

SM2015 – Guatemala

Baseline Health Facility

Ixcán, Ixil, Quiché and Sololá

Final Report

December 2014



TABLE OF CONTENTS

Chapter 1 SURVEY METHODOLOGY	7
1.1 Overview	7
1.2 Health facility survey	7
1.3 Contents and methods for data collection	7
1.3.1 Contents of the 2014 Guatemala health facility survey	7
1.3.2 Methods for data collection	8
1.4 Sampling	8
1.5 Survey implementation	8
1.5.1 Data collection instruments	8
1.5.2 Training and supervision of data collectors	8
1.5.3 Data collection and management	8
1.5.4 Data analysis and report writing	9
Chapter 2 FACILITY-LEVEL INFRASTRUCTURE, RESOURCES, MANAGEMENT, AND SUPPORT	9
2.1 General description of the facility	9
2.1.1 Type of health facility	9
2.1.3 Geographical representation	10
2.1.4 Medical record extraction	10
2.1.5 Referrals	11
2.1.6 Governing authority	11
2.2 Basic infrastructure	11
2.2.1 Electricity and Water	11
2.2.2 Internet access	12
2.2.3 Report generation	12
2.3 Personnel	13
2.3.1 Personnel in ambulatory units	13
2.3.2 Personnel in basic and complete facilities	13
Chapter 3 CHILD HEALTH	15
3.1 Child services offered – a background	15
3.2 Composite indicator for child care and nutrition	15
3.3 Child health care equipment	15
3.3.1 Child health care equipment in ambulatory facilities	16
3.3.2 Child health care equipment in basic and complete facilities	16
3.4 Important drugs and supplements	17
3.5 Education material	19

3.6 Child growth monitoring	19
Chapter 4 VACCINES.....	20
4.1 Vaccination services	20
4.2 Vaccine logistics	20
4.2.1 Storage	20
4.2.2 Demand and supply.....	20
4.3 Vaccines observed.....	21
4.4 Cold chain.....	22
Chapter 5 FAMILY PLANNING	23
5.1 Service provision and storage	23
5.2 Observed contraception methods and reported family planning services.....	23
5.2.1 Observed contraception methods and reported family planning services in ambulatory facilities	23
5.2.2 Observed contraception methods and reported family planning services in basic and complete facilities	24
5.3 Composite family planning indicator	25
5.4 Teaching and awareness	26
Chapter 6 MATERNAL HEALTH: ANTENATAL CARE (ANC), DELIVERY, AND POSTPARTUM CARE (PPC)..	27
6.1 Service provision	27
6.2 ANC - PPC equipment.....	28
6.2.1 ANC - PPC equipment in ambulatory facilities	28
6.2.2 ANC - PPC equipment in basic and complete facilities.....	28
6.3 ANC - PPC medications	30
6.3.1 ANC - PPC medications in ambulatory facilities	30
6.3.2 ANC - PPC medications in basic and complete facilities.....	31
6.4 ANC medical record review.....	31
6.4.1 Antenatal care according to the norm for births in the past two years.....	32
6.4.2 Antenatal care before twelve weeks gestation in the past two years	34
6.5 Delivery medical record review.....	34
6.5.1 Births attended in CAPs and CAIMIs managed according to the norm.....	35
6.5.2 Partograph revision	35
6.6 Postnatal care medical record review.....	36
6.6.1 Checks after birth performed according to the norm	37
Chapter 7 MATERNAL & NEONATAL HEALTH: COMPLICATIONS	38
7.1 Emergency obstetric and neonatal care service provision.....	38
7.2 Supplies and equipment needed for emergency obstetric and neonatal care	38
7.3 Important drugs needed for emergency obstetric and neonatal care.....	39

7.4 Distribution of obstetric and neonatal complications.....	40
7.5 Management of obstetric complications (sepsis, hemorrhage, pre-eclampsia and eclampsia) in the last two years.....	41
7.5.1 Sepsis in basic facilities.....	41
7.5.2 Sepsis in hospitals.....	41
7.5.3 Hemorrhage in basic facilities	42
7.5.4 Hemorrhage in hospitals	42
7.5.5 Pre-eclampsia & eclampsia in basic facilities	43
7.5.6 Pre-eclampsia & eclampsia in hospitals	43
7.6 Management of neonatal complications (low birth weight, prematurity, sepsis and asphyxia) in the last two years.....	44
7.6.1 Low birth weight (LBW) and prematurity in basic facilities.....	44
7.6.2 Low birth weight (LBW) and prematurity in hospitals	45
7.6.3 Sepsis in basic facilities.....	46
7.6.4 Sepsis in hospitals.....	46
7.6.5 Asphyxia in basic facilities	47
7.6.6 Asphyxia in hospitals	47
Chapter 8 INFECTION CONTROL.....	49
8.1 Equipment for disposal and disposal methods	49
8.1.1 Equipment for disposal	49
8.2 Decontamination and sterilization	49
Appendix A: SM2015 Health Facility Indicators	50
Table A.1.1 Facility performance indicators matrix	50
Table A.1.2 Facility monitoring indicators matrix.....	Error! Bookmark not defined.

This Final Report on the SM2015-Guatemala Facility Survey was produced in agreement with the Inter-American Development Bank (IDB). All analyses and report writing were performed by the Institute for Health Metrics and Evaluation (IHME) at the University of Washington.

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

Alexandra Schaefer, BA
Data Analyst, IHME

Bernardo Hernández Prado, MS, DSc
Associate Professor, IHME

Ali H. Mokdad, PhD
Professor, IHME

Erin Palmisano, BA
Project Officer, IHME

Contributing authors

Brent Anderson, BA
Project Officer, IHME

K. Ellicott Colson, MPH
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, BS
Data Analyst, IHME

Gulnoza Usmanova, MPH, MD
Post-Graduate Fellow, IHME

Shelley Wilson, BA
Project Officer, IHME

Acknowledgements

We would like to extend our gratitude to UNIMER for their implementation of data collection in Guatemala for this project.

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 percent 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 healthcare 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, baseline data were collected at health facilities in intervention areas in the departments of Ixcán, Ixil, Quiché, and Sololá. Data collection for this baseline evaluation took place at health facilities only. This document describes the performance indicator results in health facilities in the departments of Ixcán, Ixil, Quiché, and Sololá.

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 2014 Guatemala health facility survey

The health facility survey includes 3 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 3 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 60 health facilities was selected from a list of all facilities serving the nineteen intervention municipalities of Ixcán, Ixil, Quiché, and Sololá. This list was constructed according to a referral network outlined by the Ministry of Health. All complete and basic facilities serving SM2015 areas were included in the sample, due to the small number of these facilities operating in the area. Among ambulatory facilities, a simple random sample was drawn to meet the quota of 60 intervention facilities.

