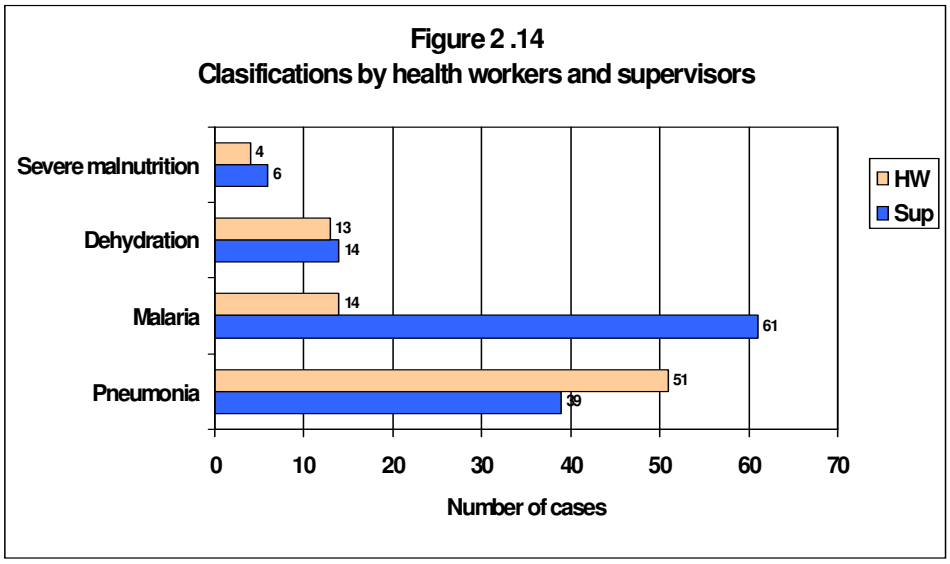
Figure 2.13 shows the number of children presenting with diarrhea, fever, or cough/difficult breathing and how many of those children were assessed appropriately with a skin pinch, feeling for fever, or counting respiratory rate, respectively. The results show good assessment for fever, but poor results for assessing diarrhea and pneumonia. Out of 84 children presented with symptoms of pneumonia, in only 11 children (13 percent) was respiratory rate counted. In the assessment of dehydration in children presenting with diarrhea, of 110 children presenting with diarrhea, the skin pinch was performed on only 27 (25 percent) of them.

Classification Indicators

The IMCI guidelines use "classifications" instead of diagnosis. Each illness is classified according to the actions to be taken, namely: (1) urgent referral, (2) simple medical treatment and advice; or (3) advice on home management. Of critical importance to the impact of IMCI on child and infant mortality is the correct identification of "severe" cases - either through the identification of general danger signs or through identification of other signs of severity.

In this assessment, a total of 264 classifications were made by health workers in the 167 cases observed. This is a mean of 1.6 classifications per case. Supervisors found 5.8 classifications per case on average. So according to the supervisors, the health workers still missed about 72 percent of the classifications.

Figure 2.14 shows comparisons between health workers and supervisors for the four most important classifications in IMCI. Health workers classified 51 cases of pneumonia while supervisors detected 39. However, of the 51 pneumonia cases classified by health workers, only 25 (49 percent) were validated by the supervisor (correct classification).



Health workers classified 14 cases of malaria to the 61 cases by the supervisors. Of the 14 cases of malaria identified by the health worker, 12 cases (86 percent) were validated by the supervisor. For diarrhea with some dehydration, the health worker identified 13 cases. Of the 13 cases classified by the health worker, the supervisor validated only 4 cases. Similarly, of the 4 cases of severe malnutrition classified by the health worker, the supervisor validated only 2 cases.

Treatment Indicators

Once the assessment of the sick child is completed, health workers classify the condition and select the appropriate treatment. Treatment includes the use of antibiotics, anti-malarials, paracetamol or other drugs. Referral recommendations and home care are considered part of the treatment.

Oral antibiotic therapy is recommended for a limited number of conditions and a key concern of the IMCI guidelines is the reduction of the overuse of antibiotics. Table 2.4 shows that in 50 percent of conditions antibiotics were used inappropriately. Only 3 percent of pneumonia cases were correctly treated with an antibiotic. Anti-malarial use for malaria cases was also as low as 5 percent.

According to IMCI guideline, health workers are instructed to give the first dose of the prescribed treatment. However, none of the children was given the first dose of the treatment at the facility.

Table 2.4 Treatment Indicators

Indicator	Percentage
T1. Children who are inappropriately treated with an antibiotic	50.0%
T2. Percent of children needing an oral antibiotic who are prescribed the antibiotic correctly	8.8%
T3. Percent of children needing an oral antimalarial who are prescribed the antimalarial correctly	5.3%
T4. Percent of children with pneumonia correctly treated	2.8%
T5. Percent of children with malaria correctly treated	5.3%
T6. Percent of children who receive first dose of treatment at facility	0%
T7. Children needing referral who were correctly referred.	17.2%

Counseling Indicators

The final stage of the IMCI consultation is the counseling of caretakers. Counseling includes giving specific recommendations on how to give the treatment, to give extra fluids and feeding, and on when to come back for follow-up or when to return immediately. Counseling messages are patterned for each classification, and they are prioritized so the caretaker is not overwhelmed with instructions.

Table 2.5 shows the principal counseling indicators. Generally, this was the weakest area of sick child consultations. It was only in 7 percent of cases that the caretaker was advised on how to administer the treatment.

The more general counseling messages of: (1) feeding during illness, (2) when to come back for follow up and, (3) when to come back immediately, were infrequently conveyed by health workers. Twenty one percent of caretakers were advised to give extra fluids and continue feeding during illness. Correct nutritional advice for children who were underweight was given to 23 percent of the caretakers. The IMCI guidelines recommend that caretakers of children under two years of age be given nutritional counseling. This occurred in only16 percent of cases. Out of 93 children who were not fully vaccinated, 66 percent left the facility without getting the needed vaccination on the day of the survey.

