

# **SM2015-Guatemala**

## **Baseline Health Facility Survey**

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**Data Quality Report**

**February 2014**



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## Acronyms and abbreviations

CAIMI	Comprehensive maternal and child health care center (centro de atención integral materno infantil)
CAP	Permanent health care center (centro de atención permanente)
CAPI	Computer-assisted personal interview
EONC	Essential Obstetric and Neonatal Care
IHME	Institute for Health Metrics and Evaluation
IUD	Intrauterine device
SM2015	Salud Mesoamérica 2015 Initiative
ORS	Oral rehydration salts

This data quality report on the Salud Mesoamérica 2015-Guatemala baseline health facility survey was produced in agreement with the Inter-American Development Bank. All analyses and report writing were performed by the Institute for Health Metrics and Evaluation (IHME) at the University of Washington. This report is meant as a descriptive analysis to explore the most significant aspects of the information gathered for Salud Mesoamérica 2015. Its purpose is to ensure that collected data is of the highest possible quality.

## About IHME

IHME monitors global health conditions and health systems and evaluates interventions, Initiatives, and reforms. Our vision is that better health information will lead to more knowledgeable decision-making and higher achievements in health. To that end, we strive to build the needed base of objective evidence about what does and does not improve health conditions and health systems performance. IHME provides high-quality and timely information on health, enabling policymakers, researchers, donors, practitioners, local decision-makers, and others to better allocate limited resources to achieve optimal results.

## Lead authors

Erin Palmisano, BA  
Data Analyst, IHME

Alexandra Schaefer, BA  
Data Analyst, IHME

Bernardo Hernández Prado, MS, DSc  
Associate Professor, IHME

Ali H. Mokdad, PhD  
Professor, IHME

## Contributing authors

Brent Anderson, BA  
Project Officer, IHME

K. Ellicott Colson, BA  
Post-Bachelor Fellow, IHME

Sima Desai, BS  
Data Analyst, IHME

Marielle C. Gagnier, BS  
Post-Bachelor Fellow, IHME

Annie Haakenstad, MA  
Project Officer II, IHME

Paria Naghavi, BESC, BA  
Data Analyst, IHME

Dharani Ranganathan, BA  
Data Analyst, IHME

Gulnoza Usmanova MPH, MD  
Post – Graduate Fellow, IHME

Sarah Wulf, MPH  
Research Associate, IHME

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## Chapter 1 SURVEY METHODOLOGY

### 1.1 Overview

*Salud Mesoamérica 2015* (SM2015) is a regional public-private partnership that brings together Mesoamerican countries, private foundations and bilateral and multilateral donors with the purpose of reducing health inequalities affecting the poorest 20% of the population in the region. Funding will focus on supply- and demand-side interventions, including changes in policy, evidence-based interventions, the expansion of proven and cost-effective health care packages, and the delivery of incentives for effective health services. One of its defining features is the application of a results-based financing model (RBF) that relies on serious performance measurement and enhanced transparency in reporting accountability and global impact assessment. The initiative will focus its resources on integrating key interventions aimed at reducing health inequalities resulting from the lack of access to reproductive, maternal, and neonatal health (including immunization and nutrition) for the poorest quintile of the population.

The objectives of the SM2015 evaluation are to assess whether countries are reaching the targeted indicators set by the initiative and to evaluate the impact of specific interventions. In Guatemala, data collection is taking place at households and health facilities in intervention and control areas. The evaluation design includes a baseline data collection prior to the beginning of the intervention, as well as follow-up measures at 18 months (only in health facilities) and again at 36 and 54 months later. This document describes the methods and results of the baseline measurement in health facilities.

### 1.2 Health facility survey

The health facility survey is one of two (the other being a household survey) components of the overall data collection method employed in the initiative. Twinning of both surveys is a defining and innovative feature designed to most accurately capture prevalence estimates of select key indicators. In general terms, the objectives of the health facility survey are assessing facility conditions, evaluating service provision and utilization, and measuring quality of care. The medical record review (MRR) was implemented in order to capture historical data on the facilities' treatment practices by asking about various medical complications that mothers and infants experienced, along with how each case was treated. It also assessed the medical practices of the facilities before, during, and after uncomplicated births. Importantly, the facility survey will capture changes made by interventions at the level of the health services access point, the health facility, and predict changes in population health outcomes. The baseline health facility survey, recounted in this report, measured baseline prevalence estimates of various health indicators with the aim of monitoring future changes in those indicators.

### 1.3 Contents and methods for data collection

#### 1.3.1 Contents of the 2013 baseline Guatemala health facility survey

The baseline health facility survey includes three components: an interview questionnaire, an observation checklist, and a medical record review. The questionnaire captures information reported by the facility director, manager, or person in charge of the health facility; the checklist captures objective data observed by the surveyors at the time of the survey using an observation checklist, and in the case of some inputs, also reviewing administrative records to identify the presence of stock-outs in the three



months prior to the survey. The medical record review assesses the record-keeping of the facilities and captures the facilities' treatment practices. In each part of the survey, data is collected on general facility characteristics, infrastructure, and human resource composition, supply logistics, infection control, child health care, vaccine availability, family planning, and maternal antenatal, delivery, and postpartum care. For the topics of child and maternal care and family planning, information is collected on the types of services provided, components of the care offered, equipment available, and quality of record keeping.

### **1.3.2 Methods for data collection**

The facility survey is conducted using a computer-assisted personal interview (CAPI). The CAPI was programmed using DatStat Illume and installed into computer netbooks which are used by the surveyors at all times of the interview. CAPI supports skip patterns, inter-question answer consistency, and data entry ranges. The aim of introducing CAPI to the field was to reduce survey time by prompting only relevant questions, to maintain a logical answering pattern across different questions, and to decrease data entry errors.

### **1.4 Sampling**

For this evaluation, a sample of 90 health facilities was selected from a list of all facilities serving the 27 municipalities covered by the SM2015 initiative, located in the departments of Huehuetenango and San Marcos. This list was constructed according to a referral network outlined by the Ministry of Health. All basic and complete facilities serving SM2015 areas were included in the sample with certainty, due to small numbers. Among all ambulatory facilities, the Fundación FES field data collection team identified those ambulatory facilities serving communities selected for the household survey, to allow for maximal data linkage. A stratified random sample of ambulatory facilities, where the strata were mobile and non-mobile units, was drawn from this shortened list of facilities to reach the quota of 60 intervention and 30 control facilities. Ten mobile units and 33 non-mobile units were drawn in intervention areas, and four mobile units and 13 non-mobile units were drawn in control areas. In both intervention and control areas, there were insufficient ambulatory facilities serving areas selected for the household survey, so the intervention and control samples was supplemented with two and four ambulatory non-mobile facilities, respectively. These supplementary facilities serve SM2015 municipalities but not communities selected for the SM2015 household survey. In addition, data from three ambulatory facilities that were not in our original sample, but were designated as replacement facilities, were also collected by the Fundación FES field team, making our sample 93 facilities instead 90. Facilities are further broken down by facility classification within intervention and control areas in tables 2.1.1 and B2.1.1.

For the Medical Record Review, interviewers were instructed to select records at each facility following a systematic sampling strategy. Records for specific conditions (maternal and neonatal complications, deliveries, antenatal and postpartum care) were selected according to a quota set considering the Essential Obstetric and Neonatal Care (EONC) level that each facility provides.

### **1.5 Survey implementation**

#### **1.5.1 Data collection instruments**

All health facility surveys were conducted using computer netbooks equipped with CAPI programs (See section 1.3.2)

### **1.5.2 Training and supervision of data collectors**

Training sessions and health facility pilot surveys were conducted in Guatemala in April, 2013. The 6 surveyors had a medical background (physicians and nurses) and underwent 3 days of training. The training included an introduction to the initiative, proper conduct of survey, in-depth view of the instrument, and hands-on training on the CAPI software. Training was followed by a 2 day pilot of all components of the survey at actual health facilities.

### **1.5.3 Data collection and management**

As described in section 1.3.2, data was collected using computer netbooks equipped with CAPI software. A lead surveyor monitored the conduct of the facility survey and reported feedback. Data collection using CAPI allowed data to be transferred instantaneously once a survey was completed via a secure link to the Institute for Health Metrics and Evaluation (IHME). IHME monitored collected data on a continuous basis and provided feedback. Suggestions, surveyor feedback, and any modifications were incorporated into the health facility instrument and readily transmitted to the field. The new instrument survey would be ready for use on the following day of data collection.

### **1.5.4 Data analysis and report writing**

Ongoing data analysis was done at IHME and new data was continuously incorporated. Analysis was done using STATA version 13. Performance indicators were calculated at IHME following the indicator definition provided by IDB. A mid survey report was submitted to the Inter American Bank with estimates on key for-payment indicators. This baseline data quality report includes information from facilities in intervention areas. An appendix of tables referring to only to control areas are included (Appendix B) as well as an appendix of tables referring to aggregate data including both intervention and control areas (Appendix C).

## Chapter 2 FACILITY-LEVEL INFRASTRUCTURE, RESOURCES, MANAGEMENT, AND SUPPORT

### 2.1 General description of the facility

The main body of this report refers to facilities in intervention areas only. Information about control areas and aggregate data of both intervention and control areas are included in the appendices.

#### 2.1.1 Type of health facility

A total of 61 facilities were evaluated: 47 ambulatory health units, 13 basic health units, and 1 complete health unit. The classification of ambulatory includes health centers, community health centers, health posts and other minimal health units. Basic level facilities include permanent health care centers (CAP) and comprehensive maternal and child health care centers (CAIMI). All hospitals are classified as complete level facilities. These health units are further broken down by facility classification and geographical representation in tables 2.1.1 and 2.1.2.

**Table 2.1.1** Facilities by EONC level

Facility classification	Control
ambulatory	47
basic	13
complete	1
Total	61

#### 2.1.2 Geographical representation

**Table 2.1.2** Geographical representation

Department	Municipality	No. of facilities
HUEHUETENANGO	Colotenango	2
	San Gaspar Ixchil	1
	San Idelfonso Ixtahuacán	2
	San Juan Atitan	3
	San Mateo Ixtatán	5
	San Miguel Acatán	6
	San Pedro Necta	2
	San Rafael Petzal	2
	Santa Eulalia	1
	Santa Barbara	4
SAN MARCOS	Todos Santos Cuchumatán	3
	Comitancillo	5
	Concepción Tutuapa	9
	Ixchiguan	6
	San José Ojetenam	3
	Sibinal	2
	Tajumulco	5
TOTAL	17	61

#### 2.1.4 Medical record extraction

The health facility survey included a review of 954 medical records. The number and type of medical records reviewed varied depending on the type of facility and the services it provided. Records of antenatal care and child growth charts were evaluated in all facilities. In addition, records of delivery, postpartum care, maternal complications and neonatal complications were to be reviewed at the basic and complete level of facility. Although field teams checked for maternal and neonatal complication records at basic level facilities, those cases were referred to hospitals and records were only stored there, and therefore only evaluated at the complete level.

**Table 2.1.4** Number of medical records by facility classification (EONC level)

Medical records	Ambulatory	Basic	Complete	Total
Antenatal care	176	137	12	325
Delivery	n/a	179	21	200
Postpartum	n/a	128	13	141
Maternal complications	n/a	0	28	28
Neonatal complications	n/a	0	28	28
Growth	181	47	4	232
Total	357	491	106	954

#### 2.1.5 Referrals

In response to the question, “Do you usually receive referred patients from another health facility?” 21.3% of ambulatory facilities and 100% of basic and complete facilities reported receiving referred patients from other facilities. All facilities reported sending or referring patients to other health units.

#### 2.1.6 Governing authority

All health facilities were public institutions from the Ministry of Health (Ministerio de Salud).

### 2.2 Basic infrastructure

#### 2.2.1 Electricity and Water

All basic and complete health units and 95.7% of ambulatory health units had functional electricity. All basic and complete facilities used a central electric supply. Of the ambulatory health units that had functional electricity, 97.6% used a central electricity supply and 2.4% used a private supply. None of the evaluated facilities owned an in-facility generator.

Of all ambulatory facilities, the majority (62.2%) had water piped into the facility. However, unprotected wells, public wells, and facility wells were also prevalent. In the category “other”, many facilities also cited “water tank” as a source of water. Most basic and complete facilities reported having water piped into the facility, at 69.2% and 100% respectively. At the basic level, facilities also reported “unprotected wells”, “tanker trucks”, and “water tanks” as sources.

Table 2.2.1 details the sources of electricity and water available at facilities. Interviewers asked facility

representatives to indicate all sources of electricity and water for the health unit; therefore representatives could indicate more than one source serving the facility.

**Table 2.2.1** Electricity and water

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Functional electricity	47	95.7	2.9	13	100		1	100	
Source of electricity									
Central supply (Comisión Federal de Electricidad)	42	97.6	2.3	13	100		1	100	
Private supply	42	2.4	2.3	13	0		1	0	
In-facility generator	42	0		13	0		1	0	
Solar generator	42	0		13	0		1	0	
Other source	42	0		13	7.7	7.4	1	0	
DK/ DR	3								
Source of water									
Piped into facility	45	62.2	7.2	13	69.2	12.8	1	100	
Public well	45	8.9	4.2	13	0		1	0	
Facility well	45	2.2	2.2	13	0		1	0	
Unprotected well	45	15.6	5.4	13	15.4	10.0	1	0	
Hand pump	45	0		13	0		1	0	
Bottled water	45	0		13	0		1	0	
Tanker truck	45	0		13	7.7	7.4	1	0	
Rain water	45	2.2	2.2	13	0		1	0	
Other	45	20	6.0	13	7.7	7.4	1	100	
DK/ DR	2								

### 2.2.2 Internet access

Only 21.3% of facilities had access to the internet. More specifically, 8.5%, 61.5%, and 100% of ambulatory, basic, and complete facilities respectively had internet access.

## 2.3 Personnel

### 2.3.1 Personnel in ambulatory units

Ambulatory health units are further categorized by those that do and those that do not have a doctor on staff. The following table (Table 2.3.1) details the personnel composition in ambulatory health facilities. Personnel are limited in health units without a doctor, with only health promoters, nurses, auxiliary nurses, and midwives reported. The mean represents the average number of personnel reported per category. On average, there were 2.6 health promoters, 0.3 nurses, 2.6 auxiliary nurses, and 7 midwives per ambulatory facility without a doctor.

Ambulatory health units that do have a doctor report a greater variety of personnel and, in general, a larger number of staff working at the facility. On average there were 1 general physician, 1.2 nurses, 2.8 auxiliary nurses, 9.4 midwives, and 0.2 social workers per ambulatory facility with a doctor.

**Table 2.3.1** Personnel composition in ambulatory facilities

Personnel type	Ambulatory without doctor			Ambulatory with doctor		
	N	mean	SE	N	mean	SE
General physician	42	0	0	5	1	0
Pediatrician	42	0	0	5	0	0
Nutritionist	42	0	0	5	0	0
Pharmacist	42	0	0	5	0	0
Nurse	42	0.3	0.61	5	1.2	1.1
Auxiliary nurse	42	2.6	3.65	5	2.8	1.64
Midwife	42	7	16.58	5	9.4	7.92
Social worker	42	0	0.15	5	0.2	0.45
Laboratory technician	42	0	0	5	0	0
Health promoter	42	2.6	7.39	5	0	0
Other	29	0.4	1.17	2	0	0

### 2.3.2 Personnel in basic and complete facilities

The personnel composition shows a large variation across basic and complete health units. The mean represents the average number of personnel reported per category by facility type (Table 2.3.2).