For the medical record review, a systematic sampling method was used to select complications and delivery records in each facility. Records for specific conditions (maternal and neonatal complications, deliveries, antenatal and postpartum care, and child 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 June 30 – July 4 2014. The 6 surveyors had medical backgrounds (physicians and nurses) and underwent four days of training. The training included an introduction to the initiative, proper conduct of the survey, in-depth review of the instrument, and hands-on training with the CAPI software. Training was followed by a two-day pilot of all components of the survey at currently operating health facilities.

1.5.3 Data collection and management

As described in Section 1.3.2, data were collected using computer netbooks equipped with CAPI

software. A lead surveyor monitored the implementation 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 IHME. IHME monitored collected data on a continuous basis and provided feedback. Suggestions, surveyor feedback, and any modifications were incorporated into the health facility instruments and readily transmitted to the field.

1.5.4 Data analysis and report writing

Data analysis was conducted at IHME. Analysis was done using STATA version 13.1. Performance indicators were calculated at IHME following the indicator definition provided by IDB. This report provides detailed information on key performance indicator components from the 60 facilities selected in the intervention area in Ixcán, Ixil, Quiché, and Sololá.

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

The main body of this report refers to facilities surveyed for the baseline evaluation in intervention areas only. Appendix A details performance and monitoring indicator values at the baseline evaluation in Ixcán, Ixil, Quiché and Sololá.

2.1 General description of the facility

2.1.1 Type of health facility

A total of 60 facilities in intervention areas were surveyed: 39 ambulatory health units, 16 basic health units, and 5 complete health units. 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 EONC level and facility type in Tables 2.1.1 and 2.1.2.

Table 2.1.1 Facilities by EONC level

Ambulatory	39
Basic	16
Complete	5
Total	60

Table 2.1.2 Facilities by facility type

Puesto de salud	37
Centro de convergencia	1
Cenapa	1
CAP	15
CAIMI	1
Hospital	5
Total	60

2.1.3 Geographical representation

Facilities surveyed for the baseline evaluation were located in 19 municipalities in a total of 4 departments (Table 2.1.3).

Table 2.1.3 Geographical representation

Department	Municipality	No. of facilities
IXCAN	Ixcán	10
	TOTAL	10
IXIL	Chajul	11
	Nebaj	1
	TOTAL	12
QUICHE	Chicaman	2
	Cunén	3
	Joyabaj	4
	Sacapulas	5
	San Andrés Sajcabaja	2
	San Antonio Ilotenango	2
	San Bartolomé Jocotenango	2
	San Pedro Jocopilas	3
	Santa Cruz Del Quiché	1
	Uspantán	1
	TOTAL	25
	SOLOLA	San Antonio Palopo
San Juan La Laguna		1
Santa Catarina Ixtahuacán		1
Santa Catarina Ixtahuacán Boca Costa		6
Santa Cruz La Laguna		2
Solola		1
TOTAL		13

2.1.4 Medical record extraction

The health facility survey included a review of 2,895 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 reviewed at the basic and complete level of facility.

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

Medical records	Ambulatory	Basic	Complete	Total
Antenatal care	423	166	54	643
Delivery	0	287	131	418
Postpartum	0	286	131	417
Maternal complications	0	197	220	417
Neonatal complications	0	210	231	441
Growth	370	149	40	559
Total	793	1295	807	2895

2.1.5 Referrals

In response to the question, “Do you usually receive referred patients from another health facility?” 23.1% of ambulatory facilities, 87.5% of basic facilities, and all 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 governed by the Ministry of Health (Ministerio de Salud).

2.2 Basic infrastructure

2.2.1 Electricity and Water

All basic and complete health units and 89.7% of ambulatory units had functional electricity. Of the ambulatory health units that had functional electricity, 45.7% used a central electricity supply and 37.1% used a private supply. None of the evaluated ambulatory facilities owned an in-facility generator. In basic units, 62.5% used a central electricity supply and 18.8% used a private supply, while in hospitals 60% used central electricity and 40% used an in-facility generator. Those facilities that reported using an “other source” of electricity tended to name a local company or other non-municipal source of electricity.

Of all ambulatory facilities, the majority (74.4%) had water piped into the facility. Most basic and facilities reported having water piped into the facility (81.3%), while the majority of complete facilities used a facility well for water (80%).

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	39	89.7	4.9	16	100		5	100	
Source of electricity									
Central supply (Comisión Federal de Electricidad)	35	45.7	8.4	16	62.5	12.1	5	60	21.9
Private supply	35	37.1	8.2	16	18.8	9.8	5	0	
In-facility generator	35	0		16	6.3	6.1	5	40	21.9
Solar generator	35	2.9	2.8	16	0		5	0	
Other source	35	20	6.8	16	25	10.8	5	40	21.9
Source of water									
Piped into facility	39	74.4	7.0	16	81.3	9.8	5	40	21.9
Public well	39	0		16	0		5	0	
Facility well	39	2.6	2.5	16	6.3	6.1	5	80	17.9
Unprotected well	39	0		16	0		5	0	
Hand pump	39	2.6	2.5	16	0		5	0	
Bottled water	39	0		16	0		5	20	17.9
Tanker truck	39	0		16	6.3	6.1	5	20	17.9
Rain water	39	12.8	5.3	16	0		5	0	
Other	39	23.1	6.8	16	18.8	9.8	5	20	17.9

2.2.2 Internet access

Only 18.3% of facilities had access to the internet. More specifically, no ambulatory facilities, 37.5% of basic facilities, and 100% of complete facilities had internet access.

2.2.3 Report generation

CAP and CAIMI health facilities were evaluated on their ability to access data and generate regular reports on immunization as well as maternal, newborn, and child care. During the observation checklist component of the survey, interviewers observed the presence of graphs or analysis on maternal and neonatal health topics in designated situational rooms. Municipal Health Districts meet the indicator if they have available at least one graph or analysis on maternal care and neonatal care and at least one graph or analysis on infant care. In total, 93.8% of Municipal Health Districts met the requirements for this indicator.