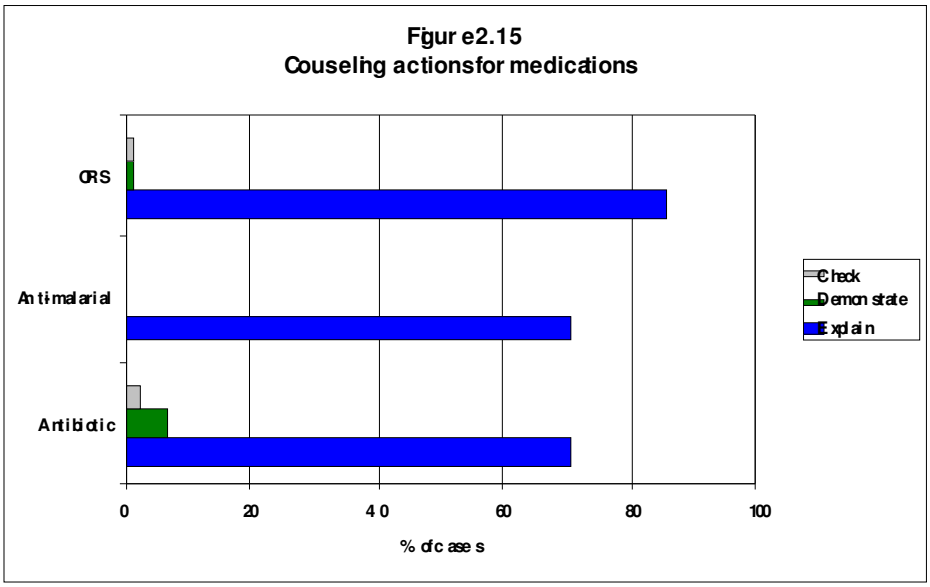
Table 2.5 also shows that only 1 percent of the health workers told the mother at least three messages of when to return immediately to the facility. None of the health workers used a mother's card to counsel the mother on the different aspects of treatment.

Table 2.5 Counseling Indicators

Indicator	Percentage
C1. Children prescribed oral medication whose caretaker is advised on how to administer the treatment	6.7%
C2. Caretakers who are advised to give extra fluids and continue feeding during illness	21.0%
C3. Underweight children whose caretaker received correct nutritional counseling	23.1%
C4. Children less than two years of age whose caretaker received correct nutritional counseling	15.7%
C5. Children who did not get needed vaccinations	65.6%
C6. Children whose caretaker is advised on when to return immediately	1.4%
C7. Children leaving the facility whose caretaker was given or shown a mother's card.	0%

For ORS, verbal explanation was given on how to give the ORS in 85 percent of cases. Giving demonstrations on how to give ORS was very low (1 percent). In asking "checking" questions of the mother to see if she understood how to give ORS, again only 1 percent of cases were asked checking questions.

For anti-malarials, explanation was given to 70 percent and no demonstration and checking questions were made to make sure that the caretaker understood how to administer the drug. In the case of antibiotics, explanation, demonstrations and checking questions were made to 71, 7 and 2 percent of caretakers, respectively (Figure 2.15)



None of the health workers used IMCI chart booklet and/or IMCI chart wall at any time during the management of sick child. Similarly, the IMCI recording form was not used by any health worker.

Caretaker Indicators

These groups of indicators are designed to evaluate whether the caretaker understood the instructions he/she was given by the health providers. These indicators are computed from Form 2 (Exit Interview). A total of 160 caretakers were interviewed. Seven were referred and the caretakers were not available for interviewing.

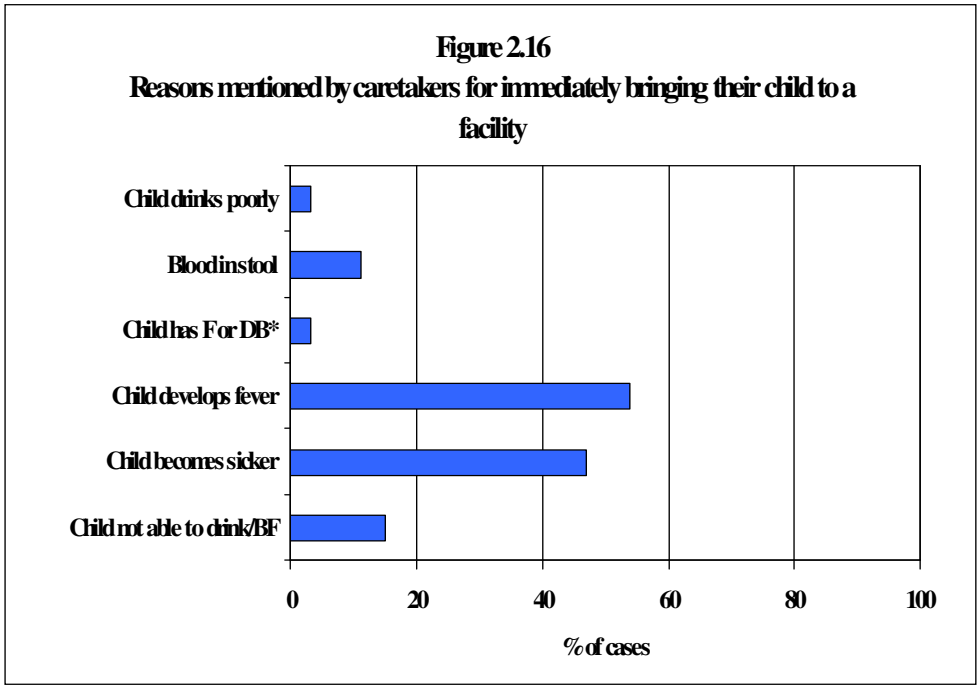
Mothers were the primary caretakers who brought children to the facility (87 percent). Fathers came with the children (either with mother or alone) in less than 9 percent of cases.