**Table 2.3.2** Personnel composition in basic and complete health units

Personnel type	Basic			Complete		
	N	mean	SE	N	mean	SE
General physician	13	2.6	1.8	1	9	n/a
Pediatrician	13	0	0	1	2	n/a
Nutritionist	13	0.9	1.04	1	0	n/a
Pharmacist	13	0.2	0.55	1	0	n/a
Nurse	13	3.2	1.64	1	3	n/a
Auxiliary nurse	13	11.4	4.89	1	25	n/a
Midwife	13	20.2	32.32	1	0	n/a
Social worker	13	0.5	0.52	1	0	n/a
Laboratory technician	13	0.6	0.96	1	4	n/a
Health promoter	13	5.7	12.02	1	0	n/a
Internist	13	0	0	1	3	n/a
Gynecologist	13	0	0	1	4	n/a
Surgeon	13	0	0	1	1	n/a
Anesthesiologist	13	0	0	1	4	n/a
Emergency medical technician	13	0.2	0.55	1	0	n/a
Radiology technician	13	0.2	0.55	1	4	n/a
Ambulance driver/polyvalent	12	1.5	1.17	1	2	n/a
Other specialties	9	2.1	6.32	0	0	n/a

## Chapter 3 CHILD HEALTH

### 3.1 Child services offered – a background

This chapter summarizes key indicators related to child health care. In the questionnaire component of the survey, facility representatives were asked about service provision and logistics of ordering and receiving supplies. In the observation component, interviewers observed the setting of the room in which child services are provided, functionality of equipment, stock of pharmacy inputs, stock of vaccines, and related educational materials. 100% of ambulatory, 92.3% of basic, and 100% of complete health units report child health service provision.

**Table 3.1.1** Child health care services provision

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Unit offers child services	47	100		13	92.3	7.4	1	100	
Unit vaccinates children under 5	47	95.7	2.9	13	100		1	100	

### 3.2 Composite indicator for child care and nutrition

According to the indicator related to the continuous availability of supplies and equipment needed for child care, facilities that offer child services are evaluated for observed and functional equipment, continuous availability of pharmacy inputs, and continuous availability of vaccines (in facilities that store vaccines). Table 3.2.1 presents these three broad components of the indicator. Equipment and pharmacy inputs for child care will be further detailed in sections 3.3 and 3.4. Vaccines will be further detailed in chapter 4.

**Table 3.2.1** Continuous availability of supplies and equipment needed for child care

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Observed and functional equipment	47	10.6	4.5	12	8.3	8.0	1	0	
All pharmacy inputs observed on the day of the survey	47	38.3	7.1	12	58.3	14.2	1	100	
No stock-out of pharmacy inputs in the previous three months	47	36.2	7.0	12	50	14.4	1	0	
Continuous availability of vaccines*	24	75	8.8	9	44.4	16.6	1	0	
Meets all criteria listed above	47	4.3	2.9	12	0		1	0	

\* Only applicable if facility stores vaccines

### 3.3 Child health care equipment

In the health facility survey observation module, interviewers checked availability and functional status of inputs needed for child care among children under 5 years old. The tables below (Tables 3.3.1 and 3.3.2) list medical equipment relating to basic child health care in facilities that provide these services. Items were observed by the surveyors, rather than merely reported by hospital staff.

#### 3.3.1 Ambulatory

According to the indicator related to the continuous availability of supplies and equipment needed for child care, ambulatory facilities should have at least one observed and functional of the following equipment: standing balance/scale for children or scale, tallimeter, stethoscope, thermometer, and pediatric stethoscope (if facility has a doctor). In total, 10.6% of ambulatory facilities met this requirement.

**Table 3.3.1** Child health care equipment observed and functional in ambulatory facilities

	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
Oral/Axillary thermometer	42	85.7	5.4	5	100	
Pediatric stethoscope*	n/a	n/a	n/a	1	0	
Standing balance or scale for children	42	61.9	7.5	5	60	21.9
Stethoscope	42	26.2	6.8	5	60	21.9
Tallimeter	42	54.8	7.7	5	60	21.9
All equipment observed and functional	42	4.8	3.3	5	60	21.9

\*Data for pediatric stethoscope missing for 4 facilities

### 3.3.2 Basic & Complete

At the basic and complete level, facilities were considered to have met the equipment portion of this indicator if they had at least one observed and functional of the following equipment: standing balance/scale for children, tallimeter, pediatric tensiometer, and pediatric stethoscope. Only one basic facility had a pediatric stethoscope or pediatric tensiometer.

**Table 3.3.2** Child health care equipment observed and functional in basic and complete level health units

	Basic			Complete		
	N	%	SE	N	%	SE
Pediatric stethoscope	12	8.3	8.0	1	0	
Pediatric tensiometer	12	8.3	8.0	1	0	
Standing balance or scale for children	12	91.7	8.0	1	100	
Tallimeter	12	66.7	13.6	1	100	
All equipment observed and functional	12	8.3	8.0	1	0	

### 3.4 Important drugs and supplements

Interviewers also observed the availability and stock of important drugs and supplements used for basic child health care, namely packets or envelopes of oral rehydration salts, ferrous sulfate drops, sulfate of zinc or gluconate of zinc, albendazole or mebendazole, antibiotics, and saline solutions.

In order to measure continuous availability of pharmacy inputs needed for basic child care, interviewers were instructed to check the stock of certain drugs for the previous three months in facilities that had all required drugs on the day of the survey. The stocks of oral rehydration packets/envelopes, abendazole, mebendazole and zinc were checked at each level of facility.

**Table 3.4.1** Child health care observed drugs and supplements in ambulatory units



	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
Packets/ Envelopes of ORS	42	78.6	6.3	5	100	
Ferrous sulfate drops	42	76.2	6.6	5	60	21.9
Zinc	42	100		5	100	
Albendazole/Mebendazole	42	57.1	7.6	5	60	21.9
Antibiotic*	n/a	n/a	n/a	1	100	
All drugs available on the day of the survey	42	35.7	7.4	5	60	21.9
All drugs available on the day of the survey and no stock-out of ORS, albendazole/mebendazole, zinc in previous three months	42	33.3	7.3	5	60	21.9

\*Antibiotic = Amoxicillin / Erythromycin / Penicillin benzathine (missing for 4 ambulatory facilities)

**Table 3.4.2** Child health care observed drugs and supplements in basic and complete units

	Basic			Complete		
	N	%	SE	N	%	SE
Packets/ Envelopes of (ORS)	12	100		1	100	
Ferrous sulfate drops	12	83.3	10.8	1	100	
Zinc	12	100		1	100	
Albendazole/Mebendazole	12	75	12.5	1	100	
Antibiotic*	12	100		1	100	
Ringer's lactate/ Hartmann's solution/ saline solution	12	100		1	100	
All drugs available on the day of the survey	12	58.3	14.2	1	100	
All drugs available on the day of the survey and no stock-out of ORS, albendazole/mebendazole, zinc in previous three months	12	50	14.4	1	0	

\*Antibiotic = Crystalline Penicillin/Erythromycin /Amoxicillin

### 3.5 Education material

Table 3.7.1 lists some educational material observed either as cards handed to the caretaker or as illustration of disease management flowcharts hung on the unit walls.

**Table 3.5.1** Child health education and awareness

Education material	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Printed materials on child growth and child development	47	48.9	7.3	12	50	14.4	1	0	
Printed materials on danger signs and symptoms of childhood illnesses	47	76.6	6.2	12	66.7	13.6	1	0	

## Chapter 4 VACCINES

### 4.1 Vaccination services

When asked about vaccination services, 92.5%, 100%, and 42.9% of ambulatory, basic, and complete health facilities reported that they do vaccinate children, respectively. Interviewers also observed and recorded the setting of the room used for immunization; while all basic and complete level facilities provide a private room with visual and auditory privacy, 66.7% of ambulatory health facilities provide this (Table 4.1.1).

**Table 4.1.1** Vaccination services

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Unit vaccinates children under 5	47	95.7	2.9	13	100		1	100	
Immunization room									
Private room with visual and auditory privacy	46	30.4	6.8	13	30.8	12.8	1	100	
Non-private room without auditory or visual privacy	46	4.3	3.0	13	0		1	0	
Visual privacy only	46	39.1	7.2	13	46.2	13.8	1	0	
No privacy	46	15.2	5.3	13	23.1	11.7	1	0	
Don't provide such services	46	6.5	3.6	13	0	0.0	1	0	
Other	46	4.3	3.0	13	0		1	0	

### 4.2 Vaccine logistics

#### 4.2.1 Storage

In the questionnaire component of the survey, interviewers asked facility representatives about vaccine storage. At ambulatory facilities, 64.4% store vaccines in facility, while 24.4% pick up vaccines from other facilities and 11.1% have vaccines delivered when services are being provided. All basic facilities report storing vaccines within the facility and the complete facility has vaccines delivered when services are being provided (Table 4.2.1).

**Table 4.2.1** Vaccine storage

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Storage									
Stored in facility	45	64.4	7.1	13	100		1	0	
Picked up from another facility	45	24.4	6.4	13	0		1	0	
Delivered when services are being provided	45	11.1	4.7	13	0		1	100	
None of the above	45	0		13	0		1	0	

#### 4.2.2 Demand and supply

Facilities that store vaccines were asked logistical questions about the supply and demand of vaccines. The majority of ambulatory and basic facilities reported self-determination in ordering vaccine supplies, and ordering the same quantity each time. Responses from facility representatives about the time it takes to receive orders and whether they received the correct quantity are further detailed in Table 4.2.2.

**Table 4.2.2** Vaccine supply and demand

	Ambulatory			Basic		
	N	%	SE	N	%	SE
<b>Ordering Strategy</b>						
Determines own needs	29	96.6	3.4	13	92.3	7.4
Need determined elsewhere	29	3.4	3.4	13	0	
Both(differ by vaccine)	29	0		13	7.7	7.4
<b>Quantity to order strategy</b>						
Order same amount	29	100		13	100	
Different per vaccine	29	0		13	0	
<b>Time to order strategy</b>						
Fixed time, > once/week	29	96.6	3.4	13	100	
Fixed time, < once/week	29	0		13	0	
Order when needed	29	3.4	3.4	13	0	
<b>Time to receive supplies</b>						
< 1 week	29	62.1	9.0	13	100	
1-2 weeks	29	34.5	8.8	13	0	
> 2 weeks	29	3.4	3.4	13	0	
<b>Reception of quantity ordered</b>						
Always	29	82.8	7.0	12	58.3	14.2
Almost always	29	13.8	6.4	12	33.3	13.6
Almost never	29	3.4	3.4	12	8.3	8.0
DK/DR				1		

#### 4.3 Vaccines observed

Table 4.3.1 indicates the percentage of facilities at which at least one unit of a specified vaccine was observed by the surveyors at the time of the survey. MMR and Pentavalent vaccines were present in all facilities with stocks observed.

**Table 4.3.1** Vaccine stocks observed

Vaccine type	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
MMR	24	100		10	100		1	100	
Pentavalent*	24	100		10	100		1	100	
Polio	24	95.8	4.1	10	100		1	100	
Influenza	24	79.2	8.3	10	50	15.8	1	0	
Rotavirus	24	95.8	4.1	10	100		1	100	
Pneumococcal conjugate	24	100		10	90	9.5	1	100	
BCG	24	95.8	4.1	10	100		1	100	

\*Pentavalent/(DPT + HepB); MMR = Measles + Mumps + Rubella

#### 4.4 Cold chain

Facilities that either store vaccines, collect vaccines from other health units or have vaccines delivered to the unit to be immediately applied were asked questions related to cold chain. Interviewers observed the type of fridges used to store vaccines. Table 4.4.1 details the percent of facilities that have each type of fridge observed and functional at the time of the survey. Electric fridges and cold boxes were most common at all facility levels.

**Table 4.4.1** Fridge availability

Storage	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Electric fridge	29	96.6	3.4	13	92.3	7.4	1	100	
Kerosene fridge	29	3.4	3.4	13	0		1	0	
Gas fridge	29	6.9	4.7	13	7.7	7.4	1	0	
Solar fridge	29	0		13	0		1	0	
Cold box	30	73.3	8.1	13	92.3	7.4	1	0	
Any of the above	29	96.6	3.4	13	100		1	100	

## Chapter 5 FAMILY PLANNING

### 5.1 Service provision

This chapter summarizes key indicators related to family planning. In the questionnaire component of the survey, facility representatives are asked about service provision and logistics of ordering and receiving supplies. In the observation component of the survey, interviewers observe the stock of certain family planning methods in the previous 3 months.

All basic and complete health units and 95.7% of ambulatory facilities reported providing family planning services in-facility (Table 5.1.1). Interviewers recorded the setting of the room used for family planning services, finding that the majority of facilities offer rooms with visual privacy for patients seeking family planning services.

**Table 5.1.1** Family planning (FP) services provision

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Offers FP services	47	95.7	2.9	13	100		1	100	
FP room									
Private room with visual and auditory privacy	47	44.7	7.3	13	38.5	13.5	1	0	
Non-private room without auditory or visual privacy	47	0		13	0		1	0	
Visual privacy only	47	48.9	7.3	13	61.5	13.5	1	100	
No privacy	47	4.3	2.9	13	0		1	0	
Other	47	2.1	2.1	13	0		1	0	

**Table 5.2.1** Family planning (FP) storage

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
FP Storage									
Yes, stores contraceptives	47	100		13	100		1	100	
No, delivered when services are being provided	47	0		13	0		1	0	
Don't know/ decline to respond	2								

### 5.3 Observed contraception methods and reported family planning services

#### 5.3.1 Observed contraception methods and reported family planning services in ambulatory facilities

Table 5.3.1 lists the percent of facilities in which the surveyor observed at least one unit of a specific contraception method at the time of the survey. Most popular in both facility types are the male condoms, pills, and injectables. The table also shows reported availability of pregnancy tests and a trained doctor to perform IUD insertion. Two ambulatory units that did not report having a doctor on staff did report having a trained doctor to perform IUD insertion.

**Table 5.3.1** Observed contraception methods and reported services in ambulatory facilities

	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
<b>Observed FP methods</b>						
Any pill	40	67.5	7.4	5	80	17.9
Combined oral pill	40	65	7.5	5	80	17.9
Progestin only pill	40	2.5	2.5	5	0	
Any injectable	40	97.5	2.5	5	100	
Combined injectable (1 month)	40	10	4.7	5	0	
Progestin only injectable (3 months)	40	95	3.5	5	100	
Male condom	40	77.5	6.6	5	100	
Female condom	40	0		5	0	
IUD	40	0		5	0	
Spermicide	40	0		5	0	
Diaphragm	40	0		5	0	
Emergency contraception pill	40	2.5	2.5	5	0	
<b>Reported Services</b>						
Offers pregnancy tests	38	31.6	7.5	5	80	17.9
Trained doctor to perform IUD insertion	38	5.3	3.6	5	20	17.9

### 5.3.2 Observed contraception methods and reported family planning services in basic and complete facilities

Table 5.3.2 details the percent of basic and complete level facilities in which the surveyor observed at least one unit of a specific contraception method at the time of the survey. Most prevalent at the basic level were progestin only injectable, male condom and combined oral pills. At the complete facility, progestin only injectable, male condoms, and IUD insertion kit were the only available family planning methods.

**Table 5.3.2** Observed contraception methods and reported services in basic and complete facilities

	Basic			Complete		
	N	%	SE	N	%	SE
Observed FP methods						
Any pill	13	100		1	0	
Combined oral pill	13	84.6	10.0	1	0	
Progestin only pill	13	15.4	10.0	1	0	
Any injectable	13	100		1	100	
Combined injectable (1 month)	13	0		1	0	
Progestin only injectable (3 months)	13	100		1	100	
Male condom	13	92.3	7.4	1	100	
Female condom	13	0		1	0	
IUD	13	69.2	12.8	1	0	
IUD insertion kit	13	69.2	12.8	1	100	
Spermicide	13	0		1	0	
Diaphragm	13	0		1	0	
Emergency contraception pill	13	15.4	10.0	1	0	
Implant	13	30.8	12.8	1	0	
Reported services						
Offers pregnancy test	13	53.8	13.8	1	100	
Trained doctor to perform tubal ligation	13	7.7	7.4	1	0	
Trained doctor to perform vasectomy	13	0		1	0	

#### 5.4 Composite FP

Facilities that meet the requirements of the composite family planning indicator offer family planning services and have, as observed by surveyors at the time of the survey, certain family planning methods and no stock out of those methods in the last three months.