Table 2.2.3 Municipal Health District report generation

BASIC EONC			
	N	%	SE
At least one graph or analysis on infant care	16	100	
Graph or analysis on vaccination coverage	16	100	
Graph or analysis on micronutrient supplementation	16	87.5	8.3
At least one graph or analysis on maternal and neonatal care	16	93.8	6.1
Graph or analysis on distribution of family planning methods	16	93.8	6.1
Graph or analysis on coverage of prenatal care	16	93.8	6.1
Graph or analysis on coverage of birth	16	87.5	8.3
Graph or analysis on coverage of postpartum care	16	87.5	8.3
Graph or analysis on community visits	16	43.8	12.4

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 0.2 health promoters, 0.6 nurses, 2 auxiliary nurses, and 0.7 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 was 1 general physician, 2.5 nurses, 5.5 auxiliary nurses, 0.5 laboratory technicians, and 0.3 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	35	0	0.2	4	1	
Pediatrician	35	0		4	0	
Nutritionist	35	0		4	0	
Pharmacist	35	0		4	0	
Nurse	35	0.6	0.6	4	2.5	2.4
Auxiliary nurse	35	2	1.0	4	5.5	5.9
Midwife	35	0.7	2.2	4	0	
Social worker	35	0		4	0.3	0.5
Laboratory technician	35	0		4	0.5	0.6
Health promoter	35	0.2	0.6	4	0	
Other	35	0.4	1.1	4	0.5	0.6

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	DK/DR
General physician	16	0.9	0.3	5	1		
Pediatrician	16	0.2	0.4	5	0.8	0.4	
Nutritionist	16	0		5	0.8	0.4	
Pharmacist	16	0.1	0.3	5	0.6	0.6	
Nurse	16	1		5	1		
Auxiliary nurse	16	1		4	1		1
Midwife	16	0.2	0.4	5	0.2	0.4	
Social worker	16	0.1	0.3	5	1		
Laboratory technician	16	0.8	0.4	5	1		
Health promoter	16	0.1	0.3	5	0		
Internist	16	0		5	2.4	1.1	
Gynecologist	16	0.3	0.8	5	4.2	2.5	
Surgeon	16	0		5	2.8	2.2	
Anesthesiologist	16	0		5	2.2	1.9	
Emergency medical technician	16	0		4	0		1
Radiology technician	16	0.1	0.5	5	3.4	2.5	
Ambulance driver/polyvalent	16	2.3	1.6	5	4.6	2.1	
Other specialties	12	0.8	0.4	4	1		

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. Most 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	39	94.9	3.5	16	100		5	60	21.9
Unit vaccinates children under 5	39	100		16	100		5	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. One ambulatory and one basic facility are missing data regarding child care inputs and are therefore excluded from these tables.

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	38	63.2	7.8	15	13.3	8.8	5	60	21.9
All pharmacy inputs observed on the day of the survey	38	68.4	7.5	15	86.7	8.8	5	100	
No stock out of pharmacy inputs in the previous 3 months	38	47.4	8.1	15	40	12.6	5	80	17.9
Continuous availability of vaccines**	32	6.3	4.3	15	0		5	0	
Meets all criteria listed above	38	2.6	2.6	15	0		5	0	

*Equipment data not available in 2 facilities and therefore these are excluded from the indicator

**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 Child health care equipment in ambulatory facilities

According to indicator 7010, ambulatory facilities should have at least one observed and functional of the following equipment: standing balance/scale for children, tallimeter, stethoscope, and thermometer. Ambulatory facilities with a doctor were also required to have a pediatric stethoscope. In total, 63.1% of ambulatory facilities met these requirements.

Table 3.3.1a Child health care equipment observed and functional in ambulatory facilities without a doctor

AMBULATORY WITHOUT DOCTOR			
	N*	%	SE
Standing balance/scale for children	34	97.1	2.9
Tallimeter	34	88.2	5.5
Stethoscope	34	91.2	4.9
Oral/Axillary thermometer	34	88.2	5.5
All equipment observed and functional	34	70.6	7.8

*Child care equipment data unavailable for one facility

Table 3.3.1b Child health care equipment observed and functional in ambulatory facilities with a doctor

AMBULATORY WITH DOCTOR			
	N	%	SE
Standing balance/scale for children	4	100	
Tallimeter	4	100	
Stethoscope	4	100	
Pediatric stethoscope	4	0	
Oral/Axillary thermometer	3*	100	
All equipment observed and functional	4	0	

*During data collection, Cenapas were misclassified as basic units and were not asked about an oral/axillary thermometer.

3.3.2 Child health care equipment in basic and complete facilities

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

While most basic and complete units were equipped with height and weight measurement equipment, the overall percentage of facilities that met all requirements is driven down by the fact that each health unit tended to be missing a different input. This means that the low percentage meeting the indicator cannot be attributed to the lack of any individual input.

Table 3.3.2a Child health care equipment observed and functional in basic level health facilities

BASIC EONC LEVEL			
	N*	%	SE
Standing balance/scale for children	15	93.3	6.4
Pediatric scale	15	73.3	11.4
Tallimeter	15	86.7	8.8
Pediatric tensiometer	15	26.7	11.4
Pediatric stethoscope	15	26.7	11.4
All equipment observed and functional	15	13.3	8.8

*Child care equipment data unavailable for one facility

Table 3.3.2b Child health care equipment observed and functional in complete level health facilities

COMPLETE EONC LEVEL			
	N	%	SE
Standing balance or scale for children	5	100	
Pediatric scale	5	80	17.9
Tallimeter	5	100	
Pediatric tensiometer	5	60	21.9
Pediatric stethoscope	5	60	21.9
All equipment observed and functional	5	60	21.9

3.4 Important drugs and supplements

Interviewers also observed the availability and stock of important drugs and supplements used for basic child health care in the pharmacy section, namely packets or envelopes of oral rehydration salts (ORS), ferrous sulfate drops/micronutrients, zinc sulfate/zinc gluconate, and albendazole/mebendazole.

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 facility level.

Most ambulatory facilities without a doctor had availability of ferrous sulfate (100%), ORS (80%), zinc sulfate or gluconate (88.6%), and either albendazole or mebendazole (97.1%) on the day of the survey. When taking into account the availability of these pharmacy inputs in the previous three months, about one-half of ambulatory facilities without a doctor surveyed had continuous availability of all of these inputs. In ambulatory facilities with a doctor, only zinc sulfate or gluconate was missing in one facility, and 50% had continuous availability of all necessary inputs in the previous three months.

Table 3.4.1a Child health care observed drugs and supplements in ambulatory facilities without a doctor

AMBULATORY WITHOUT DOCTOR			
Availability on the day of the survey	N	%	SE
Packets/Envelopes of oral rehydration salt	35	80	6.8
Ferrous sulfate drops/Micronutrients	35	100	
Zinc sulfate/Zinc gluconate	35	88.6	5.4
Albendazole/Mebendazole	35	97.1	2.8
All drugs available on the day of the survey	35	68.6	7.8
All drugs available with no stockouts in past three months	35	48.6	8.4

Table 3.4.1b Child health care observed drugs and supplements in ambulatory facilities with a doctor

AMBULATORY WITH DOCTOR			
Availability on the day of the survey	N	%	SE
Packets / Envelopes of oral rehydration salt	4	100	
Ferrous sulfate drops / Micronutrients	4	100	
Zinc sulfate / Zinc gluconate	4	75	21.7
Albendazole / Mebendazole	4	100	
Antibiotics*	4	100	
All drugs available on the day of the survey	4	75	21.7
All drugs available with no stockouts in past three months	4	50	25

*Erythromycin, amoxicilin, or pencilin benzathine

In basic facilities, ORS, zinc sulfate/gluconate and isotonic solutions were not observed in all facilities. When considering the stock out in the past three months, 43.8% of basic facilities met necessary availability.