Results for this section can be found in table 2.6. When a child was prescribed ORS, the mother could say accurately how to give it in only 4 percent of cases. Caretakers whose children were prescribed antibiotics could tell how to give it in only 2 percent of cases. Malaria treatment fared better in understanding the treatment (33 percent). In cases in which the child had diarrhea, caretaker's knowledge of how to prepare the ORS was 44 percent. Caretaker knowledge of when to come back immediately (ability to identify at least two reasons) was nil.

Table 2.6 Caretaker Indicators

Indicator	Percentage
CA1a. Caretakers who are prescribed ORS and know how to give treatment	3.8%
CA1b. Caretakers who are prescribed an antibiotic and know how to give treatment	2.3%
CA1c. Caretakers who are prescribed an anti-malarial and know how to give treatment	33.3%
CA2. Caretakers of children with a classification of diarrhea who have correct knowledge of how to prepare ORS at home	43.9%
CA3. Caretakers who know when to come back immediately	0%
CA4. Caretakers who believe their children were seriously ill when they came to the facility	52.5%
CA5. Average time from appearance of first symptoms of illness and attendance at the clinic	6.6 days
CA6. Caretakers who sought care elsewhere before coming to the facility	8.1%

A series of questions were asked about perceptions of severity, home care provided and care seeking. Around 53 percent of caretakers perceived that their child was severely ill before coming to the facility. This perception of severity tended to affect when care was sought. If a child was perceived to be severely ill, care seeking outside the home was more likely to occur faster. The average time it took caretakers to bring a child for consultation from the day of first symptom was 6.6 days. Finally, about 8 percent of caretakers reported seeking help elsewhere before coming to the facility.



Caretaker knowledge about diseases prevented with vaccines was generally low. Most caretakers knew that vaccines prevented measles (44 percent) and whooping cough (29 percent). Knowledge that vaccines prevent tuberculosis, polio and tetanus was 14, 13 and12 percent, respectively. Knowledge that the vaccines also prevent diphtheria was dismal at 0.6 percent.

Only 3 percent of the caretakers reported to have bed nets in their home, and the average number present was 1.3 with a range of 1 to 2. None of the caretakers who had bed nets in their home knew that the nets should be impregnated with chemicals.

Most caretakers walked to the facility (89 percent). The median time it took caretakers to travel to the facility was 30 minutes. Once caretakers arrived at the facility, they still had to wait a median time of 15 minutes before they get the service.

Health Worker Knowledge Indicators

At the end of the consultation, three case scenarios for children with severe illness were presented to the observed health worker to assess knowledge of case management for severe illness. This tool is used because there are usually too few children with severe illness who are brought to first level facilities. In this survey, a total of 40 health workers were interviewed in 40 health facilities, 18 were health assistants, 10 were junior nurses, 10 were senior nurses and only 1 PHO and 1 physician.

For each case scenario, selected actions are given a value from 1 to 3. The decision to refer or admit the child is considered the most important step and is given the highest value. Pre-referral treatments such as injection of an antibiotic are given a value of 2 and other actions that are positive but not necessarily 'life-saving' are given a value of 1. Table 2.7 shows the results from each case scenario.

Table 2.7: Health Worker Knowledge of Case Management for Very Severe Illness

Case Scenario	Score
Case Scenario 1 : (0 – 9)	1.3
Case Scenario 2 : (0 – 8)	2.2
Case Scenario 3 : (0 – 11)	2.2

In all the case scenarios, the health workers tended to recommend urgent referral, but failed to treat the severely ill child with a pre-referral treatment and failed to initiate other actions that may assist the child such as keeping an infant warm or preventing low blood sugar.

Community and Facility Links Indicators

The links established between facility staff and the community it serves is an important aspect of facility work. The links could be established through outreach activities or other types of community engagement. Table 2.8 shows the indicators that were calculated.

Table 2.8: Health Facility-Community Links

Indicator	Percentage
HFC1. Percent of facilities with at least one community needs assessment completed	10%
HFC2. Percent of facilities with an operational plan of activities for working with the community	15%
HFC3. Percent of facilities with community-based resource persons working in health	80%
HFC4. Percent of facilities that have had a meeting with at least one community group in the last six months	65%
HFC5. Percent of facilities with any joint planning with the community	12.5%

Eighty percent of the surveyed facilities have some form of contact with community-based persons working in health. Community needs assessment and joint planning of health activities with the community is extremely low at 10 and 13 percent, respectively.

Chapter

4

Conclusions and Recommendations

General Recommendations

In order to have maximum impact on child mortality and morbidity, significant work should be done in the following three intervention areas:

1. Improving health worker knowledge and skills through training and supportive supervision;

2. Improving capacity of the health system in terms of essential drugs, supplies and equipment, HMIS, planning and management, and supervision and follow-up so that it can shoulder the desired child health intervention activities;

3. Improving the household and community practices of child health such as:

    a. healthy growth and development.

    b. disease prevention

    c. appropriate care seeking behavior and compliance to treatment by caretakers.

    d. home management of the sick child.

These three intervention areas should feed each other and signify a holistic approach to solving child health problems.

Specific Recommendations

1. IMCI trained staff is virtually non-existent throughout the facilities. As trained manpower forms an integral part of any health services at facility level, training should be a starting point to strengthen IMCI. As the main providers of case management for sick children under five are health assistants, senior nurses and junior nurses, any IMCI training needs to focus on these professionals. Physicians and PHOs need also be trained, as they are the caregivers at referral centers and can also be potential trainers.