According to the country indicator manual, the composite family planning indicator requires ambulatory level facilities to have continuous availability (no stock out in the last 3 months) of condoms, any pill, and any injectable. Basic and complete level facilities meet the family planning indicator if they have continuous availability of condoms, any pill, any injectable, IUD, and IUD insertion kit. In total, 57.6% of facilities met this criteria.

The components of this indicator are further detailed by facility classification in Table 5.4.1.

**Table 5.4.1** Composite family planning indicator

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Condom	45	80	6.0	13	92.3	7.7	1	100	
Any pill	45	68.9	7.0	13	100		1	0	
Any injectable	45	97.8	2.2	13	100		1	100	
Intrauterine device	n/a	n/a	n/a	13	53.8	14.4	1	0	
All above methods available on the day of the survey	45	62.2	7.3	13	53.8	14.4	1	0	
No stock-out in the last three months	45	62.2	7.3	13	46.2	14.4	1	0	
Composite FP indicator	45	62.2	7.3	13	46.2	14.4	1	0	

## 5.5 Teaching and awareness

Table 5.5.1 illustrates the percent of facilities that promote family planning through counseling, teaching, and educational graphics posted in the facility.

**Table 5.5.1** Teaching and awareness on family planning and STIs

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Individual FP counseling	45	100		13	92.3	7.4	1	100	
Group FP counseling	45	95.6	3.1	13	100		1	100	
FP posters on walls of facility	43	39.5	7.5	13	30.8	12.8	1	0	
STI/HIV posters on walls of facility	43	20.9	6.2	13	30.8	12.8	1	0	



## Chapter 6 MATERNAL HEALTH: ANTENATAL CARE (ANC), DELIVERY, AND POSTPARTUM CARE (PPC)

### 6.1 Service provision

This chapter summarizes key indicators related to maternal health. Interviewers observed the functionality of equipment, the continuous availability of drugs and supplements, and key lab inputs related to the provision of antenatal, delivery and postpartum care. In addition to the questionnaire and observation component of the survey, interviewers also reviewed antenatal care medical records in all applicable facilities, as well as delivery and postpartum care medical records in facilities at the basic and complete level.

All ambulatory facilities with a doctor and 97.6% of ambulatory facilities without a doctor reported offering antenatal care services. The setting of the room used for antenatal care had either auditory and visual privacy or visual privacy only for all ambulatory facilities (Table 6.1.1). Questions about delivery and postpartum care were not asked at the ambulatory level.

**Table 6.1.1** ANC service provision in ambulatory facilities

	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
Offers ANC services	42	97.6	2.3	5	100	
ANC room						
Private room with auditory and visual privacy	42	45.2	7.7	5	80	17.9
Non-private room without auditory or visual privacy	42	0		5	0	
Visual privacy only	42	54.8	7.7	5	20	17.9
No privacy	42	0		5	0	

All basic level facilities reported offering antenatal, and postpartum care services. 84.6% of basic facilities also offered routine delivery services. Interviewers observed private rooms with auditory and visual privacy for the majority of basic facilities, but visual privacy only and non-private rooms were also prevalent. Reported in complete facilities, 100% offered antenatal care, routine delivery service, and postpartum care services in rooms with visual privacy (Table 6.1.2).

**Table 6.1.2** ANC, delivery, and PPC service provision in basic and complete facilities

	Basic			Complete		
	N	%	SE	N	%	SE
Offers ANC services	13	100		1	100	
Offers routine delivery services (non-urgent)	13	84.6	10.0	1	100	
Offers PPC services	13	100		1	100	
ANC - PPC room						
Private room with auditory and visual privacy	13	53.8	13.8	1	0	
Non-private room without auditory or visual privacy	13	0		1	0	
Visual privacy only	13	46.2	13.8	1	100	
No privacy	13	0		1	0	
Delivery room						
Private room with auditory and visual privacy	13	53.8	13.8	1	0	
Non-private room without auditory or visual privacy	13	7.7	7.4	1	0	
Visual privacy only	13	23.1	11.7	1	100	
No privacy	13	15.4	10.0	1	0	

## 6.2 ANC - PPC equipment

Tables 6.2.1 and 6.2.2 indicate the percentage of facilities where specific ANC and PPC equipment was present and observed as functional by a surveyor at the time of the survey. According to the indicator relating to the continuous availability of supplies and equipment necessary for antenatal and postpartum care, facilities are required to have at least one observed and functional of the following equipment: standing scales + gynecological exam table + obstetrical tape + gooseneck or hand lamp + sphygmomanometer + stethoscope + perinatal maternal medical history. There are 10 ambulatory mobile units in the sample which are not required to have a gynecological exam table to meet the indicator, although they were still asked.

In total, 21.28% of all ambulatory level facilities met the criteria listed above. This is further detailed by ambulatory level type in Table 6.2.1.

**Table 6.2.1** Observed and functional ANC - PPC equipment in ambulatory facilities

Equipment type	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
Standing scales	42	59.5	7.6	5	60	21.9
Gynecological exam table*	42	81	6.1	5	80	17.9
Obstetrical tape	42	71.4	7.0	5	60	21.9
Gooseneck lamp or hand lamp	42	42.9	7.6	5	80	17.9
Sphygmomanometer	42	78.6	6.3	5	100	
Stethoscope	42	83.3	5.8	5	100	
All equipment observed and functional	42	21.4	6.3	5	20	17.9

\*Mobile units not required to have gynecological exam table

In general, basic and complete level facilities were better equipped than ambulatory facilities for antenatal and postpartum care. Combined, 42.9% had all required equipment observed and functional on the day of the survey. Table 6.2.2 details the percentage of basic and complete facilities where

specific ANC and PPC equipment was present and observed as functional.

**Table 6.2.2** Observed and functional ANC - PPC equipment in basic and complete facilities

Equipment type	Basic			Complete		
	N	%	SE	N	%	SE
Standing scales	13	100		1	100	
Gynecological exam table	13	84.6	10.0	1	100	
Obstetrical tape	13	84.6	10.0	1	100	
Gooseneck lamp or hand lamp	13	84.6	10.0	1	100	
Sphygmomanometer	13	84.6	10.0	1	100	
Stethoscope	13	84.6	10.0	1	100	
Perinatal maternal medical history	13	100		1	100	
All equipment observed and functional	13	38.5	13.5	1	100	

### 6.3 ANC - PPC medications

Tables 6.3.1 - 6.3.4 indicate the percentage of facilities where specific medications were available at the time of the survey and had no stock out in the last 3 months. According to the indicator related to the continuous availability of supplies and equipment necessary for antenatal and postpartum care, certain medications are required depending on facility classification level.

#### 6.3.1 ANC - PPC medications in ambulatory facilities

Ambulatory health units without a doctor are required to have continuous availability (no stock out in the last 3 months) of the following pharmacy inputs: A combination of iron & folic acid + tetanus vaccine.

Ambulatory health units with a doctor are required to have continuous availability (no stock out in the last 3 months) of the following pharmacy inputs: A combination of iron & folic acid + tetanus vaccine + erythromycin or benzathine penicillin.

**Table 6.3.1** ANC - PPC pharmacy inputs in ambulatory facilities

Pharmacy inputs	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
Iron + Folic acid	42	83.3	5.8	5	80	17.9
Erythromycin / Benzathine penicillin*	n/a	n/a	n/a	1	100	
Tetanus vaccine	42	54.8	7.7	5	80	17.9
All inputs observed on the day of the survey	42	45.2	7.7	5	80	17.9
No stock-out in the last three months	42	38.1	7.5	5	80	17.9

\* Missing data for 4 ambulatory facilities for antibiotics

#### 6.3.2 ANC - PPC medications in basic & complete facilities

Basic and complete health units are required to have continuous availability (no stock out in the last 3 months) of the following pharmacy inputs: A combination of iron & folic acid + tetanus vaccine +

antibiotic (erythromycin or benzathine penicillin or ampicillin or cephalexin). The percentage of facilities that had each of these components is detailed by facility level classification in Table 6.3.2.

**Table 6.3.2** ANC - PPC pharmacy inputs in basic and complete facilities

Pharmacy inputs	Basic			Complete		
	N	%	SE	N	%	SE
Iron + Folic acid	13	100		1	100	
Antibiotic	13	69.2	12.8	1	100	
Tetanus vaccine	13	92.3	7.4	1	100	
All inputs observed on the day of the survey	13	61.5	13.5	1	100	
No stock-out in the last three months	13	38.5	13.5	1	100	

#### 6.4 Supplies and equipment needed for delivery

In the observation component of the health facility survey, interviewers check for certain supplies and equipment important for delivery and newborn care (Table 6.4.1 & Table 6.4.2).

**Table 6.4.1** Important equipment needed for delivery care

Equipment type	Basic			Complete		
	N	%	SE	N	%	SE
Intravenous catheter sterile N ° 18	13	84.6	10.0	1	100	
Metallic clamp or umbilical tape	13	100		1	100	
Equipment p / serum c / macrodrip and microdrip	13	69.2	12.8	1	100	
Nasogastric tube K 33	13	30.8	12.8	1	100	
Sterile fields or sheltering for a baby	13	53.8	13.8	1	100	
All equipment observed and functional	13	0		1	100	

**Table 6.4.2** Pharmacy inputs needed for delivery care

Pharmacy inputs	Basic			Complete		
	N	%	SE	N	%	SE
hyoscine bromide / butylhyoscine	13	7.7	7.4	1	0	
plastic clamp or umbilical tape	13	69.2	12.8	1	100	
ergonovine maleate/ ergometrine/oxytocin	13	84.6	10.0	1	100	
drops of chloramphenicol ophthalmic / 1% silver nitrate	13	84.6	10.0	1	0	
Povidone-iodine	13	0		1	0	
Ringer's lactate / Hartmann's solution / saline solution	13	100		1	100	
S lidocaine /S epinephrine	13	84.6	10.0	1	100	
C / mounted needle syringe (syringe insulin)	13	23.1	11.7	1	0	
vitamin K 1 mg	13	30.8	12.8	1	100	
All drugs available on the day of the survey	13	0		1	0	

## 6.6 Delivery medical record review

### 6.6.1 Births attended in CAPs and CAIMIs managed according to the norm

In the health facility survey medical record review module, interviewers systematically selected records of women who delivered in permanent health care centers (CAP) and comprehensive maternal and child health care centers (CAIMI) in the previous two years. According to the country indicator manual, births are considered as being managed according to the norm if they are attended by a doctor / nurse / obstetrician / midwife + oxytocin or other uterotonic is administered + partograph is included in the medical record + there is record of cord clamping within 90 seconds. In total, 52% of women who gave births in CAPs or CAIMIs were managed according to the standards.

**Table 6.5.1** Births attended in CAPs and CAIMIs managed according to the norm

Items checked	Basic		
	N	%	SE
Birth attended by doctor / nurse / obstetrician / midwife	179	83.2	2.8
Cord clamped within 90 seconds	179	76.5	3.2
Oxytocin / other uterotonics administered	179	81.6	2.9
Partograph included in the medical file	179	70.4	3.4
Births managed according to the norm (meets all criteria listed above)	179	52	3.7

## Chapter 7 MATERNAL & NEONATAL HEALTH: COMPLICATIONS

### 7.1 Emergency obstetric and neonatal care service provision

This chapter summarizes key indicators related to the management of maternal and neonatal complications at the basic and complete level of facilities. Interviewers observed equipment in the room designated for emergency obstetric and neonatal care and certain related drugs in the pharmacy. In addition, interviewers reviewed medical records of women and neonates with one or more complication.

**Table 7.1.1** Emergency obstetric and neonatal care service provision in basic and complete facilities

	Basic			Complete		
	N	%	SE	N	%	SE
Emergency room						
Private room with visual and auditory privacy	13	53.8	13.8	1	0	
Non-private room without auditory or visual privacy	13	0		1	0	
Visual privacy only	13	30.8	12.8	1	100	
No privacy	13	15.4	10.0	1	0	
Don't provide this service	13	0		1	0	

### 7.2 Supplies and equipment needed for emergency obstetric and neonatal care

In the health facility survey observation module, interviewers checked availability and functionality of inputs in the emergency obstetric and neonatal room. According to the indicator related to emergency obstetric and neonatal care, all basic and complete level facilities should have at least one observed and functional of the following equipment: blood pressure apparatus + stethoscope + portable Doppler or Pinard stethoscope+ autoclave or dry heat sterilizer + adult resuscitation bag + neonatal resuscitation bag + laryngoscope + MVA kit. In addition, complete level facilities should have at least one neonatal/ pediatric stethoscope, equipment for anesthesia, and a kit for C-sections.

As detailed in table 7.2.1, only one basic level facility had all the required equipment on the day of the survey. The least likely to be present in basic level facilities was the MVA kit. The evaluated hospital had all but one equipment (blood pressure apparatus) observed on the day of the survey, making it so the complete level facility did not pass this portion of the indicator.

**Table 7.2.1** Observed and functional equipment for emergency care

Equipment type	Basic			Complete*		
	N	%	SE	N	%	SE
Anesthesia equipment	n/a	n/a	n/a	1	100	
Autoclave (or dry heat)	13	69.2	12.8	1	100	
Blood pressure apparatus	13	76.9	11.7	1	0	
Kit for C-sections	n/a	n/a	n/a	1	100	
Laryngoscope	13	23.1	11.7	1	100	
MVA kit	13	7.7	7.4	1	100	
Neonatal/ pediatric stethoscope	n/a	n/a	n/a	1	100	
Oxygen tank	13	53.8	13.8	1	100	
Portable Doppler (or Pinard stethoscope)	13	84.6	10.0	1	100	
Adult resuscitation bag	13	61.5	13.5	1	100	
Neonatal resuscitation bag	13	46.2	13.8	1	100	
Stethoscope	13	100		1	100	
All equipment observed and functional	13	7.7	7.39	1	0	

\*Missing data for functionality of equipment for 1 hospital. This column is solely based on observed equipment.

### 7.3 Important drugs needed for emergency obstetric and neonatal care

In the health facility survey observation module, interviewers check for the availability of certain drugs related to emergency obstetric and neonatal care, depending on the facility classification. If all drugs are available on the day of the survey, interviewers are instructed to continue on to check the stock of some of those drugs in the previous three months. As detailed in tables 7.3.1 and 7.3.2, none of the evaluated facilities had all specified drugs available on the day of the survey.

According to the indicator related to emergency obstetric and neonatal care, basic facilities should availability on the following drugs on the day of the survey: oxytocin + dexamethasone or betamethasone + penicillin or ampicillin + gentamicin or amikacin + metronidazole or clindamycin + magnesium sulfate + hydralazine + calcium gluconate. The following drugs were further evaluated for stock-out in the last three months: dexamethasone + magnesium sulfate + oxytocin + ampicillin or penicillin.

Table 7.3.1 details the percent of basic facilities that had each of the drugs listed above on the day of the survey. Hydralazine (23.1%) and calcium gluconate (30.8%) were least prevalent.