All required child care drugs and supplements were observed in 100% of complete-level facilities. When considering the stock out in the past three months, 80% of complete facilities met necessary availability.

Table 3.4.2a Child health care observed drugs and supplements in basic facilities

BASIC EONC LEVEL			
Availability on the day of the survey	N	%	SE
Packets / Envelopes of oral rehydration salt	16	93.8	6.1
Ferrous sulfate drops/ Micronutrients	16	100	
Zinc sulfate / Zinc gluconate	16	93.8	6.1
Albendazole / Mebendazole	16	100	
Antibiotics*	16	100	
Ringer lactate/ Hartman solution/ Saline solution	16	93.8	6.1
All drugs available on the day of the survey	16	87.5	8.3
All drugs available with no stockouts in past three months	16	43.8	12.4

*Erythromycin, amoxicilin, or pencilin benzathine

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

COMPLETE EONC LEVEL			
Availability on the day of the survey	N	%	SE
Packets / Envelopes of oral rehydration salt	5	100	
Ferrous sulfate drops / Micronutrients	5	100	
Zinc sulfate / Zinc gluconate	5	100	
Albendazole / Mebendazole	5	100	
Antibiotics*	5	100	
Ringer lactate/ Hartman solution/ Saline solution/ Dextrose	5	100	
All drugs available on the day of the survey	5	100	
All drugs available with no stockouts in past three months	5	80	17.9

*Erythromycin, amoxicilin, or pencilin benzathine

3.5 Education material

Table 3.5.1 lists some education material observed as either cards to be given to caretakers or as illustrations hung on facility 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	38	89.5	5.0	15	66.7	12.2	5	100	
Printed materials on danger signs and symptoms in children	38	94.7	3.6	15	80	10.3	5	100	

3.6 Child growth monitoring

According to the indicator related to child growth monitoring, records of children aged 0-23 months should have record of weight and height measurements and counseling during their most recent visit in 2014. In the medical record review portion of the survey, records of children 0-23 months were selected systematically from the book “Weight and Height” Growth Monitoring (Monitoreo del Crecimiento “Peso y Longitud”) and reviewed.

Facilities generally performed well on this indicator, with the majority of records containing information about the child’s height and weight, and most records containing information about counseling given during the child’s visit (Tables 3.6.1a-3.6.1c).

Table 3.6.1a Child growth monitoring in ambulatory facilities

AMBULATORY EONC			
	N	%	SE
Weight recorded	360	99.7	0.3
Height recorded	360	99.7	0.3
Counseling recorded	360	64.4	2.5
Indicator 8610	360	64.4	2.5

Table 3.6.1b Child growth monitoring in basic facilities

BASIC EONC			
	N	%	SE
Weight Recorded	149	100	
Height Recorded	149	99.3	0.7
Counseling Recorded	149	59.1	4
Indicator 8610	149	59.1	4

Table 3.6.1c Child growth monitoring in complete facilities

COMPLETE EONC			
	N	%	SE
Weight Recorded	40	100	
Height Recorded	40	100	
Counseling Recorded	40	100	
Indicator 8610	40	100	

Chapter 4 VACCINES

4.1 Vaccination services

When asked about vaccination services, all health facilities reported that they do vaccinate children. Interviewers observed and recorded the setting of the room used for immunization; while most basic level facilities provide a private room with visual and auditory privacy, 17.9% of ambulatory health facilities and 20% of complete facilities offer no privacy during immunization (Table 4.1.1).

Table 4.1.1 Vaccination services

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Unit vaccinates children under 5	39	100		16	100		5	100	
Immunization room									
Private room with visual and auditory privacy	39	71.8	7.2	16	87.5	8.3	5	80	17.9
Non-private room without auditory nor visual	39	2.6	2.5	16	6.3	6.1	5	0	
Visual privacy only	39	5.1	3.5	16	0		5	0	
No privacy	39	17.9	6.2	16	6.3	6.1	5	20	17.9
Other	39	2.6	2.5	16	0		5	0	

4.2 Vaccine logistics

4.2.1 Storage

In the questionnaire component of the survey, interviewers asked facility representatives about vaccine storage. Among ambulatory facilities, 87.2% of the units store vaccines in facility, and all basic facilities report storing vaccines within the facility. Four out of five hospitals store vaccines, and one out of five have vaccines delivered when vaccination 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	39	87.2	5.3	16	100		5	80	17.9
Picked up from another facility	39	7.7	4.3	16	0		5	0	
Delivered when services are being provided	39	5.1	3.5	16	0		5	20	17.9
None of the above	39	0		16	0		5	0	

4.2.2 Demand and supply

Facilities that store vaccines were asked logistical questions about the supply and demand of vaccines. All 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			Complete		
	N	%	SE	N	%	SE	N	%	SE
Ordering Strategy									
Determines own needs	34	100		16	100		4	100	
Need determined elsewhere	34	0		16	0		4	0	
Both(differ by vaccine)	34	0		16	0		4	0	
Quantity to order strategy									
Order same amount	34	100		16	100		4	100	
Different per vaccine	34	0		16	0		4	0	
Time to order strategy									
Fixed time, > once/week	34	82.4	6.5	16	75	10.8	4	75	21.6
Fixed time, < once/week	34	0		16	0		4	25	21.6
Order when needed	34	17.6	6.5	16	25	10.8	4	0	
Time to receive supplies									
< 1 week	34	88.2	5.5	16	87.5	8.3	4	100	
1-2 weeks	34	11.8	5.5	16	12.5	8.3	4	0	
> 2 weeks	34	0		16	0		4	0	
Reception of quantity ordered									
Always	33	18.2	6.7	16	6.3	6.1	4	25	21.6
Almost always	33	51.5	8.7	16	68.8	11.6	4	75	21.6
Almost never	33	30.3	8.0	16	25	10.8	4	0	
DK/DR	1								

4.3 Vaccines observed

Tables 4.3.1a-c indicate 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 (if the facility stores vaccines).