2. This survey has revealed that the few trained personnel are not managing sick children in their respective facilities. This indicates the importance of some form of IMCI orientation for health managers to enable them to make efficient utilization of trained staff.

3. Supervision of services at all levels is very important. A clear lack of supervision for all activities found in this survey needs improvement. IMCI follow-up supervision with case observation and supportive supervision for other activities at all levels should be initiated.

4. Lack of essential IMCI materials is another important problem. Printed materials like IMCI chart booklet, wall chart, recording forms and mother's cards which can fairly easily be made available are lacking in most of the facilities. IV set and nasogastric tube were not found in most facilities. The presence of these materials is crucial to implement and monitor IMCI, and any program that is designed to improve facility IMCI in the region should first address this problem.

5. Indices of availability of both oral and injectable pre-referral drugs are also low. About 80% of the facilities had some form of stock-out of IMCI essential oral drugs in the month prior to the survey. This constraint definitely affects the quality of services given to sick children and every effort should be made to improve this situation.

6. More alarming is shortage of vaccines in the health facilities. Vaccination is believed to be one of the cheapest and most effective strategies to improve child health in our country. Nevertheless, in the surveyed areas many children who have access to health facilities are missing vaccination because of lack of vaccines in the facilities. On the day of the survey, for instance, 22% of the facilities did not have BCG vaccine and 15% did not have any of the four vaccines for EPI. MOH, RHB and other partners need to work to ensure sustainable availability of vaccines at all facilities for successful EPI activities.

7. Some 20% of the facilities did not have equipment and supplies to support full vaccination services (functioning refrigerator or cold chain and syringes). This affects the routine EPI activities both at static and outreach sites. All facilities should sustainably be supplied with these equipment and supplies in order to improve immunization services.

8. Ten percent of the facilities do not have outreach vaccination program. This is a lot in regions like Oromia where the health coverage is not hundred percent. Even among those which have outreach, 53% reported having problems in conducting outreach in the past 3 months mainly due to lack of transport, fridge not working or not enough personnel. Twenty percent of the facilities do not give vaccination activities at static sites daily. All these conditions need to be improved and accessibility be increased for better vaccination coverage – facilities should be enabled to give vaccination at static sites daily, outreach vaccination activities should be expanded and the existing ones be strengthened.

9. ITNs distributions as part of malaria control activity were being done only by 8% of the facilities. Availability of chemicals and measuring cups for impregnation is even lower. Likewise, only 2.5% of the households reported to have bed net at home. On the other hand the survey has revealed that 65% of the households live in malaria high risk areas. This clearly indicates the need for promotion and supply of ITN in the region for effective malaria prevention activities.

10. Very few, if any, pamphlets and take-home cards were available in the facilities for health education. These materials are very important for a one-to-one health education. There is a need to develop and produce such materials to strengthen IEC and BCC on topics related to child health.

11. Up to date health record keeping is low in the surveyed facilities. Patient history, immunization and growth monitoring registers are up to date in only half to three quarters of the facilities. Outpatient records and reports were also incomplete in many facilities. Strengthening HMIS by training of health workers and revision of record and report formats will definitely improve this situation.

12. Appropriate referral of severely ill children is one of the important components of IMCI practice. This was in fact difficult in majority of the cases due to lack of transport or money or both. The distance of the next referral facility was also very important prohibitive factor. As majority of the referred cases refuse the referral, it would be helpful if the IMCI training can include a specialized module on "When referral is not possible." This module is already incorporated in the annexes to the standard 11-day course. In addition, the referral facilities should be equipped with appropriate materials, supplies and drugs to handle severely ill children.

13. Health facility – community link appeared to be weak. Though about 93% of the facilities have some forms of outreach to the community, only few have conducted community needs assessment and operational plan that included community works. Strengthening facility activities with community – based workers and joint planning between health facilities and community should be emphasized for good support from the community. This can be achieved by promoting community health volunteers and equipping health workers with the skills required to work with the community.

14. As expected of non-IMCI trained health workers, all IMCI assessment, classification, treatment and counseling indicators in this survey were invariably low. Surprisingly, none of the observed children was checked for the three danger signs. Relevant assessment tasks for their presenting complaints were not performed for most children. Health workers missed about 72% of the classifications when compared to the gold standard (supervisor's classifications). No doubt, all these and other low performances affect quality of care given to sick children. However, these are believed to be improved by training, and standard IMCI training for facility health workers is highly recommended.

15. There are some areas which deserve more attention than others during IMCI training for health workers. Misclassification and under treatment of malaria is very much worrying when seen from the prevalence and perspective of the outcome of untreated cases. Counseling of caretakers, especially demonstration and asking checking questions were almost not there. These and other areas of low performance should get emphasis during IMCI training.

16. This survey further revealed that caretaker's perception of severity of a child illness is low. This low perception of severity affected when care was sought. If a child was perceived to be severely ill, care seeking outside the home was more likely to occur faster. Caretakers' knowledge about vaccine preventable diseases was also low. This calls for caretakers centered IEC/BCC and strengthening of community IMCI to enable caretakers identify severe illness, seek help promptly and manage minor illnesses at home to improve child health.

17. Assessment scores of health workers' knowledge of case management for severe illness were generally low. Integrated Refresher Training (IRT) for health workers and provision of quick reference materials on selected health topics would help to improve this situation.

Annex A.