**Table 7.3.1** Drugs needed for emergency care in basic level facilities

Drug availability	Basic		
	N	%	SE
Benzathine penicillin / ampicillin	13	84.6	10.0
Calcium gluconate	13	30.8	12.8
Dexamethasone / betamethasone	13	76.9	11.7
Gentamicin / amikacin	13	69.2	12.8
Hydralazine ampoules	13	23.1	11.7
Magnesium sulfate	13	84.6	10.0
Metronidazole or clindamycin	13	84.6	10.0
Oxytocin	13	84.6	10.0
All drugs available on the day of the survey	13	0	

Complete level facilities were checked for the availability of the following drugs on the day of the survey: oxytocin + dexamethasone or betamethasone + benzathine penicillin or ampicillin + gentamicin or amikacin + metronidazole or clindamycin + magnesium sulfate + hydralazine hydrochloride + calcium gluconate + ceftriaxone + chloramphenicol + nifedipine + diazepam + diphenylhydantoin. Stock-out in the last three months was further evaluated for the following drugs: oxytocin + magnesium sulfate + diazepam, dexamethasone or betamethasone + magnesium sulfate + amikacin or gentamicin.

Table 7.3.2 details the percent of complete level facilities that had each of those drugs on the day of the survey. Diphenylhydantoin and nifedipine were not available, although all other necessary drugs were.

**Table 7.3.2** Drugs needed for emergency care in complete level facilities

Drug availability	Complete		
	N	%	SE
Benzathine penicillin / ampicillin	1	100	
Calcium gluconate	1	100	
Ceftriaxone	1	100	
Chloramphenicol	1	100	
Dexamethasone / Betamethasone	1	100	
Diazepam	1	100	
Diphenylhydantoin	1	0	
Gentamicin / amikacin	1	100	
Hydralazine hydrochloride	1	100	
Magnesium sulfate	1	100	
Metronidazole or clindamycin	1	100	
Nifedipine	1	0	
Oxytocin	1	100	
All drugs available on the day of the survey	1	0	



## 7.4 Management of obstetric complications

### 7.4.1 Women with obstetric complications (sepsis, hemorrhage, pre-eclampsia and eclampsia) managed according to the norm in the last two years

In the medical record review portion of the survey, records of women who had one of the maternal complications of interest in the last two years are selected systematically and reviewed. Although field teams checked for maternal complication records at basic level facilities, they were only stored at hospitals, and therefore only evaluated at the complete level. In total, interviewers reviewed records of 27 women with one or more maternal complications, coming from the only hospital in intervention areas (Table 7.4.1).

**Table 7.4.1** Distribution of maternal complications in hospitals

	Total
Women with sepsis	2
Women with hemorrhage	24
Women with pre-eclampsia	2
<b>TOTAL</b>	<b>28</b>

### 7.4.2 Sepsis

According to the country indicator manual, sepsis is managed according to the norm if vital signs were checked (temperature + pulse + diastolic and systolic blood pressure), antibiotics were administered, and correct treatment was recorded.

Correct treatment is evaluated as follows:

- Manual vacuum aspiration or revision of uterus if septic abortion
- Hysterectomy if uterine perforation
- Laparotomy if perforation or abscesses or infected ectopic pregnancy
- Surgical repair if tears of cervical canal or uterus

There were two records of maternal sepsis at the complete level and neither had all vital signs checked and correct treatment recorded (Table 7.4.2). Temperature, pulse, and diastolic blood pressure were checked in both records, but systolic blood pressure was missing in one. Correct treatment was recorded in one record, but the other had a septic abortion and no record of manual vacuum aspiration nor revision of uterus.

**Table 7.4.2** Medical record review: sepsis

	Complete		
	N	%	SE
Vital signs checked	2	50	35.4
Antibiotics administered	2	100	
Correct treatment given	2	50	35.4
Sepsis managed according to the norm (meets all above criteria)	2	0	

### 7.4.3 Hemorrhage

Hemorrhage is managed according to the norm if vital signs were checked (diastolic and systolic blood pressure), lab tests were performed (Ht + Hb + PT + PTT + platelet count), oxytocin or other uterotonic was administered, the cause for the hemorrhage was recorded, and correct treatment was given.

Correct treatment is evaluated as follows:

- Manual vacuum aspiration or revision of uterus if complicated abortion or retained placenta
- Caesarian section or hysterectomy if placenta previa or placenta abruption or uterine rupture or uterine atony
- Laparotomy if ectopic pregnancy or uterine atony
- Surgical repair if tears of cervical canal or uterus.

None of the evaluated records had either prothrombin time (PT) or partial thromboplastin time (PTT) performed, and therefore were not managed according to the standards (Table 7.4.3).

**Table 7.4.3.** Medical record review at complete level facilities: hemorrhage

	Complete		
	N	%	SE
Vital signs checked	24	79.2	8.3
Correct treatment given	24	58.3	10.1
Oxytocin/ other uterotonic administered	24	41.7	10.1
Lab tests performed	24	0	
Cause recorded	24	100	
Hemorrhage managed according to the norm (meets all above criteria)	24	0	

### 7.4.4 Pre-eclampsia & Eclampsia

According to the country indicator manual, pre-eclampsia and eclampsia are managed according to the standards if vital signs were checked (diastolic and systolic blood pressure, pulse, respiratory rate, and patellar reflex), lab tests were performed (urine protein, platelet count), correct treatment was given, and the outcome of pregnancy was recorded.

Correct treatment is evaluated as follows:

- If diastolic blood pressure is greater than 110 then administration of hydralazine/nifedipine
- If gestational age is 26-34 weeks, then administration of dexamethasone/betamethasone
- Administration of magnesium sulfate

As detailed in table 7.4.4, none of the records of women with pre-eclampsia are managed according to the norm. In both cases, urine protein tests were not done and patellar reflex was not checked.

**Table 7.4.4** Medical record review: pre-eclampsia

	Complete		
	N	%	SE
Vital signs checked	2	0	
Lab tests performed	2	0	
Correct treatment given	2	50	35.4
Outcome recorded	2	100	
Pre-eclampsia managed according to the norm (meets all above criteria)	2	0	

## 7.5 Management of neonatal complications

### 7.5.1 Neonatal complications (low birth weight, prematurity, sepsis and asphyxia) managed according to the norm in the last two years

In the medical record review portion of the survey, records of infants who had one of the neonatal complications of interest in the last two years are selected systematically and reviewed. Although field teams checked for neonatal complication records at basic level facilities, they were only stored at hospitals, and therefore only evaluated at the complete level. In total, interviewers reviewed records of 28 infants with one or more complication (Table 7.5.1). There were no records of neonatal prematurity found in intervention areas.

**Table 7.5.1** Distribution of neonatal complications in hospitals

	Total
Neonates with low birth weight	3
Neonates with sepsis	22
Neonates with asphyxia	6
TOTAL	31

### 7.5.2 Low birth weight (LBW) and prematurity

According to the country indicator manual, low birth weight and prematurity are managed according to the standards if all checkups reported (pulse, respiratory rate, Downes or Silverman score), lab tests were done (blood glucose level, oxygen saturation level), neonate was evaluated by a doctor at

admission and correct treatment was given. Correct treatment is evaluated as follows:

- Oxygen mask/oxygen hood/oxygen CAAP/mechanical ventilation/keeping neonate in incubator
- If respiratory rate is >80 then IV feeding

None of the evaluated records of neonates with low birth weight reported management according to the standards. Although all infants were evaluated by a doctor at admission and given correct treatment, none had record of oxygen saturation level, Silverman score or Downes score.

**Table 7.5.2** Medical record review: low birth weight

	Complete		
	N	%	SE
Evaluated by a doctor at admission	3	100	
All checkups recorded	3	0	
Lab tests performed	3	0	
Correct treatment given	3	100	
Managed according to the norm (meets all above criteria)	3	0	

### 7.5.3 Sepsis

According to the country indicator manual, sepsis is managed according to the standards if all checkups were reported (temperature + pulse), lab tests were performed (leukocyte count + C-reactive protein + erythrocyte sedimentation rate), treatment with any antibiotic, and neonate was evaluated by a doctor at admission.

As detailed in table 7.5.3, none of the evaluated records showed neonates managed according to the norm for sepsis. This is largely due to the absence of laboratory tests.

**Table 7.5.3** Medical record review: infants with sepsis

	Complete		
	N	%	SE
Evaluated by a doctor at admission	22	100	
All checkups recorded	22	77.3	8.93
Treatment with antibiotics	22	100	
Lab tests performed	22	0	
Sepsis managed according to the norm (meets all above criteria)	22	0	

### 7.5.4 Asphyxia

According to the country indicator manual, asphyxia is managed according to the standards if all

checkups were reported (pulse, respiratory rate, Downes score or Silverman score), lab tests were performed (oxygen saturation level, blood glucose level, hemoglobin, C-reactive protein, erythrocyte sedimentation rate, chest radiograph), treatment with any antibiotic, and neonate was evaluated by a doctor at admission.

None of the evaluated records of neonates with asphyxia reported management according to the standards. Although all infants were evaluated by a doctor at admission, none had record of oxygen saturation level, Silverman score or Downes score, C-reactive protein test, or erythrocyte sedimentation rate.

**Table 7.5.4** Medical record review: infants with asphyxia

	Complete		
	N	%	SE
Evaluated by a doctor at admission	6	100	
All checkups recorded	6	0	
Lab tests performed	6	0	
Asphyxia managed according to the norm (meets above criteria)	6	0	

## Chapter 8 INFECTION CONTROL

### 8.1 Equipment for disposal and disposal methods

#### 8.1.1 Equipment for disposal

Staff at health facilities were asked about certain items available related to biohazard disposal, including incinerators, manuals that specify decontamination methods, and contracts with other facilities for biohazard disposal (Table 8.1.1).

**Table 8.1.1** Equipment for disposal

	Ambulatory				Basic				Complete			
	N	%	SE	DK/DR	N	%	SE	DK/DR	N	%	SE	DK/DR
Incinerator at facility	47	6.4	3.6	0	13	0		0	1	0		0
Contract with other facility for biohazard disposal	42	40.5	7.6	2	13	53.8	13.8	0	1	100		0
Manual for decontamination	46	6.5	3.6	1	13	46.2	13.8	0	1	100		0

### 8.2 Decontamination and sterilization

Table 8.2.1 lists the different techniques used for decontaminating and sterilizing equipment.

**Table 8.2.1** Decontamination and sterilization

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
<b>Decontamination methods</b>									
Submerged in disinfectant, then scrubbed with a brush, soap and water	47	27.7	6.5	13	84.6	10.0	1	100	
Scrubbed with a brush, soap and water, then submerged in disinfectant	47	2.1	2.1	13	7.7	7.4	1	0	
Scrubbed with a brush, soap and water only	47	0		13	0		1	0	
Submerged in disinfectant, without scrubbing with brush	47	25.5	6.4	13	0		1	0	
Cleaned with water and soap, without scrubbing with a brush	47	0		13	0		1	0	
Equipment never reused	47	19.1	5.7	13	0		1	0	
Other	47	25.5	6.4	13	38.5	13.5	1	0	
<b>Sterilization methods</b>									
Dry heat	47	0		13	0		1	0	
Autoclave	47	25.5	6.4	13	76.9	11.7	1	100	
Boiling	47	4.3	2.9	13	0		1	0	
Steam	47	2.1	2.1	13	7.7	7.4	1	0	
Chemical sterilization	47	25.5	6.4	13	15.4	10.0	1	0	
Processed away from facility	47	2.1	2.1	13	0		1	0	
Facility doesn't sterilize	47	25.5	6.4	13	0		1	0	
Other	47	12.8	4.9	13	7.7	7.4	1	0	

## Appendix A: SM2015 health facility indicators

The following indicator matrices represent facilities in intervention areas only. Corresponding indicator definitions can be found in A.2

**Table A.1.1** Facility indicators matrix

SM2015 indicators	N	%	SE
Births attended in the CAPs and CAIMIs managed according to the norm	179	52	3.7
Neonates with complications (low birth weight, prematurity, birth asphyxia and sepsis) managed according to standards in the last two years	28	0	
Women with obstetric complications (sepsis, hemorrhage, severe pre-eclampsia and eclampsia) managed according to the norm in the last two years	27	0	
Health facilities with continuous availability of supplies and equipment needed for child care, immunization and nutrition	60	3.3	2.3
Health facilities with continuous availability of supplies and equipment needed for pre and postpartum care	61	13.1	4.3
Health facilities with continuous availability of supplies and equipment needed for emergency obstetric and neonatal care	14	0	
Health facilities that have supplies of modern family planning methods (oral, injectable, barrier, IUD)	59	57.6	6.4

SM2015 additional indicators	N	%	SE
Proportion of women of reproductive age (15-49) who received $\geq 4$ ANC visits by qualified personnel according to best practices for a birth in the last two years	109	0.9	0.9
Women of reproductive age (15-49) who received their first prenatal care visit by qualified personnel before 12 weeks gestation in the last two years	61	11.5	4.1
Institutional postpartum patients of reproductive age, evaluated and registered in clinical records, at least every 15 min during the first hour and 30 min until 2 hours, and when leaving hospital in the last two years	140	15	3

### A.2 Indicator definitions

#### 1. Births attended in the CAPs and CAIMIs managed according to the norm

Denominator:

Total number of delivery records in the last 2 years in the sample

Formula:

*Basic:* Birth attended by a doctor, nurse, obstetrician or midwife + oxytocin or other uterotonic administered + partograph included in the medical record + there is record of cord clamped within 90 seconds.



## 2. Neonates with complications (low birth weight, prematurity, birth asphyxia and sepsis) managed according to standards in the last two years

### Denominator:

Total number of neonatal complication records in the sample

### Formula:

Low birth weight and prematurity:

*Complete:* All checkups reported (pulse + respiratory rate + Downes or Silverman score) + lab tests done (blood glucose + oxygen saturation level) + neonate evaluated by a doctor at admission + correct treatment given. Correct treatment is evaluated as follows: oxygen mask/oxygen hood/oxygen CAAP/mechanical ventilation/keeping neonate in incubator + if respiratory rate is >80 then IV feeding

Asphyxia:

*Complete:* All checkups reported (pulse + respiratory rate + Downes score or Silverman score) + lab tests performed (oxygen saturation level + blood glucose level + hemoglobin + C-reactive protein + erythrocyte sedimentation rate + chest radiograph) + neonate evaluated by a doctor at admission.

Sepsis:

*Complete:* All checkups reported (temperature + pulse) + lab tests performed (leukocyte count + C-reactive protein + erythrocyte sedimentation rate) + treatment with any antibiotic + neonate evaluated by a doctor at admission.

## 3. Women with obstetric complications (sepsis, hemorrhage, severe pre-eclampsia and eclampsia) managed according to the norm in the last two years

### Denominator:

Total number of obstetric complication records in the sample

### Formula:

Sepsis:

*Complete:* Vital signs checked (temperature + pulse + diastolic + systolic blood pressure) + antibiotics administered + correct treatment recorded. Correct treatment is evaluated as follows: manual vacuum aspiration or revision of uterus if septic abortion + hysterectomy if uterine perforation + laparotomy if perforation or abscesses or infected ectopic pregnancy + surgical repair if tears of cervical canal or uterus

Hemorrhage:

*Complete:* Vital signs checked (diastolic + systolic blood pressure) + lab tests performed (Ht + Hb + PT + PTT + platelet count) + oxytocin or other uterotonic administered + the cause of hemorrhage recorded + correct treatment was given. Correct treatment is evaluated as follows: manual vacuum aspiration or revision of uterus if complicated abortion or retained placenta + caesarian section or hysterectomy if placenta previa or placenta abruptio or uterine rupture or uterine atony + laparotomy if ectopic pregnancy or uterine atony + surgical repair if tears of cervical canal or uterus.