Table 4.3.1a Vaccine stocks observed in ambulatory facilities

AMBULATORY EONC LEVEL			
Vaccine type	N*	%	SE
Pentavalent**/(HepB + DPT)	33	87.9	5.7
Polio	33	27.3	7.8
MMR**	33	63.6	8.4
Rotavirus	33	72.7	7.8
Pneumococcal conjugate	33	42.4	8.6
BCG	33	18.2	6.7

*Includes only facilities that store vaccines
 **Pentavalent = DPT + HepB + Hib; MMR = Measles + Mumps + Rubella

Table 4.3.1b Vaccine stocks observed in basic facilities

BASIC EONC LEVEL			
Vaccine type	N	%	SE
Pentavalent**/(HepB + DPT)	16	100	
Polio	16	31.3	11.6
MMR*	16	75	10.8
Rotavirus	16	68.8	11.6
Pneumococcal conjugate	16	50	12.5
BCG	16	12.5	8.3

*Pentavalent = DPT + HepB + Hib; MMR = Measles + Mumps + Rubella

Table 4.3.1c Vaccine stocks observed in complete facilities

COMPLETE EONC LEVEL			
Vaccine type	N	%	SE
Pentavalent*/(HepB + DPT)	5	80	17.9
Polio	5	20	17.9
MMR*	5	80	17.9
Rotavirus	5	60	21.9
Pneumococcal conjugate	5	0	
BCG	5	0	

*Pentavalent = DPT + HepB + Hib; 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 Vaccine storage and thermometer availability

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Storage									
Electric fridge	35	97.1	2.8	16	100		5	100	
Kerosene fridge	35	0		16	0		5	0	
Gas fridge	35	0		16	0		5	0	
Solar fridge	35	0		16	0		5	0	
Cold box	35	88.6	5.4	16	93.8	6.1	5	100	
Any of the above	35	97.1	2.8	16	100		5	100	
Thermometers									
Digital thermometers	34	44.1	8.5	16	56.3	12.4	5	60	21.9
Alcohol thermometers	33	15.2	6.2	16	43.8	12.4	5	40	21.9
Other thermometers	21	42.9	10.8	9	44.4	16.6	1	100	
Any of the above	34	76.5	7.3	16	81.3	9.8	5	100	

Chapter 5 FAMILY PLANNING

5.1 Service provision and storage

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 health facilities reported providing family planning services in-facility, and all facilities store contraceptives, with the exception of one ambulatory facility (Tables 5.1.1-5.1.2). Interviewers recorded the setting of the room used for family planning services, finding that the majority of facilities offer rooms with visual and auditory 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	39	100		16	100		5	100	
FP room									
Private room with visual and auditory privacy	39	71.8	7.2	16	100		5	80	17.9
Non-private room without auditory nor visual privacy	39	2.6	2.5	16	0		5	0	
Visual privacy only	39	5.1	3.5	16	0		5	20	17.9
No privacy	39	17.9	6.2	16	0		5	0	
Other	39	2.6	2.5	16	0		5	0	

Table 5.1.2 Family planning (FP) storage

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
FP Storage									
Yes, stores contraceptives	39	97.4	2.5	16	100		5	100	
No, delivered when services are being provided	39	2.6	2.5	16	0		5	0	

5.2 Observed contraception methods and reported family planning services

5.2.1 Observed contraception methods and reported family planning services in ambulatory facilities

Table 5.2.1 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 are injectables and the male condom. The table also shows reported availability of pregnancy tests; half of all ambulatory units offer these.

Table 5.2.1 Observed contraception methods and reported services in ambulatory facilities

	Ambulatory without doctor			Ambulatory with doctor		
	N	%	SE	N	%	SE
Observed FP methods						
Any pill	34	76.5	7.3	4	75	21.6
Combined oral pill	34	73.5	7.6	4	75	21.6
Progestin only pill	34	5.9	4.0	4	0	
Any injectable	34	97.1	2.9	4	100	
Combined injectable (1 month)	34	58.8	8.4	4	75	21.6
Progestin only injectable (3 months)	34	91.2	4.9	4	50	25.0
Male condom	34	91.2	4.9	4	75	21.6
IUD*	34	8.8	4.9	4	25	21.6
Reported services						
Offers pregnancy test	34	50	8.6	4	50	25.0

*Intrauterine device

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

Table 5.2.2 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 injectables and male condoms. Progestin-only pills were missing at all complete-level facilities.

In terms of reported family planning services, all hospitals were able to offer pregnancy tests and perform IUD insertion and voluntary sterilization for women. Four out of five hospitals were able to provide vasectomies. In basic level facilities, 78.6% offer pregnancy tests and 64.3% can offer IUD insertion, but few facilities are able to provide male or female sterilization.

Though all 16 basic-level facilities responded during the interview that they store contraceptives, only 14 basic facilities were able to show the interviewer the area where contraceptives are stored.

Table 5.2.2 Observed contraception methods and reported services in basic and complete facilities

	Basic			Complete		
	N	%	SE	N	%	SE
Observed FP methods						
Any pill	14	85.7	9.4	5	80	17.9
Combined oral pill	14	78.6	11.0	5	80	17.9
Progestin only pill	14	21.4	11.0	5	0	
Any injectable	14	100		5	100	
Combined injectable (1 month)	14	92.9	6.9	5	100	
Progestin only injectable (3 months)	14	92.9	6.9	5	100	
Male condom	14	100		5	100	
IUD*	14	71.4	12.1	5	100	
IUD insertion kit	14	71.4	12.1	5	100	
Reported services						
Offers pregnancy tests	14	78.6	11.0	5	100	
Trained doctor to perform IUD insertion	14	64.3	12.8	5	100	
Trained doctor to perform tubal ligation	14	14.3	9.4	5	100	
Trained doctor to perform vasectomy	14	0		5	80	17.9

*Intrauterine device

5.3 Composite family planning indicator

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.

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, and IUD.

Ambulatory and basic-level facilities tended to stock male condoms and injectables, but in general, facilities tended not to have three months' stock of all necessary family planning methods. 71.1% of ambulatory facilities, 64.3% of basic facilities, and 80% of complete facilities had all required methods on the day of the survey, but only about 30% of all facilities had continuous availability of required family planning methods. The components of this indicator are further detailed by facility classification in Tables 5.3.1a-5.3.1c.

Table 5.3.1a Composite family planning indicator in ambulatory facilities

AMBULATORY EONC			
	N	%	SE
Male condom	38	89.5	5
Any pill	38	76.3	6.9
Any injectable	38	97.4	2.6
Availability of all above methods on the day of the survey	38	71.1	7.4
Continuous availability of all methods in the previous three months*	38	31.6	7.5

* Includes availability on the day of the survey

Table 5.3.1b Composite family planning indicator in basic facilities

BASIC EONC			
	N	%	SE
Male condom	14	100	
Any pill	14	85.7	9.4
Any injectable	14	100	
IUD	14	71.4	12.1
Availability of all above methods on the day of the survey	14	64.3	12.8
Continuous availability of all methods in the previous three months*	14	35.7	12.8

* Includes availability on the day of the survey

Table 5.3.1c Composite family planning indicator in complete facilities

COMPLETE EONC			
	N	%	SE
Male condom	5	100	
Any pill	5	80	17.9
Any injectable	5	100	
IUD	5	100	
Availability of all above methods on the day of the survey	5	80	17.9
Continuous availability of all methods in the previous three months*	5	0	

* Includes availability on the day of the survey

5.4 Teaching and awareness

Table 5.4.1 illustrates the percent of facilities that promote family planning through counseling, teaching, and educational graphics in the local language posted in the facility. Posters were only sought out in facilities whose contraceptive methods were available for observation by the interviewers.