Ethiopia - Oromia
Regional Health Bureau
Health Facility Survey 2004

Indicators Checklist

		Indicators	2004 ESHE
Health Facility		HF1. *Percent* of facilities with at least one health worker trained	5/40 12.5%
		HF2. *Percent* of facilities that have received at least one supervisory visit in the last three months.	1/40 2.5%
		HF3. *Percent* of facilities with up-to-date immunization and patient registers.	1/40 2.5%
		HF4. *Index* of availability of IMCI essential oral drugs (out of 7).	5.7
		HF5. *Percent* of facilities with no stock-outs of any IMCI essential oral drugs in the previous month.	8/40 20%
		HF6. *Index* of availability of injectable drugs for IMCI pre-referral treatment (quinine, Diazepam, Gentamicine, Benzylpenicillin and chloramphenicol) – (out of 5)	1.3
		HF7. *Percent* of health facilities with equipment and supplies to support full vaccination services.	32/40 80%
		HF8. *Index* of availability of four vaccines. (out of 4)	3.3
		HF9. *Percent* of facilities with essential equipment and materials available.	8/40 20%
		HF10. *Percent* with at least one community needs assessment completed	4/40 10%
		HF11. *Percent* of facilities with an operational plan of activities for working with the community	6/40 15%
		HF12. *Percent* of facilities with community-based resource persons working in health	32/40 80%
		HF13. *Percent* of facilities that have had a meeting with at least one community group in the last six months	26/40 65%
		HF14. *Percent* of facilities with any joint planning with the community	5/40 12.5%
		HF15. *Percent* of facilities with at least one staff person trained and active in community-based activities	5/40 12.5%
Case Management	**Assessment**	CMA1. *Percent* of children checked for three danger signs.	0/40 0%
		CMA2. *Index* of integrated assessment. (out of 10)	3.9
		CMA3. *Percent* of children checked for the presence of cough, diarrhoea and fever.	60/167 36.5%
		CMA4. *Percent* of children under two years of age assessed for feeding practices	14/109 12.8%
		CMA5. *Index* of children under two years of age assessed for feeding practices. (out of 3)	1.0
		CMA6. *Percent* of children whose weight is checked against a growth chart.	37/167 22.3%
		CMA7. *Percent* of children whose vaccination status is checked.	19/167 11.4%
		CMA8. *Percent* of children checked for lethargy	1/1 100%

		CMA9. *Percent* of children checked for other problems.	81/167 48.5%
		CMA10. *Percent* of children with very low weight assessed for feeding problems.	0/13 0%
		CMA11. *Percent* of children with very low weight correctly classified.	0/15 0%
		CMA12. *Percent* of children correctly classified.	28/138 20.3%
	Treatment		
		CMT2. *Percent* of children needing an oral antibiotic and/or an anti-malarial who are prescribed **both** drugs correctly.	1/92 1.1%
		CMT2a. *Percent* of children needing an oral antibiotic who are prescribed the antibiotic correctly	5/57 8.8%
		CMT2b. *Percent* of children needing an oral antimalarial who are prescribed the antimalarial correctly	3/57 5.3%
		CMT3. *Percent* of children who are inappropriately treated with an antibiotic. (those who **do not** need AB but are given AB.	46/92 50%
		CMT4. *Percent* of children with pneumonia correctly treated.	1/36 2.8%
		CMT5. *Percent* of children with dehydration correctly treated.	5/13 38.5%
		CMT6. *Percent* of children with malaria correctly treated.	3/57 5.3%
		CMT7. *Percent* of children with anemia in high malaria-risk area correctly treated.	0/14 0%
		CMT8. *Percent* of children who receive first dose of treatment at facility	0/80 0%
		CMT9 *Percent* of children needing referral who are correctly referred.	5/29 17.2%
	Counseling	CMC1. *Percent* of children prescribed oral medication whose caretaker is advised on how to administer the treatment.	7/105 6.7%
		CMC2. *Percent* of caretakers who are advised to give extra fluids and continue feeding during illness.	29/138 21%
		CMC3. *Percent* of underweight children whose caretaker received correct nutritional counseling	3/13 23.1%
		CMC4. *Percent* of children less than two years of age whose caretaker received correct nutritional counseling.	14/89 15.7%
		CMC5. *Percent* of children who did not get needed vaccinations. –Missed opportunities--.	61/93 65.6%
		CMC6. *Percent* of children whose caretaker is advised on when to return immediately	2/138 1.4%
		CMC7. *Percent* of children leaving the facility whose caretaker was given or shown a mother's card	0/136 0%
Caretaker		C1. *Percent* of caretakers of children who are prescribed ORS, and/or an oral antibiotic and/or an oral anti-malarial and know how to give the treatment.	7/120 5.8%
		C1a. *Percent* of caretakers of children who are prescribed ORS and know how to give the treatment	3/78 3.8%
		C1b. *Percent* of caretakers of children who are prescribed antibiotic and know how to give the treatment	2/86 2.3%

	C1c. *Percent* of caretakers of children who are prescribed antimalarial and know how to give the treatment	2/6 33.3%
	C2. *Percent* of caretakers of children with diarrhea whose mothers have correct knowledge of how to prepare ORS at home.	43/98 43.9%
	C3. *Percent* of caretakers who know when to come back immediately.	0/2 0%
	C4. *Percent* of caretakers who believe their children were severely ill and at risk of death when they came to the facility.	84/160 52.5%
	C5. *Average* time delay from the appearance of the first symptoms of illness to the attendance at the clinic.	6.5 days range 1-60 median 4 days
	C6. *Percent* of caretakers who sought care elsewhere before coming to the facility.	13/160 8.1%
	C7. *Percent* of caretakers who sought help elsewhere and went specifically to CHWs before coming to the facility	0/13 0% most (6/13) went to traditional healers
	C8. *Percent* of children under five with fever for whom care was sought promptly.	29/75 38.7%
Health Worker	Case scenario 1: range (0-9)	1.3
	Case scenario 2: range (0-8)	2.2
	Case scenario 3: range (0-11)	2.2

Note: For indicator C8 – for those with presenting complaint of fever and who came to the facility within 3 days.

Annex B

PRIORITY INDICATORS

Facility Indicators

1. *Percent* of facilities with at least one health worker trained.