Severe pre-eclampsia and eclampsia:

*Complete:* Vital signs checked (diastolic + systolic blood pressure + pulse + respiratory rate + patellar reflex) + lab tests performed (urine protein + platelet count) + outcome of pregnancy recorded + correct treatment given. Correct treatment is evaluated as follows: if diastolic blood pressure is greater than 110 then administration of hydralazine/nifedipine + if gestational age is 26-34 weeks, then administration of dexamethasone/betamethasone + administration of magnesium sulfate

#### **4. Health facilities with continuous availability of supplies and equipment needed for child care, immunization and nutrition**

Denominator: Total number of health facilities that offer child services and store vaccines

Formula:

*Ambulatory without doctor:* The following equipment: standing balance or scale for children + tallimeter + stethoscope + thermometer + availability of the following vaccines (if the facility stores vaccines): pentavalent (or HepB + DPT) + polio + MMR + rotavirus + pneumonia + BCG + no stock-out of the following vaccines (if the vaccine is available on the day of the survey): BCG + MMR + availability of the following drugs: oral rehydration salts + ferrous sulfate + zinc + albendazole or mebendazole + no stock-out of the following drugs: oral rehydration salts + albendazole or mebendazole + sulfate of zinc/ gluconate of zinc.

*Ambulatory with doctor:* The following equipment: standing balance or scale for children + tallimeter + stethoscope + thermometer + pediatric stethoscope + availability of the following vaccines (if the facility stores vaccines): pentavalent (or HepB + DPT) + polio + MMR + rotavirus + pneumonia + BCG + no stock-out of the following vaccines (if the vaccine is available on the day of the survey): BCG + MMR + availability of the following drugs: oral rehydration salts + ferrous sulfate +sulfate of zinc/gluconate of zinc + albendazole or mebendazole + amoxicillin or erythromycin or penicillin + no stock-out of the following drugs: oral rehydration salts + albendazole or mebendazole + zinc

*Basic and Complete:* The following equipment: standing balance/scale for children, tallimeter, pediatric tensiometer, and pediatric stethoscope. Only one basic facility had a pediatric stethoscope or pediatric tensiometer + availability of the following vaccines (if the facility stores vaccines): pentavalent (or HepB + DPT) + polio + MMR + rotavirus + pneumonia + BCG + no stock-out of the following vaccines (if the vaccine is available on the day of the survey): BCG + MMR + availability of the following drugs: oral rehydration salts + ferrous sulfate + sulfate of zinc/gluconate of zinc + albendazole or mebendazole + amoxicillin or erythromycin or penicillin + no stock-out of the following drugs: oral rehydration salts + albendazole or mebendazole + zinc

#### **5. Health facilities with continuous availability of supplies and equipment needed for pre and postpartum care**

Denominator: Total number of health facilities that provides pre and postnatal services (and lab for basic and complete type of health facilities) in our sample

Formula:

*Ambulatory (mobile unit):* All of the following equipment observed to be functioning: standing scale + gooseneck lamp or hand lamp + CLAP obstetrical tape + blood pressure apparatus + stethoscope + perinatal maternal medical

history + the following drugs: Iron + folic acid + tetanus + no stock-out of the following drugs: iron + folic acid + tetanus vaccine

*Ambulatory without doctor (non-mobile unit):* All of the following equipment observed to be functioning: standing scale + gynecological exam table + gooseneck lamp or hand lamp + CLAP obstetrical tape + blood pressure apparatus + stethoscope + perinatal maternal medical history + the following drugs: Iron + folic acid + tetanus + no stock-out of the following drugs: iron + folic acid + tetanus vaccine

*Ambulatory with doctor:* All of the following equipment observed to be functioning: standing scale + gynecological exam table + gooseneck lamp or hand lamp + CLAP obstetrical tape + blood pressure apparatus + stethoscope + perinatal maternal medical history + the following drugs: Iron + folic acid + tetanus vaccine + erythromycin + penicillin benzathine + no stock-out of the following drugs: iron + folic acid + tetanus vaccine

*Basic:* All of the following equipment observed to be functioning: standing scale + gynecological exam table + gooseneck lamp or hand lamp + CLAP obstetrical tape + blood pressure apparatus + stethoscope + perinatal maternal medical history + the following drugs: Iron + folic acid + tetanus + antibiotic (erythromycin or penicillin benzathine or ampicillin or cephalixin) + no stock-out of the following drugs: iron + folic acid + tetanus vaccine

*Complete:* All of the following equipment observed to be functioning: standing scale + gynecological exam table + gooseneck lamp or hand lamp + CLAP obstetrical tape + blood pressure apparatus + stethoscope + perinatal maternal medical history + no stock-out of the following drugs: iron + folic acid + tetanus vaccine

## **6. Health facilities with continuous availability of supplies and equipment needed for emergency obstetric and neonatal care**

Denominator: Total number of basic & complete health facilities that provide emergency obstetric and neonatal care

### Formula:

*Basic:* The following equipment observed to be functioning: blood pressure apparatus + stethoscope + pinard stethoscope or portable doppler + autoclave or dry heat sterilizer + tank of oxygen + adult resuscitation bag + neonatal resuscitation bag + laryngoscope + MVA kit + availability of the following drugs on the day of the survey: oxytocin + dexamethasone or betamethasone + penicillin or ampicillin + gentamicin or amikacin + metronidazole or clindamycin + magnesium sulfate + hydralazine ampoule + calcium gluconate + continuous availability (no stock out in the last three months) of the following drugs: oxytocin + magnesium sulfate + dexamethasone + penicillin or ampicillin

*Complete:* The following equipment observed to be functioning: blood pressure apparatus + stethoscope + pinard stethoscope or portable doppler + autoclave or dry heat sterilizer + tank of oxygen + adult resuscitation bag + neonatal resuscitation bag + laryngoscope + starter kit for curettage/AMEU + the following equipment was only observed: pediatric stethoscope + equipment for anesthesia + equipment for C-section + availability on the day of the survey of the following drugs: oxytocin + dexamethasone or betamethasone + penicillin benzathine or ampicillin + gentamicin or amikacin + metronidazole or clindamycin + magnesium sulfate + hydralazine hydrochloride + calcium gluconate + ceftriaxone + chloramphenicol + nifedipine + diazepam + diphenhydantoin + continuous availability (no stock out in the last three months) of the following drugs: oxytocin + magnesium sulfate + dexamethasone or betamethasone + diazepam + gentamicin or amikacin

## 7. Health facilities that have supplies of modern family planning methods (oral, injectable, barrier, IUD)

### Denominator:

Total number of health facilities that stores family planning methods in our sample

### Formula:

*Ambulatory:* The following family planning methods observed on the day of the survey and no stock-out of these methods in the last one, two or three months: male condom + any oral pill + any injectable

*Basic and Complete:* The following family planning methods observed on the day of the survey and no stock-out of these methods in the last one, two or three months: male condom + any oral pill + any injectable + IUD

## 8. Proportion of women of reproductive age (15-49) who received $\geq 4$ ANC visits by qualified personnel according to best practices for a birth in the last two years

### Denominator:

Total number of antenatal records in the sample.

### Formula:

*Ambulatory:* 4 ANC visits with the following: (1) a doctor/nurse at each visit, (2) physical checkups at each visit (weight + blood pressure + fundal height), (3) fetal checkups at each visit if the fetus is over 20 weeks (fetal movement + fetal heart rate), (4) laboratory tests performed at least once (blood type + Rh factor blood test + blood glucose level + HIV test + platelet count + VDRL + Hb level + urinalysis)

*Basic and Complete:* 4 ANC visits with the following: (1) a doctor/nurse at each visit, (2) physical checkups at each visit (weight + blood pressure + fundal height + pulse), (3) fetal checkups at each visit if the fetus is over 20 weeks (fetal movement + fetal heart rate), (4) laboratory tests performed at least once (blood type + Rh factor blood test + blood glucose level + VDRL + Hb level + urinalysis)

## 9. Women of reproductive age (15-49) who received their first prenatal care visit by doctor or nurse before 12 weeks gestation in the last two years

### Denominator:

Total number of antenatal records in the sample

### Formula:

*Ambulatory, Basic and Complete:* First ANC visit performed by a doctor/nurse + (date of 1<sup>st</sup> ANC visit – date of last menstrual period = before 12 weeks gestation)

## 10. Institutional postpartum patients of reproductive age, evaluated and registered in clinical records, at least every 15 minutes during the first hour and 30 min until 2 hours, and when leaving hospital in the last two years

### Denominator:

Total number of postpartum care records in the sample.

Formula:

*Basic and Complete:* Systolic blood pressure + diastolic blood pressure + temperature + pulse are evaluated and registered four times in the first hour, two times in the second hour and once at discharge.

## Appendix B: Control-Area Tables

**Table B2.1.1** Facilities by EONC level

Facility Classification	Control
Ambulatory	21
Basic	7
Complete	4
Total	32

**Table B2.1.2** Geographical representation

Department	Municipality	No. of facilities
HUEHUETENANGO	Barillas	4
	San Rafael la Independencia	2
	San Sebastian Coatan	2
	San Sebastian Huehuetenango	4
	Santa Cruz Barillas	1
	Santa Eulalia	3
	Santiago Chimaltenango	1
	huehuetenango	1
SAN MARCOS		1
	La Reforma	1
	Nuevo Progreso	2
	San Lorenzo	1
	San Miguel Ixtahuacán	2
	Tacaná	5
	malacatan	1
san marcos	1	
TOTAL	16	32

**Table B2.1.4** Number of medical records by facility classification (EONC level)

Medical Records	Ambulatory	Basic	Complete	Total
Antenatal care	82	44	14	140
Delivery	n/a	57	64	121
Postpartum	5	40	28	73
Maternal complications	n/a	0	91	91
Neonatal complications	n/a	0	87	87
Growth	60	24	12	96
Total	147	165	296	608

**Table B2.2.1** Electricity and water

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Functional electricity	21	81	8.6	7	100		4	100	
Source of electricity									
Central supply	17	100		7	100		4	100	
Private supply	17	0		7	0		4	0	
In-facility generator	17	0		7	0		4	0	
Solar generator	17	0		7	0		4	0	
Other source	17	0		7	14.3	13.2	4	25	21.6
Source of water									
Piped into facility	21	57.1	10.8	7	71.4	17.1	4	0	
Public well	21	0		7	0		4	0	
Facility well	21	4.8	4.7	7	0		4	100	
Unprotected well	21	0		7	0		4	0	
Hand pump	21	0		7	0		4	0	
Bottled water	21	0		7	0		4	0	
Tanker truck	21	0		7	0		4	0	
Rain water	21	0		7	0		4	0	
Other	21	47.6	10.9	7	42.9	18.7	4	0	

**Table B2.3.1** Personnel composition in ambulatory facilities

Personnel type	Ambulatory without doctor			Ambulatory with doctor		
	N	Mean	SE	N	Mean	SE
General physician	19	0		2	1	
Pediatrician	19	0		2	0	
Nutritionist	19	0		2	0	
Pharmacist	19	0		2	0	
Nurse	19	0.6	0.9	2	5	4.2
Auxiliary nurse	19	2.7	4.6	2	32	39.6
Midwife	18	2.2	5.0	0	0	
Social worker	19	0.1	0.2	2	1	1.4
Laboratory technician	19	3.3	14.2	2	0.5	0.7
Health promoter	19	0.4	0.7	1	0	
Other	19	0.2	0.4	1	2	

**Table B2.3.2** Personnel composition in basic and complete health units

Personnel type	Basic				Complete		
	N	Mean	SE	DK/DR	N	Mean	SE
General physician	7	2.6	1.7	0	4	15	8.3
Pediatrician	7	0		0	4	8	9.0
Nutritionist	7	0.9	1.5	0	4	1.5	1.0
Pharmacist	7	0.1	0.4	0	4	3.5	5.0
Nurse	7	3.4	1.5	0	4	38.5	34.6
Auxiliary nurse	7	14.6	3.8	0	4	142.3	96.3
Midwife	7	37	49.3	0	4	0	
Social worker	7	0.4	0.5	0	4	2.3	1.5
Laboratory technician	7	0.9	1.1	0	4	8.3	3.9
Health promoter	7	0		1	4	0	
Internist	7	0		0	4	4.8	6.8
Gynecologist	7	0		0	4	6	4.2
Surgeon	7	0		0	4	6.3	5.0
Anesthesiologist	7	0		0	4	2.5	3.0
Emergency medical technician	7	2	5.3	0	4	0	
Radiology technician	7	0		0	4	8.8	3.6
Ambulance driver/polyvalent	7	2.2	1.0	0	4	4.8	1.0
Other specialties	7	0.9	2.3	0	4	1	0.8

**Table B3.1.1** Child health care services provision

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Unit offers child services	21	100		7	100		4	100	
Unit vaccinates children under 5	21	100		7	100		4	50	25

**Table B3.2.1** Continuous availability of supplies and equipment needed for child care

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Observed and functional equipment	19	15.8	8.4	7	0		4	25	21.6
All pharmacy inputs observed on the day of the survey	19	68.4	10.7	7	42.9	18.7	4	50	25.0
No stock-out of pharmacy inputs in the previous three months	19	68.4	10.7	7	14.3	13.2	4	50	25.0
Continuous availability of vaccines*	11	63.6	14.5	7	42.9	18.7	3	33.3	27.2
Meets all criteria listed above	19	5.3	5.1	7	0		4	0	

\* Only applicable if facility stores vaccines



**Table B3.3.1** Child health care equipment observed and functional in ambulatory facilities

	Ambulatory without doctor		
	N	%	SE
Oral/Axillary thermometer	19	89.5	7.0
Pediatric stethoscope	1	0	
Standing balance or scale for children	19	42.1	11.3
Stethoscope	19	36.8	11.1
Tallimeter	19	68.4	10.7
All equipment observed and functional	19	15.8	8.4

**Table B3.3.2** Child health care equipment observed and functional in basic & complete level health units

Equipment type	N	Basic		N	Complete	
		%	SE		%	SE
Pediatric stethoscope	7	42.9	18.7	4	75	21.6
Pediatric tensiometer	7	42.9	18.7	4	50	25.0
Standing balance or scale for children	7	57.1	18.7	4	100	
Tallimeter	7	57.1	18.7	4	50	25.0
All equipment observed and functional	7	0		4	25	21.6

**Table B3.4.1** Child health care observed drugs and supplements in ambulatory units

	Ambulatory without doctor		
	N	%	SE
Packets/ Envelopes of (ORS)	19	84.2	8.4
Ferrous sulfate drops	19	94.7	5.1
Zinc	19	100	
Albendazole/Mebendazole	19	84.2	8.4
Antibiotic	n/a	n/a	n/a
All drugs available on the day of the survey	19	68.4	10.7
All drugs available on the day of the survey and no stock-out of ORS, albendazole/mebendazole, zinc in previous three months	19	68.4	10.7

**Table B3.4.2** Child health care observed drugs and supplements in basic and complete units

Supplement type	N	Basic		N	Complete	
		%	SE		%	SE
Packets/ Envelopes of (ORS)	7	71.4	17.1	4	100	
Ferrous sulfate drops	7	85.7	13.2	4	50	25
Zinc	7	100		4	100	
Albendazole/Mebendazole	7	57.1	18.7	4	100	
Antibiotic	7	100		4	100	
Ringer's lactate/ Hartmann's solution/ saline solution	7	100		4	100	
All drugs available on the day of the survey	7	42.9	18.7	4	50	25
All drugs available on the day of the survey and no stock-out of ORS, albendazole/mebendazole, zinc in previous three months	7	14.3	13.2	4	50	25

\*Antibiotic = Crystalline Penicillin/Erythromycin /Amoxicillin

**Table B3.5.1** Child health education and awareness

Education material	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Printed materials on child growth and child development	19	57.9	11.3	7	28.6	17.07	4	25	21.6
Printed materials on danger signs and symptoms of childhood illnesses	19	68.4	10.7	7	28.6	17.07	4	25	21.6