Table 5.4.1 Teaching and awareness on family planning and STIs

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Individual FP counseling	39	100		16	100		5	100	
Group FP counseling	39	100		16	100		5	100	
FP posters on walls of facility	38	84.2	5.9	14	85.7	9.4	5	100	
STI/HIV posters on walls of facility	38	68.4	7.5	14	85.7	9.4	5	100	

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 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	35	100		4	100	
ANC room						
Private room with auditory and visual privacy	35	91.4	4.7	4	100	
Non-private room without auditory nor visual privacy	35	0		4	0	
Visual privacy only	35	8.6	4.7	4	0	
No privacy	35	0		4	0	

All basic and complete level facilities reported offering antenatal, delivery, and postpartum care services. Interviewers observed private rooms with auditory and visual privacy for these services in all basic and complete facilities (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	16	100		5	100	
Offers routine delivery services (non-urgent)	16	100		5	100	
Offers PPC services	16	100		5	100	
ANC - PPC room						
Private room with auditory and visual privacy	16	100		5	100	
Non-private room without auditory nor visual	16	0		5	0	
Visual privacy only	16	0		5	0	
No privacy	16	0		5	0	
Delivery room						
Private room with auditory and visual privacy	16	100		5	100	
Non-private room with neither auditory nor visual privacy	16	0		5	0	
Visual privacy only	16	0		5	0	
No privacy	16	0		5	0	

6.2 ANC - PPC equipment

Tables 6.2.1-6.2.3 indicate the percentage of facilities where a surveyor observed functional ANC and PPC equipment 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, interviewers are required to observe at least one functional piece of the following equipment: standing scales + gynecological exam table + obstetric tape + gooseneck or hand lamp + sphygmomanometer + stethoscope + perinatal maternal medical history.

6.2.1 ANC - PPC equipment in ambulatory facilities

In total, 30.8% of all ambulatory level facilities met the criteria listed above. This is further detailed by ambulatory facilities that do and do not have a doctor on staff in Tables 6.2.1a-6.2.1b.

Table 6.2.1a Observed and functional ANC - PPC equipment in ambulatory facilities without a doctor

AMBULATORY WITHOUT DOCTOR			
Equipment type	N	%	SE
Standing scale with height rod/(scale + height rod)	35	80	6.8
Gynecological exam table	35	74.3	7.4
Measuring tape	35	80	6.8
Gooseneck lamp/ hand lamp	35	68.6	7.8
Sphygmomanometer	35	82.9	6.4
Stethoscope	35	85.7	5.9
Perinatal maternal medical history	35	97.1	2.8
All equipment observed and functional	35	28.6	7.6

Table 6.2.1b Observed and functional ANC - PPC equipment in ambulatory facilities with a doctor

AMBULATORY WITH DOCTOR			
Equipment type	N	%	SE
Standing scale with height rod/(scale + height rod)	4	100	
Gynecological exam table	4	75	21.7
Measuring tape	4	75	21.7
Gooseneck lamp/hand lamp	4	75	21.7
Sphygmomanometer	4	100	
Stethoscope	4	100	
Perinatal maternal medical history	4	100	
All equipment observed and functional	4	50	25

6.2.2 ANC - PPC equipment in basic and complete facilities

All hospitals and a quarter of basic facilities had the necessary functional equipment on the day of the survey. Tables 6.2.2a-6.2.2b detail the percentage of basic and complete facilities where specific ANC and PPC equipment was observed and functional.

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

BASIC EONC LEVEL			
Equipment type	N	%	SE
Standing scale with height rod/(scale + height rod)	16	50	12.5
Gynecological exam table	16	81.3	9.8
Measuring tape	16	75	10.8
Gooseneck lamp/hand lamp	16	68.8	11.6
Sphygmomanometer	16	68.8	11.6
Stethoscope	16	93.8	6.1
Perinatal maternal medical history	16	93.8	6.1
All equipment observed and functional	16	25	10.8

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

COMPLETE EONC LEVEL			
Equipment type	N	%	SE
Standing scale with height rod/(scale + height rod)	5	100	
Gynecological exam table	5	100	
Measuring tape	5	100	
Gooseneck lamp/hand lamp	5	100	
Sphygmomanometer	5	100	
Stethoscope	5	100	
Perinatal maternal medical history	5	100	
Perinatal maternal card	5	100	
All equipment observed and functional	5	100	

6.3 ANC - PPC laboratory inputs

6.3.1 ANC - PPC laboratory inputs in ambulatory facilities

Certain laboratory inputs needed for antenatal and postpartum care were observed in facilities that had a lab. Ambulatory units with a doctor were required to have a rapid test for glycemia, which was unavailable in the only facility with a lab that was surveyed.

Table 6.3.1 Laboratory inputs in ambulatory facilities

AMBULATORY WITH DOCTOR			
Laboratory inputs	N	%	SE
Rapid glycemia test	1	0	
Availability of all lab inputs	1	0	

6.3.2 ANC - PPC laboratory inputs in basic and complete facilities

The lab equipment required for ANC and PPC services in basic level facilities that provide lab services are as follows: centrifuge; test tubes; glucometer/blood glucose strips; hemocue and microcuvettes, or equipment for traditional hematocrit method; sharps guards; and lab reagents for hemoglobin and blood glucose. 16.7% of basic level facilities met these criteria (Table 6.3.2a).

In complete level facilities, the lab equipment requirements are as follows: microscope; centrifuge; test tubes; glucometer; hematology equipment; basic blood chemistry equipment; equipment for STI tests; and lab reagents for hemoglobin and blood glucose. Table 6.3.2b shows that only 40% of complete facilities met all requirements for the indicator; however, the only missing requirements were hematology equipment (present in 80% of facilities) and lab reagents (present in 60% of facilities).

Table 6.3.2a Laboratory inputs in basic facilities

BASIC EONC LEVEL			
Laboratory inputs	N	%	SE
Centrifuge	12	91.7	8.3
Test tubes	12	100	
Glucometer or blood glucose strips	12	100	
(Hemocue + microcuvettes) or (Capillary and measuring rule for traditional hematocrit method)	12	58.3	14.9
Sharps guards	12	75	13.1
Lab reagents (hemoglobin and blood glucose)	12	41.7	14.9
Availability of all lab inputs	12	16.7	11.2

Table 6.3.2b Laboratory inputs in complete facilities

COMPLETE EONC LEVEL			
Laboratory inputs	N	%	SE
Microscope	5	100	
Centrifuge	5	100	
Test tubes	5	100	
Glucometer	5	100	
Hematology equipment*	5	80	20
Basic blood chemistry (Creatinine, N urea)	5	100	
Equipment for STI tests (syphilis + HIV + VDRL)**	5	100	
Lab reagents (hemoglobin and blood glucose)	5	60	24.5
Availability of all lab inputs	5	40	24.5

*Automized or traditional hematologic measurement or (equipment for platelet, white blood cell, and red blood cell count + equipment for prothrombin and thromboplastin time)

**Includes microscope, enzyme immunoassay, and VDRL test

6.4 ANC - PPC medications

Tables 6.4.1 - 6.4.4 indicate the percentage of facilities that had availability of specific medications at the time of the survey and 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.