   Numerator: Number of health facilities with at least one person trained in IMCI.

   Denominator: Total number of facilities surveyed.

2. *Percent* of facilities that have received at least one supervisory visit in the last three months.

   Numerator: Number of health facilities with at least one IMCI supervisory visit in the last three months (with observation of case management)

   Denominator: Total number of facilities surveyed.

3. *Percent* of facilities with up-to-date immunization and patient registers.

   Numerator: Number of health facilities with up-to-date (immunization and patient) registers.

   Denominator: Total number of facilities surveyed.

4. *Index* of availability of IMCI essential oral drugs.

   Definition: Arithmetic mean of IMCI essential oral drugs recommended for home treatment of diarrhea, dysentery, pneumonia, fever, malaria, and anemia available at each facility the day of visit, divided by seven.

   Calculation:
   - ORS, 1 point
   - cotrimoxazole, 1 point
   - fansidar, 1 point
   - vitamin A, 1 point
   - iron, 1 point
   - mebendazole, 1point
   - paracetamol/aspirin, 1 point

   Divided by seven

5. Percent of facilities with no stock-outs of any IMCI essential oral drugs in the previous month.

   Numerator: Number of health facilities with out stock-outs of IMCI essential oral drugs in the previous month.

   Denominator: Total number of facilities surveyed.

6. *Index* of availability of injectable drugs for pre-referral treatment (quinine, chloramphenicol).

Definition**:** Arithmetic mean of the recommended injectable antibiotics (chloramphenicol) and anti-malarials (quinine) for pre-referral treatment for children and young infants with severe classification needing immediate referral, available in the facility on the day of the visit, divided by four.

Calculation: - cloramphenicol, 1 point
- quinine, 1 point
- diazepam, 1 point

Divided by three

7. *Percent* of health facilities with equipment and supplies to support full vaccination services.

Numerator: Number of health facilities that have the equipment and supplies to support full vaccination services (functioning refrigerator or cold chain, and functioning sterilizer and needles/syringes or disposable needles/syringes available on the day of survey.

Denominator: Total number of facilities surveyed.

8. *Index* of availability of four vaccines.

Definition: Arithmetic mean of recommended vaccines available at each facility the day of visit, divided by four.

Calculation: - BCG, 1 point
- Polio, 1 point
- DPT, 1 point
- Measles, 1 point
Divided by four

9. *Percent* of essential equipment and materials available in health facilities.

Numerator: Number of health facilities with needed equipment and materials (working weighing scales for adults and children, timing device, thermometers, child health cards, source of clean water, spoons, cups and jugs to mix and administer ORS, educational materials for care takers) available on the day of the survey.

Denominator: Total number of facilities surveyed.

Case management Indicators

Assessment

1. *Percent* of children checked for three danger signs.

Numerator: Number of children aged 2 months up to five years seen who are checked for three danger signs (is the child able to drink or breastfeed, does the child vomit everything, has the child had convulsions).

Denominator: Total number of children aged 2 months up to five years seen

2. *Index* of integrated assessment.

Definition: Arithmetic mean of 10 assessment tasks performed for each child (checked for three danger signs, checked for the three main symptoms, child weighted and weight checked against a growth chart, checked for pallor, and checked for vaccination status divided by ten).

Calculation:
- checked for "ability to drink or breastfeed", "vomits everything", and convulsions", 1 point each
- checked for presence of "cough & fast/difficult breathing", "diarrhoea", and "fever", 1 point each
- child weighed the same day and child's weight used against a recommended growth chart, 1 point each
- child checked for pallor, 1 point
- child vaccination status checked (card or history), 1 point

Divided by ten

3. *Percent* of children checked for the presence of cough, diarrhoea and fever.

Numerator: Number of children seen whose caretakers were asked about the presence of cough, diarrhoea, and fever.

Denominator: Total number of children seen.

4. *Percent* of children under two years of age assessed for feeding practices.

Numerator: Number of children under two years of age whose caretakers are asked if they breastfeed this child, whether the child takes any other food or fluids other than breast milk, and if during this illness the child's feeding has changed.

Denominator: Total number of children under two years of age seen.

5. *Index* of children under two years of age assessed for feeding practices.

Definition: Arithmetic mean of three nutrition assessment tasks in children under two years of age (are they asked if : breastfeed this child, whether the child takes any other food or fluids other than breast milk, or if during this illness the child's feeding has changed).

Calculation: Asked status of breastfeeding, 1 point
Asked if child takes any other food or fluids other than milk, 1 point
Asked if during illness the child's feeding has changed
Divided by 3

6. *Percent* of underweight children who are assessed for feeding problems.

Numerator: Number of children with a validated classification of underweight and no severe classification whose caretaker is asked: if the mother breastfeeds the child, if the child takes food or fluids other than breast milk, and if during this illness the child's feeding has changed.

Denominator: Total number of children with validated classification of under weight.

7. *Percent* of children whose weight is checked against a growth chart.

Numerator: Number of children seen who have been weighed the same day and have their weight checked against a recommended growth chart.

Denominator: Total number of children seen

8. *Percent* of children whose vaccination status is checked.

Numerator: Number of children seen who have their vaccination card or vaccination history checked.

Denominator: Total number of children seen.

Treatment

9. *Percent* of children treated appropriately according to the classification made by the health worker.

Numerator: Number of children with correct treatment according to classification by health worker.

Denominator: Total number of children seen

10. *Percent* of children needing an oral antibiotic and/or an anti-malarial who are prescribed the drug correctly.

Numerator: Number of children with validated classification, who do not need urgent referral, who need an oral antibiotic and/or an anti-malarial (pneumonia, and/or dysentery, and/or malaria, and/or acute ear infection, and/or anemia in high malaria risk areas) who are correctly prescribed them, including dose, number of times per day, and number of days

Denominator: Total number of children with validated classifications, who do not need urgent referral, who need an oral antibiotic and/or an anti-malarial.