**Table B4.1.1** Vaccination services

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Unit vaccinates children under 5	21	100		7	100		4	50	25.0
Immunization room									
Private room with visual and auditory privacy	20	25	9.7	6	33.3	19.3	4	50	25.0
Non-private room without auditory or visual privacy	20	0		6	16.7	15.2	4	0	
Visual privacy only	20	55	11.1	6	50	20.4	4	0	
No privacy	20	15	8.0	6	0		4	0	
Other	20	0		6	0		4	25	21.6
Don't provide such services	20	5	4.9	6	0		4	25	21.6

**Tables B4.2.1** Vaccine storage & **Table B4.2.2** Vaccine supply and demand

Vaccine Information	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
<b>Storage</b>									
Stored in facility	21	71.4	9.9	7	100		2	100	
Picked up from another facility	21	14.3	7.6	7	0		2	0	
Delivered when services are being provided	21	14.3	7.6	7	0		2	0	
None of the above	21	0		7	0		2	0	
<b>Ordering Strategy</b>									
Ordering Strategy									
Determines own needs	15	100		7	85.7	13.2	2	100	
Need determined elsewhere	15	0		7	14.3	13.2	2	0	
Both(differ by vaccine)	15	0		7	0		2	0	
<b>Quantity to order strategy</b>									
Order same amount	15	100		7	100		2	100	
Different per vaccine	15	0		7	0		2	0	
<b>Time to order strategy</b>									
Fixed time, > once/week	15	80	10.3	7	57.1	18.7	2	50	35.4
Fixed time, < once/week	15	0		7	0		2	0	
Order when needed	15	20	10.3	7	0		2	50	35.4
<b>Time to receive supplies</b>									
< 1 week	15	80	10.3	7	100		2	100	
1-2 weeks	15	20	10.3	7	0		2	0	
> 2 weeks	15	0		7	0		2	0	
<b>Reception of quantity ordered</b>									
Always	15	86.7	8.8	7	28.6	17.1	2	100	
Almost always	15	0		7	71.4	17.1	2	0	
Almost never	15	13.3	8.8	7	0		2	0	

**Table B4.3.1** Vaccine stocks observed

Vaccine type	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
MMR	12	91.7	8.0	7	100		3	33.3	27.2
Pentavalent	12	91.7	8.0	7	100		3	33.3	27.2
Polio	12	91.7	8.0	7	100		3	33.3	27.2
Influenza	12	66.7	13.6	7	71.4	17.1	3	33.3	27.2
Rotavirus	12	91.7	8.0	7	71.4	17.1	3	33.3	27.2
Pneumococcal conjugate	12	91.7	8.0	7	85.7	13.2	3	33.3	27.2
BCG	12	83.3	10.8	7	100		3	100	
DPT alone	1	0		0			2	0	
HepB alone	1	0		0			2	50	35.4
Hib alone	1	0		0			2	50	35.4

\*Pentavalent/ (DPT + HepB); MMR = Measles + Mumps + Rubella

**Table B4.4.1** Fridge availability

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Storage									
Electric fridge	15	93.3	6.4	6	100		4	100	
Kerosene fridge	15	0		6	0		4	0	
Gas fridge	15	6.7	6.4	6	0		4	0	
Solar fridge	15	0		6	0		4	0	
Cold box	15	86.7	8.8	6	100		4	50	25
Any of the above	15	100		6	100		4	100	

**Table B5.1.1** Family planning (FP) services provision

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Offers FP services	21	100		7	100		4	100	
FP room									
Private room with visual and auditory privacy	20	25	9.7	7	28.6	17.1	4	25	21.6
Non-private room without auditory or visual privacy	20	0		7	0		4	0	
Visual privacy only	20	70	10.3	7	71.4	17.1	4	75	21.6
No privacy	20	5	4.9	7	0		4	0	
Other	20	0		7	0		4	0	

**Table B5.2.1** Family planning (FP) storage

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
FP Storage									
Yes, stores contraceptives	21	100		7	100		4	100	
No, delivered when services are being provided	21	0		7	0		4	0	
DK/DR	2								

**Table B5.3.1** Observed contraception methods and reported services in ambulatory facilities

	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
Observed FP methods						
Any pill	19	78.9	9.35	1	100	
Combined oral pill	19	78.9	9.35	1	100	
Progestin only pill	19	0		1	0	
Any injectable	19	94.7	5.12	1	100	
Combined injectable (1 month)	19	5.3	5.12	1	0	
Progestin only injectable (3 months)	19	94.7	5.12	1	100	
Male condom	19	100		1	100	
Female condom	19	0		1	0	
IUD	19	10.5	7.04	1	100	
Spermicide	19	0		1	0	
Diaphragm	19	0		1	0	
Emergency contraception pill	19	0		1	0	
Reported Services						
Offers pregnancy tests	19	57.9	11.33	1	100	
Trained doctor to perform IUD insertion	19	5.3	5.12	1	100	

**Table B5.3.2** Observed contraception methods and reported services in basic and complete facilities

	Basic			Complete		
	N	%	SE	N	%	SE
Observed FP methods						
Any pill	7	100		4	100	
Combined oral pill	7	85.7	13.2	4	100	
Progestin only pill	7	14.3	13.2	4	0	
Any injectable	7	100		4	100	
Combined injectable (1 month)	7	0		4	25	21.6
Progestin only injectable (3 months)	7	100		4	100	
Male condom	7	100		4	100	
Female condom	7	0		4	0	
IUD	7	85.7	13.2	4	100	
IUD insertion kit	7	85.7	13.2	4	100	
Spermicide	7	0		4	0	
Diaphragm	7	0		4	0	
Emergency contraception pill	7	0		4	0	
Implant	7	42.9	18.7	4	50	25.0
Reported services						
Offers pregnancy test	7	71.4	17.1	4	100	
Trained doctor to perform tubal ligation	7	0		4	100	
Trained doctor to perform vasectomy	7	0		4	75	21.6

**Table B5.4.1** Composite family planning indicator

Family planning methods	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Condom	20	100		7	100		4	100	
Any pill	20	80	9.2	7	100		4	100	
Any injectable	20	95	5.0	7	100		4	100	
Intrauterine device	n/a	n/a	n/a	7	71.4	18.4	4	100	
All above methods available on the day of the survey	20	75	9.9	7	71.4	18.4	4	100	
No stock-out in the last 1 month + 2 months + 3 months	20	70	10.5	7	71.4	18.4	4	100	

**Table B5.5.1** Teaching and awareness on family planning and STIs

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Individual FP counseling	21	100		7	100		4	100	
Group FP counseling	21	100		7	85.7	13.2	4	100	
FP posters on walls of facility	19	47.4	11.4	7	71.4	17.1	4	100	
STI/HIV posters on walls of facility	19	21.1	9.4	7	28.6	17.1	4	75	21.6

**Table B6.1.1** ANC service provision in ambulatory facilities

	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
Offers ANC services	19	94.7	5.1	2	50	35.4
ANC room						
Private room with auditory and visual privacy	19	31.6	10.7	1	100	
Non-private room without auditory or visual privacy	19	0		1	0	
Visual privacy only	19	68.4	10.7	1	0	
No privacy	19	0		1	0	

**Table B6.1.2** ANC, delivery, and PPC service provision in basic and complete facilities

	Basic			Complete		
	N	%	SE	N	%	SE
Offers ANC services	7	100		4	100	
Offers routine delivery services (non-urgent)	7	100		4	100	
Offers PPC services	7	71.4	17.1	4	100	
ANC - PPC room						
Private room with auditory and visual privacy	7	28.6	17.1	4	75	21.6
Non-private room without auditory or visual privacy	7	14.3	13.2	4	0	
Visual privacy only	7	57.1	18.7	4	25	21.6
No privacy	7	0		4	0	
Delivery room						
Private room with auditory and visual privacy	7	57.1	18.7	4	25	21.6
Non-private room without auditory or visual privacy	7	0		4	0	
Visual privacy only	7	42.9	18.7	4	25	21.6
No privacy	7	0		4	50	25.0

**Table B6.2.1** Observed and functional ANC - PPC equipment in ambulatory facilities

Equipment type	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
Gynecological exam table*	19	78.9	9.4	1	100	
Gooseneck lamp or hand lamp	19	42.1	11.3	1	100	
Obstetrical tape	19	63.2	11.1	1	0	
Perinatal maternal medical history	19	100		1	0	
Sphygmomanometer	19	68.4	10.7	1	100	
Standing scales	19	84.2	8.4	1	0	
All equipment observed and functional	19	21.1	9.4	1	0	

\*Not applicable for mobile units

**Table B6.2.2** Observed and functional ANC - PPC equipment in basic and complete facilities

Equipment type	Basic			Complete		
	N	%	SE	N	%	SE
Gynecological exam table*	7	85.7	13.2	4	75	21.6
Gooseneck lamp or hand lamp	7	71.4	17.1	4	100	
Obstetrical tape	7	71.4	17.1	4	75	21.6
Perinatal maternal medical history	7	100		4	75	21.6
Sphygmomanometer	7	100		4	75	21.6
Standing scales	7	71.4	17.1	4	100	
Stethoscope	7	100		4	75	21.6
All equipment observed and functional	7	14.3	13.2	4	75	21.6

**Table B6.3.1** ANC - PPC pharmacy inputs in ambulatory facilities

Pharmacy inputs	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
Erythromycin/benzathine penicillin	n/a	n/a	n/a	1	100	
Iron + Folic acid	19	94.7	5.1	1	100	
Tetanus vaccine	19	84.2	8.4	1	100	
All inputs observed on the day of the survey	19	78.9	9.4	1	100	
No stock-out in the last three months	19	73.7	10.1	1	100	

**Table B6.3.2** ANC - PPC pharmacy inputs in basic and complete facilities

Pharmacy inputs	Basic			Complete		
	N	%	SE	N	%	SE
Antibiotic	7	100		4	100	
Iron + Folic acid	7	100		4	75	21.6
Tetanus vaccine	7	100		4	100	
All inputs observed on the day of the survey	7	100		4	75	21.6
No stock-out in the last three months	7	85.7	13.2	4	50	25.0

**Table B6.4.1** Important equipment needed for delivery care

Equipment type	Basic			Complete		
	N	%	SE	N	%	SE
Intravenous catheter sterile N° 18	7	71.4	17.07	4	100	
Metallic Clamp or umbilical tape	7	100		4	100	
Equipment p / serum c / macrodrip and microdrip	7	71.4	17.07	4	100	
Nasogastric tube K 33	7	28.6	17.07	4	75	21.65
Sterile fields or sheltering for a baby	7	57.1	18.7	4	50	25
All equipment observed and functional	7	14.3	13.23	4	50	25

**Table B6.4.2** Pharmacy inputs needed for delivery care

Pharmacy inputs	Basic			Complete		
	N	%	SE	N	%	SE
Hyoscine bromide / butylhyoscine	7	28.6	17.1	4	25	21.6
Plastic clamp or umbilical tape	7	100		4	75	21.6
Ergonovine maleate / Ergometrine / Oxytocin	7	85.7	13.2	4	100	
Chloramphenicol eye drops / 1% silver nitrate	7	100		4	75	21.6
Povidone-iodine	7	0		4	25	21.6
Ringer's lactate / Hartmann's solution / saline solution	7	100		4	100	
S lidocaine /S epinephrine	7	71.4	17.1	4	100	
C / mounted needle syringe (syringe insulin)	7	14.3	13.2	4	75	21.6
Vitamin K 1 mg	7	42.9	18.7	4	100	
All drugs available on the day of the survey	7	0		4	0	



**Table B6.5.1** Births attended in CAPs and CAIMIs managed according to the norm

Items checked	Basic		
	N	%	SE
Birth attended by doctor / nurse / obstetrician / midwife	57	82.5	5.0
Cord clamped within 90 seconds	57	71.9	5.9
Oxytocin / other uterotonics administered	57	96.5	2.4
Partograph included in the medical file	57	54.4	6.6
Births managed according to the norm (meets all criteria listed above)	57	36.8	6.4

**Table B7.1.1** Emergency obstetric and neonatal care service provision in basic and complete facilities

	Basic			Complete		
	N	%	SE	N	%	SE
Emergency room						
Private room with visual and auditory privacy	7	57.1	18.7	4	25	21.6
Non-private room without auditory nor visual privacy	7	14.3	13.2	4	0	
Visual privacy only	7	28.6	17.1	4	25	21.6
No privacy	7	0		4	50	25.0
Don't provide this service	7	0		4	0	

**Table B7.2.1** Observed and functional equipment for emergency care

Equipment type	Basic			Complete*		
	N	%	SE	N	%	SE
Anesthesia equipment	7	0		4	75	21.6
Autoclave (or dry heat sterilizer)	7	71.4	17.1	4	75	21.6
Blood pressure apparatus	7	42.9	18.7	4	50	25.0
Kit for C-sections	7	0		4	75	21.6
Laryngoscope	7	28.6	17.1	4	75	21.6
MVA kit	7	0		4	100	
Neonatal/ pediatric stethoscope	7	0		4	50	25.0
Oxygen tank	7	42.9	18.7	4	100	
Portable Doppler (or Pinard stethoscope)	7	42.9	18.7	4	100	
Adult resuscitation bag	7	57.1	18.7	4	100	
Neonatal resuscitation bag	7	57.1	18.7	4	100	
Stethoscope	7	100		4	100	
All equipment observed and functional	7	0		4	25	21.6

\*Missing data for functionality. This column is solely based on observed equipment.

**Table B7.3.1** Drugs needed for emergency care in basic level facilities

Drug availability	N	Basic	
		%	SE
Benzathine penicillin / ampicillin	7	71.4	17.1
Calcium gluconate	7	14.3	13.2
Dexamethasone / Betamethasone	7	57.1	18.7
Gentamicin / amikacin	7	57.1	18.7
Hydralazine ampoules	7	28.6	17.1
Magnesium sulfate	7	42.9	18.7
Metronidazole or clindamycin	7	71.4	17.1
Oxytocin	7	85.7	13.2
All drugs available on the day of the survey	7	14.3	13.2

**Table B7.3.2** Drugs needed for emergency care in complete level facilities

Drug availability	N	Complete	
		%	SE
Penicillin benzathine / ampicillin	4	100	
Calcium gluconate	4	75	21.6
Ceftriaxone	4	100	
Chloramphenicol	4	25	21.6
Dexamethasone / Betamethasone	4	100	
Diazepam	4	100	
Diphenylhydantoin	4	50	25.0
Gentamicin / amikacin	4	100	
Chloramphenicol	4	75	21.6
Magnesium sulfate	4	100	
Metronidazole or clindamycin	4	100	
Nifedipine	4	50	25.0
Oxytocin	4	100	
All drugs available on the day of the survey	4	0	

**Table B7.4.1** Distribution of maternal complications

	Total
Women with sepsis	9
Women with hemorrhage	47
Women with pre-eclampsia	24
Women with eclampsia	10
TOTAL	90

**Table B7.4.2** Medical record review: sepsis

	Complete		
	N	%	SE
Vital signs checked	9	100	
Antibiotics administered	9	100	
Correct treatment given	9	77.8	13.9
Sepsis managed according to the norm (meets all above criteria)	9	77.8	13.9

**Table B7.4.3.** Medical record review at complete level facilities: hemorrhage

	Complete		
	N	%	SE
Vital signs checked	47	89.4	4.5
Correct treatment given	47	21.3	6.0
Oxytocin/ other uterotonic administered	47	57.4	7.2
Lab tests performed	47	12.8	4.9
Cause recorded	47	100	
Hemorrhage managed according to the norm (meets all above criteria)	47	0	

**Table B7.4.4** Medical record review: pre-eclampsia

	Complete		
	N	%	SE
Vital signs checked	24	0	
Lab tests performed	24	70.8	9.3
Correct treatment given	24	70.8	9.3
Outcome recorded	24	95.8	4.1
Pre-eclampsia managed according to the norm (meets all above criteria)	24	0	