6.4.1 ANC - PPC medications in ambulatory facilities

Ambulatory 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)/multivitamin + tetanus vaccine (if the facility stores vaccines).

Table 6.4.1a ANC - PPC pharmacy inputs in ambulatory facilities without a doctor

AMBULATORY WITHOUT DOCTOR			
Pharmacy inputs	N	%	SE
(Iron + Folic acid)/Multivitamin	35	97.1	2.8
Tetanus vaccine*	31	74.2	7.9
All drugs available on the day of the survey	35	74.3	7.4
Continuous availability in the previous three months	35	42.9	8.4

*Only in facilities that store vaccines

Table 6.4.1b ANC - PPC pharmacy inputs in ambulatory facilities with a doctor

AMBULATORY WITH DOCTOR			
Pharmacy inputs	N	%	SE
(Iron + Folic acid)/Multivitamin	4	100	
Tetanus vaccine*	3	100	
All drugs available on the day of the survey	4	100	
Continuous availability in the previous three months	4	25	21.7

*Only in facilities that store vaccines

6.4.2 ANC - PPC medications in basic and 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)/multivitamin + tetanus vaccine (if the facility stores vaccines). The percentage of facilities that had each of these components is detailed by facility level classification in Tables 6.4.2a-6.4.2b.

Table 6.4.2a ANC - PPC pharmacy inputs in basic facilities

BASIC EONC LEVEL			
Pharmacy inputs	N	%	SE
(Iron + Folic acid)/Multivitamin	16	87.5	8.3
Tetanus vaccine	16	75	10.8
All drugs available on the day of the survey	16	75	10.8
Continuous availability in the previous three months	16	31.3	11.6

Table 6.4.2b ANC - PPC pharmacy inputs in complete facilities

COMPLETE EONC LEVEL			
Pharmacy inputs	N	%	SE
(Iron + Folic acid)/Multivitamin	5	80	17.9
Tetanus vaccine*	5	100	
All drugs available on the day of the survey	5	80	17.9
Continuous availability in the previous three months	5	60	21.9

*Only in facilities that store vaccines

6.5 ANC medical record review

6.5.1 Antenatal care according to the norm for births in the past two years

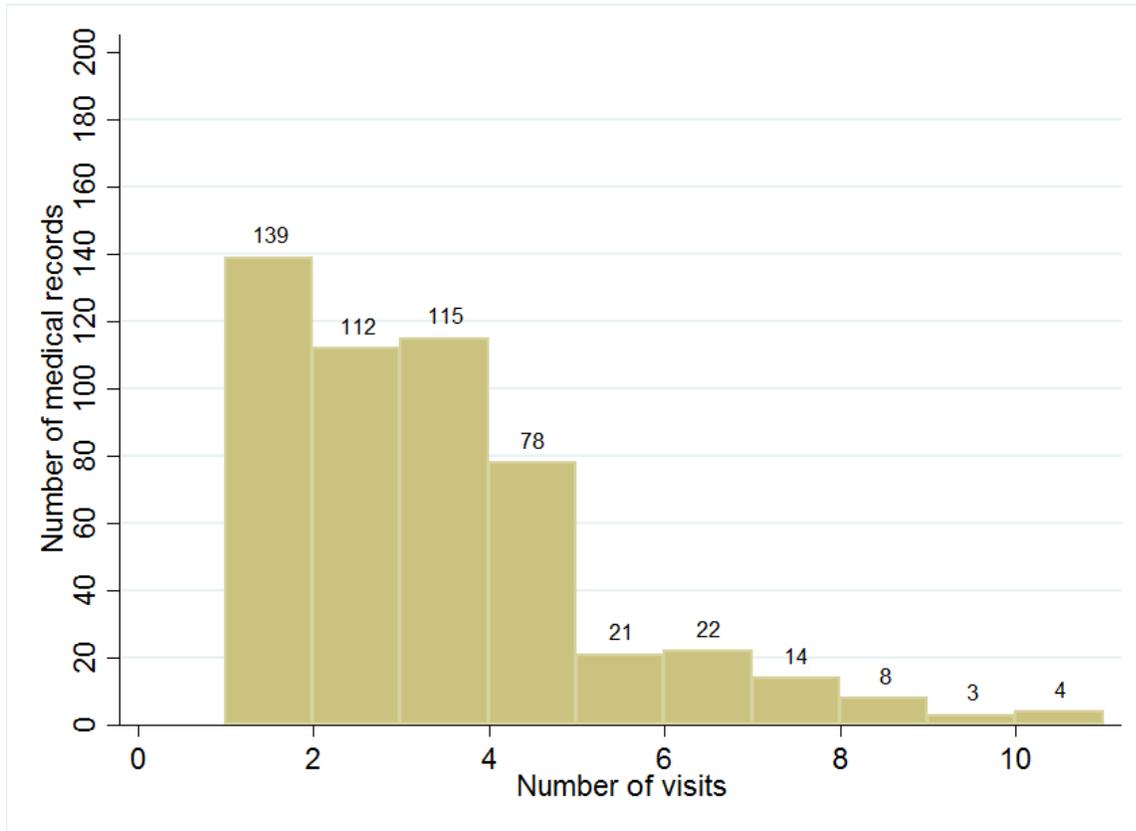
Records of antenatal care were reviewed in all applicable facilities. In order to demonstrate antenatal care according to the standards, each woman must have had at least 4 visits with a doctor or nurse during her pregnancy, and her weight, blood pressure, and fundal height must have been recorded at each visit. In addition, any visit after 20 weeks' gestation must have included a check of fetal heart rate and fetal movement. In order to meet indicator requirements, a variety of laboratory tests must have been performed at least once during the pregnancy, as detailed in Table 6.5.1.