11. *Percent* of children who are inappropriately treated with an antibiotic.

Numerator: Number of children with validated classification who do not need urgent referral and do not need an antibiotic for one or more IMCI classifications (no pneumonia: cough or cold, diarrhea with or without dehydration, persistent diarrhea, malaria, fever-malaria unlikely, measles, chronic ear infection, no ear infection, anemia or very low weight, and/or no anemia and not very low weight) who are given or prescribed an antibiotic for those validated classifications.

Denominator: Total number of children seen who do not need urgent referral and who do not need an antibiotic for one or more IMCI classifications

12. *Percent* of children needing referral who are correctly referred.

Numerator: Number of children with a validated classification of severe disease needing referral (one or more danger signs, severe pneumonia or very severe disease, and/or severe dehydration with any other severe classification, and/or severe persistent diarrhea, and/or very severe febrile disease, and/or severe complicated measles, and/or mastoiditis, and/or severe malnutrition or severe anemia) who were referred by the health workers

Denominator: Total number of children with a validated classification of severe disease needing referral.

Counseling

13. *Percent* of children prescribed oral medication whose caretaker is advised on how to administer the treatment.

Numerator: Number of children with validated classifications not needing referral, who do not need urgent referral, who received or were prescribed an antibiotic and/or an anti-malarial and/or ORS who receive at least two treatment counseling messages (explanation on how to administer treatment, demonstration on how to administer treatment, open-ended question to check caretaker understanding).

Denominator: Total number of children with validated classifications not needing urgent referral, who received or were prescribed an antibiotic and/or an anti-malarial and/or ORS.

14. *Percent* of caretakers who are advised to give extra fluids and continue feeding during illness.

Numerator: Number of children with validated classifications, who do not need urgent referral, whose caretakers are advised to continue breast feeding and for longer time if less than 6 months, or continue feeding and give extra fluids if more than 6 months.

Denominator: Total number of children with validated classifications, who do not need urgent referral.

15. *Percent* of underweight children whose caretaker received correct nutritional counseling.

Numerator: Number of children with a validated classification of underweight, who do not need urgent referral, whose caretakers are provided with two age-appropriate feeding messages (breastfeeding, frequency and type of complementary food).

Denominator: Total number of children with a validated classification of underweight, who do not need urgent referral

16. *Percent* of children less than two years of age whose caretaker received correct nutritional counseling.

Numerator: Number of children less than two years, who do not need urgent referral, whose caretakers are provided with two age-appropriate feeding messages (breastfeeding, frequency and type of complementary food).

Denominator: Total number of children less than two years, who do not need urgent referral

17. *Percent* of children who did not get needed vaccinations. --Missed opportunities--.

Numerator: Number of children who need vaccinations (based on vaccination card or history) and who leave the HF without all needed vaccinations.

Denominator: Total number of children seen in facilities with active vaccination program who need vaccinations (based on vaccination card or history).

18. *Percent* of children whose caretaker is advised on when to return immediately.

Numerator**:** Number of children, who do not need urgent referral, whose caretakers received at least three of the following counseling messages on when to return immediately to a health facility: if the child is not able to drink or breastfeed, if the child becomes sicker, if the child develops fever, if the child has difficult breathing, if the child has fast breathing, if the child has blood in the stool, or if the child is drinking poorly.

Denominator**:** Total number of children seen who do not need urgent referral according to health worker.

Caretaker

1. *Percent* of caretakers of children who are prescribed ORS, and/or an oral antibiotic and/or an oral anti-malarial and know how to give the treatment.

Numerator: Number of children prescribed ORS, and/or an oral antibiotic and/or an oral anti-malarial whose caretakers can describe how to give the correct treatment including the amount, number of times per day, and number of days.

Denominator: Total number of caretakers whose children were prescribed ORS and/or an antibiotic and/or an anti-malarial.

2. *Percent* of caretakers of children with diarrhea whose caretakers have correct knowledge of how to prepare ORS at home.

Numerator: Number of caretakers who can cite correctly how to prepare ORS.

Denominator: Total number of caretakers whose children had diarrhea at time of consultation.

3. *Percent* of caretakers who know when to come back immediately.

Numerator: Number of caretakers who were told when to come back and remember at least two of the following: if the child is not able to drink or breastfeed, if the child becomes sicker, if the child develops fever, if the child has difficult breathing, if the child has fast breathing, if the child has blood in the stool, or if the child is drinking poorly.

Denominator: Total number of caretakers who were told at least three messages of when to return immediately.

4. *Percent* of caretakers who believe their children were severely ill and at risk of death when they came to the facility.

Numerator: Number of caretakers who brought their children to the facility because they believed they were severely ill or at risk of dying.

Denominator: Total number of caretakers.

5. *Average* time delay from the appearance of the first symptoms of illness and the attendance at the clinic.

Definition: The average time (in hours) it took the caretaker to bring the child to the facility after the appearance of the first symptom of illness.

Calculation: Addition of time (in hours) each caretaker took to bring the child since the start of illness and divide by total number of children brought to the facility.

6. *Percent* of caretakers who sought care elsewhere before coming to the facility.

Numerator: Number of caretakers who sought care outside the home before coming to the health facility being surveyed.

Denominator: Total number of caretakers.

SUPPLEMENTAL INDICATORS

Case Management

Assessment

1. *Percent* of children checked for lethargy. The proportion of children not visibly awake (who are not playing, smiling, or crying with energy) who are checked for lethargy.

Numerator: Number of sick children not visibly awake when assessed by the health worker (who are not playing, smiling, or crying with energy) who are checked for lethargy.

Denominator: Number of sick children not visibly awake seen.