**Table B7.5.1** Distribution of neonatal complications

	Total
Neonates with low birth weight	17
Neonates with prematurity	11
Neonates with sepsis	40
Neonates with asphyxia	27
TOTAL	95

**Table B7.5.2** Medical record review: low birth weight

	Complete		
	N	%	SE
Evaluated by a doctor at admission	17	100	
All checkups recorded	17	0	
Lab tests performed	17	5.9	5.7
Correct treatment given	17	94.1	5.7
Managed according to the norm (meets all above criteria)	17	0	

**Table B7.5.2** Medical record review: prematurity

	Complete		
	N	%	SE
Evaluated by a doctor at admission	11	100	
All checkups recorded	11	0	
Lab tests performed	11	0	
Referral to complete level	11	100	
Managed according to the norm (meets all above criteria)	11	0	

**Table B7.5.3** Medical record review: infants with sepsis

	Complete		
	N	%	SE
Evaluated by a doctor at admission	40	85	5.7
All checkups recorded	40	50	7.9
Treatment with antibiotics	40	85	5.7
Lab tests performed	40	0	
Sepsis managed according to the norm (meets all above criteria)	40	0	

**Table B7.5.4** Medical record review: infants with asphyxia

	Complete		
	N	%	SE
Evaluated by a doctor at admission	27	100	
All checkups recorded	27	7.4	5.0
Lab tests performed	27	0	
Asphyxia managed according to the norm (meets above criteria)	27	0	

**Table B8.1.1** Equipment for disposal

	Ambulatory				Basic				Complete			
	N	%	SE	DK/DR	N	%	SE	DK/DR	N	%	SE	DK/DR
Incinerator at facility	21	4.8	4.7	0	7	0		0	4	75	21.6	0
Contract with other facility for biohazard disposal	20	45	11.1	0	7	28.6	17.1	0	1	100		0
Manual for decontamination	20	15	8.0	1	7	71.4	17.1	0	4	100		0

**Table B8.2.1** Decontamination and sterilization

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
<b>Decontamination methods</b>									
Submerged in disinfectant, then scrubbed with a brush, soap and water	21	47.6	10.9	7	85.7	13.2	4	50	25.0
Scrubbed with a brush, soap and water, then submerged in disinfectant	21	9.5	6.4	7	0		4		
Scrubbed with a brush, soap and water only	21	0		7	0		4	25	21.6
Submerged in disinfectant, without scrubbing with brush	21	4.8	4.7	7	0		4	25	21.6
Cleaned with water and soap, without scrubbing with a brush	21	0		7	0		4		
Equipment never reused	21	4.8	4.7	7	0		4		
Other	21	52.4	10.9	7	42.9	18.7	4	75	21.6
<b>Sterilization methods</b>									
Dry heat	21	9.5	6.4	7	0		4	25	21.6
Autoclave	21	52.4	10.9	7	42.9	18.7	4	50	25.0
Boiling	21	9.5	6.4	7	14.3	13.2	4		
Steam	21	4.8	4.7	7	28.6	17.1	4	50	25.0
Chemical sterilization	21	14.3	7.6	7	0		4		
Processed away from facility	21	0		7	0		4		
Facility doesn't sterilize	21	4.8	4.7	7	0		4		
Other	21	19	8.6	7	14.3	13.2	4	25	21.6

## Appendix C: Aggregate Tables (facilities in intervention and control areas)

**Table C2.1.1** Facilities by EONC level

Facility classification	Control
ambulatory	68
basic	20
complete	5
Total	93

**Table C2.1.2** Geographical representation

Department	Municipality	No. of facilities
HUEHUETENANGO	Barillas	4
	Colotenango	2
	San Gaspar Ixchil	1
	San Idelfonso Ixtahuacán	2
	San Juan Atitan	3
	San Mateo Ixtatán	5
	San Miguel Acatán	6
	San Pedro Necta	2
	San Rafael Petzal	2
	San Rafael la Independencia	2
	San Sebastian Coatan	2
	San Sebastian Huehuetenango	4
	Santa Cruz Barillas	1
	Santa Eulalia	1
	Santa Barbara	4
	Santa Eulalia	3
	Santiago Chimaltenango	1
	Todos Santos Cuchumatan	3
	huehuetenango	1
	SAN MARCOS	Comitancillo
Concepción Tutuapa		9
Ixchiguan		6
La Reforma		1
Nuevo Progreso		2
SAN MIGUEL IXTAHUACÁN		2
San José Ojetenam		3
San Lorenzo		1
Sibinal		2
Tacana		3
Tacaná		2
Tajumulco		5
malacatan		1
san marcos		1
<b>TOTAL</b>	<b>34</b>	<b>93</b>

**Table C2.1.4** Number of medical records by facility classification (EONC level)

Medical records	Ambulatory	Basic	Complete	Total
Antenatal care	258	181	26	465
Delivery	n/a	236	85	321
Postpartum	5	168	41	214
Maternal complications	n/a	0	119	119
Neonatal complications	n/a	0	115	115
Growth	241	71	16	328
Total	504	656	402	1562

**Table C2.2.1** Electricity and water

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Functional electricity	68	91.2	3.4	20	100		5	100	
Source of electricity									
Central supply (Comisión Federal de Electricidad)	59	98.3	1.7	20	100		5	100	
Private supply	59	1.7	1.7	20	0		5	0	
In-facility generator	59	0		20	0		5	0	
Solar generator	59	0		20	0		5	0	
Other source	59	0		20	10	6.7	5	20	17.9
DK/ DR	3			0			0		
Source of water									
Piped into facility	66	60.6	6.0	20	70	10.3	5	20	17.9
Public well	66	4.5	2.6	20	0		5	0	
Facility well	66	3	2.1	20	0		5	80	17.9
Unprotected well	66	1.5	1.5	20	0		5	0	
Hand pump	66	0		20	0		5	0	
Bottled water	66	0		20	0		5	0	
Tanker truck	66	0		20	5	4.9	5	0	
Rain water	66	1.5	1.5	20	0		5	0	
Other	66	39.4	6.0	20	30	10.3	5	20	17.9
DK/ DR	2			0			0		

**Table C2.3.1** Personnel composition in ambulatory facilities

Personnel type	Ambulatory without doctor			Ambulatory with doctor		
	N	mean	SE	N	mean	SE
General physician	61	0		7	0.9	0.4
Pediatrician	61	0		7	0	
Nutritionist	61	0		7	0	
Pharmacist	61	0		7	0	
Nurse	61	0.4	0.7	7	2.3	2.7
Auxiliary nurse	61	2.7	3.9	7	11.1	21.6
Midwife	56	2.2	3.7	5	9.4	7.9
Social worker	61	0	0.2	7	0.4	0.8
Laboratory technician	61	1	7.9	7	0.1	0.4
Health promoter	61	1.9	6.2	6	0	
Other	61	0.3	1.0	6	0.3	0.8

**Table C2.3.2** Personnel composition in basic and complete health units

Personnel type	Basic				Complete		
	N	mean	SE	DK/DR	N	mean	SE
General physician	20	2.6	1.7	0	5	13.8	7.7
Pediatrician	20	0		0	5	6.8	8.3
Nutritionist	20	0.9	1.2	0	5	1.2	1.1
Pharmacist	20	0.1	0.5	0	5	2.8	4.6
Nurse	20	3.3	1.6	0	5	31.4	33.9
Auxiliary nurse	20	12.5	4.7	0	5	118.8	98.6
Midwife	20	26.1	38.7	0	5	0	
Social worker	20	0.5	0.5	0	5	1.8	1.6
Laboratory technician	20	0.7	1.0	0	5	7.4	3.8
Health promoter	20	3.7	9.9	1	5	0	
Internist	20	0		0	5	4.4	
Gynecologist	20	0		0	5	5.6	3.8
Surgeon	20	0		0	5	5.2	4.9
Anesthesiologist	20	0		0	5	2.8	2.7
Emergency medical technician	20	0.8	3.1	0	5	0	
Radiology technician	20	0.1	0.4	0	5	7.8	3.8
Ambulance driver/polyvalent	19	1.7	1.1	0	5	4.2	1.5
Other specialties	20	1.6	5.2	0	5	0.8	0.8

**Table C3.1.1** Child health care services provision

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Unit offers child services	68	100		20	95	4.9	5	100	
Unit vaccinates children under 5	68	97.1	2.0	20	100		5	60	21.9

**Table C3.2.1** Continuous availability of supplies and equipment needed for child care

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Observed and functional equipment	66	12.1	4.0	19	5.3	5.1	5	20	17.9
All pharmacy inputs observed on the day of the survey	66	47	6.1	19	52.6	11.4	5	60	21.9
No stock-out of pharmacy inputs in the previous three months	66	45.5	6.1	19	36.8	11.1	5	40	21.9
Continuous availability of vaccines*	35	71.4	7.6	16	43.8	12.4	4	25	21.6
Meets all criteria listed above	66	4.5	2.6	19	0		5	0	

\* Only applicable if facility stores vaccines

**Table C3.3.1** Child health care equipment observed and functional in ambulatory facilities



	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
Oral/Axillary thermometer	61	86.9	4.3	5	100	
Pediatric stethoscope*	n/a	n/a	n/a	1	0	
Standing balance or scale for children	61	55.7	6.4	5	60	21.9
Stethoscope	61	29.5	5.8	5	60	21.9
Tallimeter	61	59	6.3	5	60	21.9
All equipment observed and functional	61	8.2	3.5	5	60	21.9

\*Data for pediatric stethoscope missing for 4 facilities

**Table C3.3.2** Child health care equipment observed and functional in basic and complete level health units

Equipment type	Basic			Complete		
	N	%	SE	N	%	SE
Pediatric stethoscope	19	21.1	9.4	5	60	21.9
Pediatric tensiometer	19	21.1	9.4	5	40	21.9
Standing balance or scale for children	19	78.9	9.4	5	100	
Tallimeter	19	63.2	11.1	5	60	21.9
All equipment observed and functional	19	5.3	5.1	5	20	17.9

**Table C3.4.1** Child health care observed drugs and supplements in ambulatory units

	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
Packets/ Envelopes of (ORS)	61	80.3	5.1	5	100	
Ferrous sulfate drops	61	82	4.9	5	60	21.9
Zinc	61	100		5	100	
Albendazole/Mebendazole	61	65.6	6.1	5	60	21.9
Antibiotic*	n/a	n/a	n/a	1	100	
All drugs available on the day of the survey	61	45.9	6.4	5	60	21.9
All drugs available on the day of the survey and no stock-out of ORS, albendazole/mebendazole, zinc in previous three months	61	44.3	6.4	5	60	21.9

\*Antibiotic = Amoxicillin / Erythromycin / benzathine penicillin (missing for 4 ambulatory facilities)

**Table C3.4.2** Child health care observed drugs and supplements in basic and complete units

Supplement type	Basic			Complete		
	N	%	SE	N	%	SE
Packets/ Envelopes of (ORS)	19	89.5	7.0	5	100	
Ferrous sulfate drops	19	84.2	8.4	5	60	21.9
Zinc	19	100		5	100	
Albendazole/Mebendazole	19	68.4	10.7	5	100	
Antibiotic*	19	100		5	100	
Ringer's lactate/ Hartmann's solution/ saline solution	19	100		5	100	
All drugs available on the day of the survey	19	52.6	11.4	5	60	21.9
All drugs available on the day of the survey and no stock-out of ORS, albendazole/mebendazole, zinc in previous three months	19	36.8	11.1	5	40	21.9

\*Antibiotic = Crystalline Penicillin/Erythromycin /Amoxicillin

**Table C3.5.1** Child health education and awareness

Education material	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Printed materials on child growth and child development	66	51.5	6.2	19	42.1	11.33	5	20	17.9
Printed materials on danger signs and symptoms of childhood	66	74.2	5.4	19	52.6	11.45	5	20	17.9

**Table C4.1.1** Vaccination services

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Unit vaccinates children under 5	68	97.1	2.0	20	100		5	60	21.9
Immunization room									
Private room with visual and auditory privacy	66	28.8	5.6	19	31.6	10.7	5	60	21.9
Non-private room without auditory nor visual privacy	66	3	2.1	19	5.3	5.1	5	0	
Visual privacy only	66	43.9	6.1	19	47.4	11.4	5	0	
No privacy	66	15.2	4.4	19	15.8	8.4	5	0	
Don't provide such services	66	6.1	2.9	19	0		5	20	17.9
Other	66	3	2.1	19	0		5	20	17.9

**Table C4.2.1** Vaccine storage, supply and demand

Vaccine Information	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
<b>Storage</b>									
Stored in facility	66	66.7	5.8	20	100		3	66.7	27.2
Picked up from another facility	66	21.2	5.0	20	0		3	0	
Delivered when services are being provided	66	12.1	4.0	20	0		3	33.3	27.2
None of the above	66	0		20	0		3	0	
<b>Ordering Strategy</b>									
Determines own needs	44	97.7	2.3	20	90	6.7	2	100	
Need determined elsewhere	44	2.3	2.3	20	5	4.9	2	0	
Both(differ by vaccine)	44	0		20	5	4.9	2	0	
<b>Quantity to order strategy</b>									
Order same amount	44	100		20	100		2	100	
Different per vaccine	44	0		20	0		2	0	
<b>Time to order strategy</b>									
Fixed time, > once/week	44	90.9	4.3	20	85	8.0	2	50	35.4
Fixed time, < once/week	44	0		20	0		2	0	
Order when needed	44	9.1	4.3	20	0		2	50	35.4
<b>Time to receive supplies</b>									
< 1 week	44	68.2	7.0	20	100		2	100	
1-2 weeks	44	29.5	6.9	20	0		2	0	
> 2 weeks	44	2.3	2.3	20	0		2	0	
<b>Reception of quantity ordered</b>									
Always	44	84.1	5.5	19	47.4	11.4	2	100	
Almost always	44	9.1	4.3	19	47.4	11.4	2	0	
Almost never	44	6.8	3.8	19	5.3	5.1	2	0	
DK/DR				1					

**Table C4.3.1** Vaccine stocks observed

Vaccine type	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Pentavalent	36	97.2	2.7	17	100		4	50	25.0
MMR	36	97.2	2.7	17	100		4	50	25.0
Polio	36	94.4	3.8	17	100		4	50	25.0
Influenza	36	75	7.2	17	58.8	11.9	4	25	21.6
Rotavirus	36	94.4	3.8	17	88.2	7.8	4	50	25.0
Pneumococcal conjugate	36	97.2	2.7	17	88.2	7.8	4	50	25.0
BCG	36	91.7	4.6	17	100		4	100	
DPT alone	2	0		0			2	0	
HepB alone	2	0		0			2	50	35.4
Hib alone	2	0		0			2	50	35.4

\*Pentavalent/(DPT + HepB); MMR = Measles + Mumps + Rubella

**Table C4.4.1** Fridge availability

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Storage									
Electric fridge	44	95.5	3.1	19	94.7	5.1	5	100	
Kerosene fridge	44	2.3	2.3	19	0		5	0	
Gas fridge	44	6.8	3.8	19	5.3	5.1	5	0	
Solar fridge	44	0		19	0		5	0	
Cold box	45	77.8	6.2	19	94.7	5.1	5	40	21.9
Any of the above	44	97.7	2.3	19	100		5	100	

**Table C5.1.1** Family planning (FP) services provision

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Offers FP services	68	97.1	2.0	20	100		5	100	
FP room									
Private room with visual and auditory privacy	67	38.8	5.9	20	35	10.7	5	20	17.9
Non-private room without auditory nor visual privacy	67	0		20	0		5	0	
Visual privacy only	67	55.2	6.1	20	65	10.7	5	80	17.9
No privacy	67	4.5	2.5	20	0		5	0	
Other	67	1.5	1.5	20	0		5	0	

**Table C5.2.1** Family planning (FP) storage

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
FP Storage									
Yes, stores contraceptives	68	100		20	100		5	100	
No, delivered when services are being provided	68	0		20	0		5	0	
Don't know/ decline to respond	2								

**Table C5.3.1** Observed contraception methods and reported services in ambulatory facilities

	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
<b>Observed FP methods</b>						
Any pill	59	71.2	5.9	6	83.3	15.2
Combined oral pill	59	69.5	6.0	6	83.3	15.2
Progestin only pill	59	1.7	1.7	6	0	
Any injectable	59	96.6	2.4	6	100	
Combined injectable (1 month)	59	8.5	3.6	6	0	
Progestin only injectable (3 months)	59	94.9	2.9	6	100	
Male condom	59	84.7	4.7	6	100	
Female condom	59	0		6	0	
IUD	59	3.4	2.4	6	16.7	15.2
Spermicide	59	0		6	0	
Diaphragm	59	0		6	0	
Emergency contraception pill	59	1.7	1.7	6	0	
<b>Reported Services</b>						
Offers pregnancy tests	57	40.4	6.5	6	83.3	15.2
Trained doctor to perform IUD insertion	57	5.3	3.0	6	33.3	19.3

**Table C5.3.2** Observed contraception methods and reported services in basic and complete facilities

	Basic			Complete		
	N	%	SE	N	%	SE
<b>Observed FP methods</b>						
Any pill	20	100		5	80	17.9
Combined oral pill	20	85	8.0	5	80	17.9
Progestin only pill	20	15	8.0	5	0	
Any injectable	20	100		5	100	
Combined injectable (1 month)	20	0		5	20	17.9
Progestin only injectable (3 months)	20	100		5	100	
Male condom	20	95	4.9	5	100	
Female condom	20	0		5	0	
IUD	20	75	9.7	5	80	17.9
IUD insertion kit	20	75	9.7	5	100	
Spermicide	20	0		5	0	
Diaphragm	20	0		5	0	
Emergency contraception pill	20	10	6.7	5	0	
Implant	20	35	10.7	5	40	21.9
<b>Reported services</b>						
Offers pregnancy test	20	60	10.9	5	100	
Trained doctor to perform tubal ligation	20	5	4.9	5	80	17.9
Trained doctor to perform vasectomy	20	0		5	60	21.9

**Table C5.4.1** Composite family planning indicator

Family planning methods	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Condom	65	86.2	4.3	20	95	5.0	5	100	
Any pill	65	72.3	5.6	20	100		5	80	20.0
Any injectable	65	96.9	2.2	20	100		5	100	
Intrauterine device	n/a	n/a	n/a	20	60	11.2	5	80	20.0
All above methods available on the day of the survey	65	66.2	5.9	20	60	11.2	5	80	20.0
No stock-out in the last 1 month + 2 months + 3 months	65	64.6	6.0	20	55	11.4	5	80	20.0

**Table C5.5.1** Teaching and awareness on family planning and STIs

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Individual FP counseling	66	100		20	95	4.9	5	100	
Group FP counseling	66	97	2.1	20	95	4.9	5	100	
FP posters on walls of facility	62	41.9	6.3	20	45	11.1	5	80	17.9
STI/HIV posters on walls of facility	62	21	5.2	20	30	10.3	5	60	21.9

**Table C6.1.1** ANC service provision in ambulatory facilities

	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
Offers ANC services	61	96.7	2.3	7	85.7	13.2
ANC room						
Private room with auditory and visual privacy	61	41	6.3	6	83.3	15.2
Non-private room without auditory nor visual privacy	61	0		6	0	
Visual privacy only	61	59	6.3	6	16.7	15.2
No privacy	61	0		6	0	

**Table C6.1.2** ANC, delivery, and PPC service provision in basic and complete facilities

	Basic			Complete		
	N	%	SE	N	%	SE
Offers ANC services	20	100		5	100	
Offers routine delivery services (non-urgent)	20	90	6.7	5	100	
Offers PPC services	20	90	6.7	5	100	
ANC - PPC room						
Private room with auditory and visual privacy	20	45	11.1	5	60	21.9
Non-private room without auditory nor visual privacy	20	5	4.9	5	0	
Visual privacy only	20	50	11.2	5	40	21.9
No privacy	20	0		5	0	
Delivery room						
Private room with auditory and visual privacy	20	55	11.1	5	20	17.9
Non-private room without auditory nor visual privacy	20	5	4.9	5	0	
Visual privacy only	20	30	10.3	5	40	21.9
No privacy	20	10	6.7	5	40	21.9

**Table C6.2.1** Observed and functional ANC - PPC equipment in ambulatory facilities

Equipment type	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
Gynecological exam table*	61	80.3	5.1	6	83.3	15.2
Gooseneck lamp or hand lamp	61	42.6	6.3	6	83.3	15.2
Obstetrical tape	61	68.9	5.9	6	50	20.4
Perinatal maternal medical history	61	95.1	2.8	6	83.3	15.2
Sphygmomanometer	61	75.4	5.5	6	100	
Standing scales	61	67.2	6.0	6	50	20.4
All equipment observed and functional	61	21.3	5.2	6	16.7	15.2

\*Not applicable for mobile units

**Table C6.2.2** Observed and functional ANC - PPC equipment in basic and complete facilities

Equipment type	Basic			Complete		
	N	%	SE	N	%	SE
Gynecological exam table	20	85	8.0	5	80	17.9
Gooseneck lamp or hand lamp	20	80	8.9	5	100	
Obstetrical tape	20	80	8.9	5	80	17.9
Perinatal maternal medical history	20	100		5	80	17.9
Sphygmomanometer	20	90	6.7	5	80	17.9
Standing scales	20	90	6.7	5	100	
Stethoscope	20	90	6.7	5	80	17.9
All equipment observed and functional	20	30	10.3	5	80	17.9

**Table C6.3.1** ANC - PPC pharmacy inputs in ambulatory facilities

Pharmacy inputs	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
Erythromycin/benzathine penicillin*	61	100		6	100	
Iron + Folic acid	61	86.9	4.3	6	83.3	15.2
Tetanus vaccine	61	63.9	6.2	6	83.3	15.2
All inputs observed on the day of the survey	61	55.7	6.4	6	83.3	15.2
No stock-out in the last three months	61	49.2	6.4	6	83.3	15.2

\* Missing data for 4 ambulatory facilities

**Table C6.3.2** ANC - PPC pharmacy inputs in basic and complete facilities

Pharmacy inputs	Basic			Complete		
	N	%	SE	N	%	SE
Antibiotic	20	100		5	100	
Iron + Folic acid	20	100		5	80	17.9
Tetanus vaccine	20	95	4.9	5	100	
All inputs observed on the day of the survey	20	95	4.9	5	80	17.9
No stock-out in the last three months	20	75	9.7	5	60	21.9

**Table C6.4.1** Important equipment needed for delivery care

Equipment type	Basic			Complete		
	N	%	SE	N	%	SE
Intravenous catheter sterile N ° 18	20	80	8.9	5	100	
Metallic Clamp or umbilical tape	20	100		5	100	
Equipment p / serum c / macrodrip and microdrip	20	70	10.3	5	100	
Nasogastric tube K 33	20	30	10.3	5	80	17.9
Sterile fields or sheltering for a baby	20	55	11.1	5	60	21.9
All equipment observed and functional	20	5	4.9	5	60	21.9



**Table C6.4.2** Pharmacy inputs needed for delivery care

Pharmacy inputs	Basic			Complete		
	N	%	SE	N	%	SE
Hyoscine bromide / Butylhyoscine	20	15	8.0	5	20	17.9
Plastic clamp or umbilical tape	20	80	8.9	5	80	17.9
Ergonovine maleate / Ergometrine / Oxytocin	20	85	8.0	5	100	
Chloramphenicol eye drops / 1% silver nitrate	20	90	6.7	5	60	21.9
Povidone-iodine	20	0		5	20	17.9
Ringer's lactate / Hartmann's solution / saline solution	20	100		5	100	
S lidocaine /S epinephrine	20	80	8.9	5	100	
C / mounted needle syringe (syringe insulin)	20	20	8.9	5	60	21.9
Vitamin K 1 mg	20	35	10.7	5	100	
All drugs available on the day of the survey	20	0		5	0	

**Table C6.5.1** Births attended in CAPs and CAIMIs managed according to the norm

Items checked	Basic		
	N	%	SE
Birth attended by doctor / nurse / obstetrician / midwife	236	83.1	2.4
Cord clamped within 90 seconds	236	75.4	2.8
Oxytocin / other uterotonics administration	236	85.2	2.3
Partograph included in the medical file	236	66.5	3.1
Births managed according to the norm (meets all criteria listed above)	236	48.3	3.3

**Table C7.1.1** Emergency obstetric and neonatal care service provision in basic and complete facilities

	Basic			Complete		
	N	%	SE	N	%	SE
Emergency room						
Private room with visual and auditory privacy	20	55	11.12	5	20	17.9
Non-private room without auditory nor visual privacy	20	5	4.87	5	0	
Visual privacy only	20	30	10.25	5	40	21.9
No privacy	20	10	6.71	5	40	21.9
Don't provide this service	20	0		5	0	

**Table C7.2.1** Observed and functional equipment for emergency care

Equipment type	Basic			Complete*		
	N	%	SE	N	%	SE
Anesthesia equipment	n/a	n/a	n/a	5	80	17.9
Autoclave (or dry heat sterilizer)	20	70	10.3	5	80	17.9
Blood pressure apparatus	20	65	10.7	5	40	21.9
Kit for C-sections	n/a	n/a	n/a	5	80	17.9
Laryngoscope	20	25	9.7	5	80	17.9
MVA kit	20	5	4.9	5	100	
Neonatal/ pediatric stethoscope	n/a	n/a	n/a	5	60	21.9
Oxygen tank	20	50	11.2	5	100	
Portable Doppler (or Pinard stethoscope)	20	70	10.3	5	100	
Adult resuscitation bag	20	60	10.9	5	100	
Neonatal resuscitation bag	20	50	11.2	5	100	
Stethoscope	20	100		5	100	
All equipment observed and functional	20	5	4.9	5	20	17.9

\*Missing data for functionality of equipment. This column is solely based on observed equipment.

**Table C7.3.1** Drugs needed for emergency care in basic level facilities

Drug availability	Basic		
	N	%	SE
Benzathine penicillin / ampicillin	20	80	8.9
Calcium gluconate	20	25	9.7
Dexamethasone / Betamethasone	20	70	10.3
Gentamicin / amikacin	20	65	10.7
Hydralazine ampoules	20	25	9.7
Magnesium sulfate	20	70	10.3
Metronidazole or clindamycin	20	80	8.9
Oxytocin	20	85	8.0
All drugs available on the day of the survey	20	5	4.9

**Table C7.3.2** Drugs needed for emergency care in complete level facilities

Drug availability	Complete		
	N	%	SE
Benzathine penicillin / ampicillin	5	100	
Calcium gluconate	5	80	17.9
Ceftriaxone	5	100	
Chloramphenicol	5	40	21.9
Dexamethasone / Betamethasone	5	100	
Diazepam	5	100	
Diphenylhydantoin	5	40	21.9
Gentamicin / amikacin	5	100	
Chloramphenicol	5	80	17.9
Magnesium sulfate	5	100	
Metronidazole or clindamycin	5	100	
Nifedipine	5	40	21.9
Oxytocin	5	100	
All drugs available on the day of the survey	5	0	

**Table C7.4.1** Distribution of maternal complications

	Total
Women with sepsis	11
Women with hemorrhage	71
Women with pre-eclampsia	26
Women with eclampsia	10
TOTAL	118

**Table C7.4.2** Medical record review: sepsis

	Complete		
	N	%	SE
Vital signs checked	11	90.9	8.7
Antibiotics administered	11	100	
Correct treatment given	11	72.7	13.4
Sepsis managed according to the norm (meets all above criteria)	11	72.7	13.4

**Table C7.4.3.** Medical record review at complete level facilities: hemorrhage

	Complete		
	N	%	SE
Vital signs checked	71	85.9	4.1
Correct treatment given	71	33.8	5.6
Oxytocin/ other uterotonic administered	71	52.1	5.9
Lab tests performed	71	8.5	3.3
Cause recorded	71	100	
Hemorrhage managed according to the norm (meets all above criteria)	71	0	

**Table C7.4.4** Medical record review: pre-eclampsia

	Complete		
	N	%	SE
Vital signs checked	26	0	
Lab tests performed	26	65.4	9.3
Correct treatment given	26	69.2	9.1
Outcome recorded	26	96.2	3.8
Pre-eclampsia managed according to the norm (meets all above criteria)	26	0	

**Table C7.5.1** Distribution of neonatal complications

	Total
Neonates with low birth weight	20
Neonates with prematurity	11
Neonates with sepsis	62
Neonates with asphyxia	33
<b>TOTAL</b>	<b>126</b>

**Table C7.5.2** Medical record review: low birth weight

	Complete		
	N	%	SE
Evaluated by a doctor at admission	20	100	
All checkups recorded	20	0	
Lab tests performed	20	5	4.9
Correct treatment given	20	95	4.9
Managed according to the norm (meets all above criteria)	20	0	

**Table C7.5.3** Medical record review: infants with sepsis

	Complete		
	N	%	SE
Evaluated by a doctor at admission	62	90.3	3.8
All checkups recorded	62	59.7	6.2
Treatment with antibiotics given	62	90.3	3.8
Lab tests performed	62	0	
Sepsis managed according to the norm (meets all above criteria)	62	0	

**Table C7.5.4** Medical record review: infants with asphyxia

	Complete		
	N	%	SE
Evaluated by a doctor at admission	33	100	
All checkups recorded	33	6.1	4.2
Lab tests performed	33	0	
Asphyxia managed according to the norm (meets above criteria)	33	0	

**Table C8.1.1** Equipment for disposal

	Ambulatory				Basic				Complete			
	N	%	SE	DK/DR	N	%	SE	DK/DR	N	%	SE	DK/DR
Incinerator at facility	68	5.9	2.8	0	20	0		0	5	60	21.9	0
Contract with other facility for biohazard disposal	62	41.9	6.3	2	20	45	11.1	0	2	100		0
Manual for decontamination	66	9.1	3.5	2	20	55	11.1	0	5	100		0

**Table C8.2.1** Decontamination and sterilization

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
<b>Decontamination methods</b>									
Submerged in disinfectant, then scrubbed with a brush, soap and water	68	33.8	5.7	20	85	8.0	5	60	21.9
Scrubbed with a brush, soap and water, then submerged in disinfectant	68	4.4	2.5	20	5	4.9	5	0	
Scrubbed with a brush, soap and water only	68	0		20	0		5	20	17.9
Submerged in disinfectant, without scrubbing with brush	68	19.1	4.8	20	0		5	20	17.9
Cleaned with water and soap, without scrubbing with a brush	68	0		20	0		5	0	
Equipment never reused	68	14.7	4.3	20	0		5	0	
Other	68	33.8	5.7	20	40	10.9	5	60	21.9
<b>Sterilization methods</b>									
Dry heat	68	2.9	2.0	20	0		5	20	17.9
Autoclave	68	33.8	5.7	20	65	10.7	5	60	21.9
Boiling	68	5.9	2.8	20	5	4.9	5	0	
Steam	68	2.9	2.0	20	15	8.0	5	40	21.9
Chemical sterilization	68	22.1	5.0	20	10	6.7	5	0	
Processed away from facility	68	1.5	1.5	20	0		5	0	
Facility doesn't sterilize	68	19.1	4.8	20	0		5	0	
Other	68	14.7	4.3	20	10	6.7	5	20	17.9