2. *Percent* of children checked for other problems. The proportion of children brought to the facility for an "other problem" who were checked for this "other problem".

Numerator: Number of children brought to the facility for one or more of the main symptoms (cough/fast/difficult breathing, diarrhoea, fever) or for "ear problems" and for an "other problem" or who were brought to the facility for

an “other problem” only, whose caretaker were asked to describe this other problem.

Denominator: Number of children brought to the facility for one or more of the main symptoms (cough/fast/difficult breathing, diarrhea, fever) or for “ear problems” and for an “other problem” or who were brought to the facility for an “other problem” only.

3. ***Percent* of children with very low weight who are assessed for feeding problems.** The proportion of sick children with very low weight who are assessed for feeding problems.

   Numerator: Number of sick children with a validated classification of very low weight and no severe classification whose caretaker are asked if the mother breastfeeds the child, if the child takes food or fluids other than breastmilk, and if during this illness the child’s feeding has changed.

   Denominator: Number of sick children with a validated classification of very low weight

4. **Percent of child with very low weight correctly classified.** The proportion of children with very low weight who are correctly classified.

   Numerator: Number of children with a validated classification of very low weight who are classified as very low weight.

   Denominator: Number of children with a validated classification of very low weight.

5. ***Percent* of children correctly classified.** Proportion of children whose classifications given by the health worker match all the classifications given by an IMCI-trained surveyor (validated classification)

   Numerator: Number of children whose validated classifications match the classifications given by the health worker.

   Denominator: Number of children seen

Treatment

6. ***Percent* of children with pneumonia correctly treated.** The proportion of children with pneumonia who are prescribed antibiotic treatment correctly.

   Numerator: Number of children with a validated classification of pneumonia and no severe classification who are given/prescribed treatment with an appropriate antibiotic (including correct amount, times per day, and number of days)

   Denominator: Number of children with a validated classification of pneumonia and no severe classification

7. **Percent of children with dehydration correctly treated**. The proportion of children with diarrhoea and some dehydration who receive ORS at the facility.

   Numerator: Number of children with a validated classification of diarrhoea with some dehydration and no severe classification who receive ORS at the facility.

   Denominator: Number of children with a validated classification of diarrhoea with some dehydration and no severe classification

8. **Percent of children with malaria correctly treated**. The proportion of children with malaria who are prescribed antimalarial treatment correctly.

Numerator: Number of children with a validated classification of malaria and no severe classification who are given/prescribed treatment with an appropriate antimalarial (including correct amount, times per day, and number of days).

Denominator: Number of children with a validated classification of malaria and no severe classification

9. **Percent of children with anaemia correctly treated.** The proportion of children with anaemia who are prescribed treatment correctly.

Numerator: Number of children with a validated classification of anaemia and no severe classification who are given/prescribed correct treatment including iron, mebendazole if over two years of age and did not receive mebendazole during the previous six months, and an antimalarial if high malaria risk area (including correct amount, times per day, and number of days for all drugs).

Denominator: Number of children with a validated classification of anaemia and no severe classification

10. **Percent of children who receive a first dose of treatment at facility.** The proportion of children, who do not need urgent referral, who need an antibiotic and/or an antimalarial who receive the correct first dose(s) at the facility.

Numerator: Number of children with validated classifications, who do not need urgent referral, who need an antibiotic and/or an antimalarial (pneumonia, dysentery, malaria, acute ear infection, anemia[1]) who receive the correct first dose(s) at the health facility.

Denominator: Number of children with validated classifications, who do not need urgent referral, who need an antibiotic and/or an antimalarial**.**

Counseling

11. **Percent of children prescribed oral medication whose caretaker is advised on how to administer the treatment.** The proportion of children, who do not need urgent referral, who received or were prescribed an antibiotic and/or an antimalarial and/or ORS who received at least two treatment counselling messages.

Numerator: Number of children with validated classifications not needing referral, who do not need urgent referral, who received or were prescribed an antibiotic and/or an antimalarial and/or ORS who receive at least two treatment counseling messages (explanation on how to administer treatment, demonstration on how to administer treatment, open-ended question to check caretaker understanding).

Denominator: Number of children with validated classifications not needing urgent referral, who received or were prescribed an antibiotic and/or an antimalarial and/or ORS

12. **Percent of children whose caretaker is advised on when to return immediately**.. The proportion of sick children whose caretakers received at least three counselling messages on when to return immediately.

[1]In low- or no-risk area for malaria, anemia is not treated with antimalarial.

Numerator: Number of sick children, who do not need urgent referral, whose caretakers received at least three of the following counseling messages on when to return immediately to a health facility: if the child is not able to drink or breastfeed, if the child becomes sicker, if the child develops fever, if the child has difficult breathing, if the child has fast breathing, if the child has blood in the stool, or if the child is drinking poorly.

Denominator: Number of sick children seen who do not need urgent referral

13. ***Percent of*** **children leaving the facility whose caretaker was given or shown a mother's card.** Proportion of children, who do not need urgent referral, whose caretakers have a mother's counselling card[e] with them at departure, or report having been shown a mother's card by the health worker (Adaptation needed for sites where mothers' counselling cards are not distributed.)

Numerator: Number of children, who do not need urgent referral, whose caretakers have a mother's card[e] with them at departure or report having been shown a mother's card by the health worker during the visit.

Denominator: Number of sick children seen who do not need urgent referral.

14. ***Percent*** **of health facilities that have essential equipment and materials.** The proportion of health facilities that have all needed equipment and materials available on the day of the survey.

Numerator: Number of health facilities with all needed equipment and materials (accessible and working weighing scales for adults and children, timing device, child health cards, source of clean water, spoons, cups and jugs to mix and administer ORS) available on the day of the survey

Denominator: Number of health facilities surveyed