Table 6.5.1 Antenatal care according to the norm for births in the past two years

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
At least 4 ANC visits	317	27.8	2.5	151	27.8	3.7	48	41.7	7.1
At least 4 ANC visits according to the norm	317	9.8	1.7	151	18.5	3.2	48	31.3	6.7
Rh factor	317	37.9	2.7	151	81.5	3.2	48	68.8	6.7
Urinalysis	317	40.4	2.8	151	78.8	3.3	48	81.3	5.6
Blood glucose	317	40.1	2.8	151	82.8	3.1	48	83.3	5.4
Blood group	317	38.2	2.7	151	82.8	3.1	48	68.8	6.7
VDRL	317	41	2.8	151	82.1	3.1	48	81.3	5.6
Hb	317	35.6	2.7	151	73.5	3.6	48	72.9	6.4
Urinalysis	317	16.1	2.1	n/a	n/a	n/a	n/a	n/a	n/a
Platelet count	317	17.4	2.1	n/a	n/a	n/a	n/a	n/a	n/a
HIV	317	41	2.8	n/a	n/a	n/a	n/a	n/a	n/a
Uric acid in blood	317	8.2	1.5	n/a	n/a	n/a	n/a	n/a	n/a
All lab tests performed at least once during pregnancy	317	7.6	1.5	151	69.5	3.8	48	52.1	7.2
Antenatal care given according to the norm	317	2.2	0.8	151	14.6	2.9	48	14.6	5.1

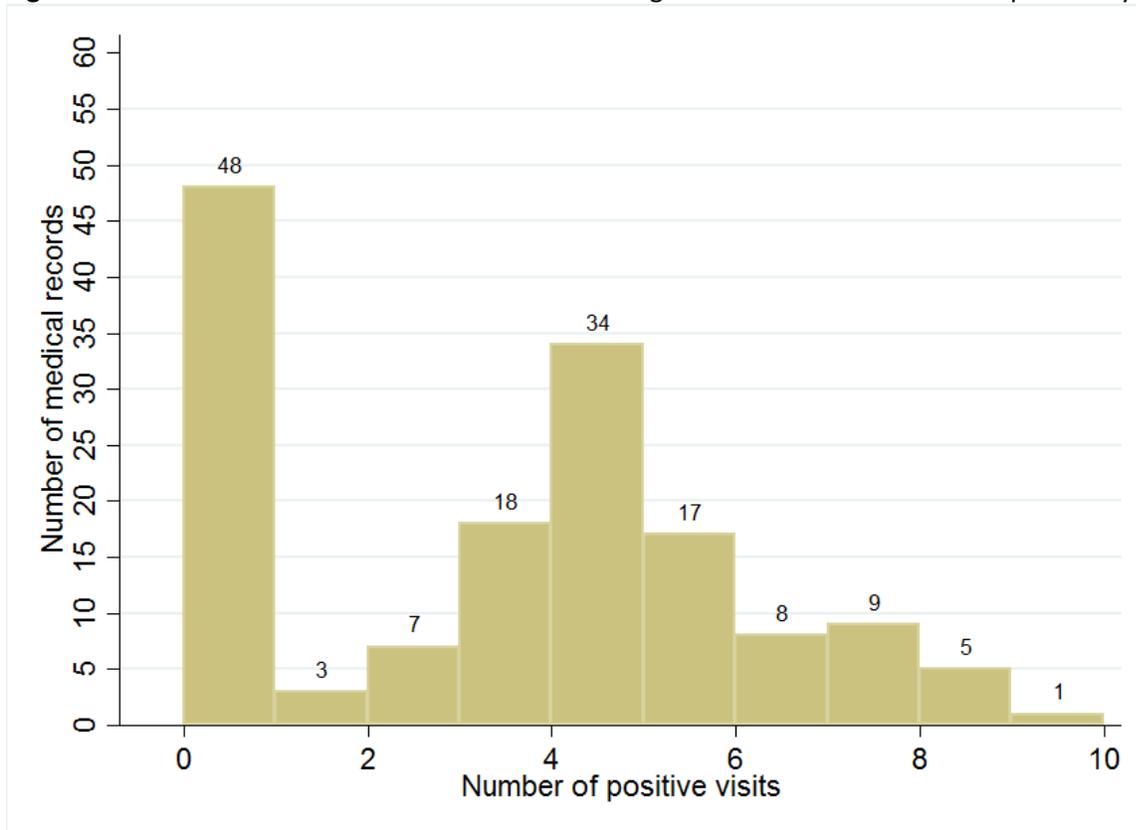
The histogram below (Figure 6.5.1a) displays the number of ANC visits in the medical records reviewed. Of all ANC records reviewed, 26.9% had only one visit, 21.7% had two visits, 22.3% had three visits, and 29.1% had four visits or more.

Figure 6.5.1a Number of antenatal care visits for births in the past two years



The histogram below (Figure 6.5.1b) displays the number of positive ANC visits, excluding the laboratory component, for women who had a minimum of four ANC visits in their medical record. If a woman's visit was positive, it included a doctor/nurse, physical checkups (weight + blood pressure + fundal height), and fetal checkups (if the gestational age was >20 weeks).

Figure 6.5.1b Number of antenatal care visits according to the norm for births in the past two years



*Only women with 4 or more ANC visits are included in this diagram

6.5.2 Antenatal care before twelve weeks gestation in the past two years

For the indicator related to early catchment for antenatal care, a woman's first antenatal care visit must have been with a doctor or nurse and have occurred before 12 weeks' gestation. Gestational age was calculated by subtracting the date of woman's last menstrual period from the date of her first ANC visit. While about half of all records indicated that a doctor or nurse attended the woman's first visit, only 25.1% showed that the woman's first visit occurred within the first trimester. In combination, only 13.4% of all ANC records met both these requirements.

Table 6.5.2 Antenatal care before 12 weeks' gestation in the past two years

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Doctor or nurse attended first ANC visit	355	37.5	2.6	156	64.1	3.8	50	82	5.4
First ANC visit before 12 weeks gestation	355	21.1	2.2	156	33.3	3.8	50	28	6.3
First ANC visit according to the norm	355	8.2	1.5	156	21.2	3.3	50	26	6.2

*Using stated gestational age, 16.7% of all records meet indicator; using calculated gestational age, 13.4% meet indicator

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 managed according to the norm if they are attended by a doctor/nurse/obstetrician/midwife + oxytocin/other uterotonic is administered + partograph is included in the medical record + there is record of cord clamping within 90 seconds. In total, 50.9% of women who gave births in CAPs or CAIMIs were managed according to the standards.

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

Items checked	Basic		
	N	%	SE
Birth attended by doctor/nurse/obstetrician/midwife	287	76.3	2.5
Cord clamping within 90 seconds	287	68.3	2.8
Oxytocin/other uterotonic administration	287	93	1.5
Partograph included in the medical record	287	94.4	1.4
Birth managed according to the norm	287	50.9	3.0

6.6.2 Partograph revision

Delivery records of women who gave birth in hospitals in the previous two years were selected systematically and reviewed. There are three ways in which the indicator was calculated as met:

1. No partograph observed + woman arrived with imminent birth or elected C-section
2. Partograph observed and filled out + Fetal Heart Rate (FHR) and alert curve recorded if dilation was greater than 4.5 cm + nothing further required if FHR > 120 beats per minute (bpm) or alert curve was not surpassed
3. Partograph observed and filled out + Fetal Heart Rate (FHR) and alert curve recorded if dilation was greater than 4.5 cm + a note within 30 minute if FHR < 120 beats per minute (bpm) or alert curve was surpassed.

Table 6.6.2 details the findings of partograph record review in hospitals.

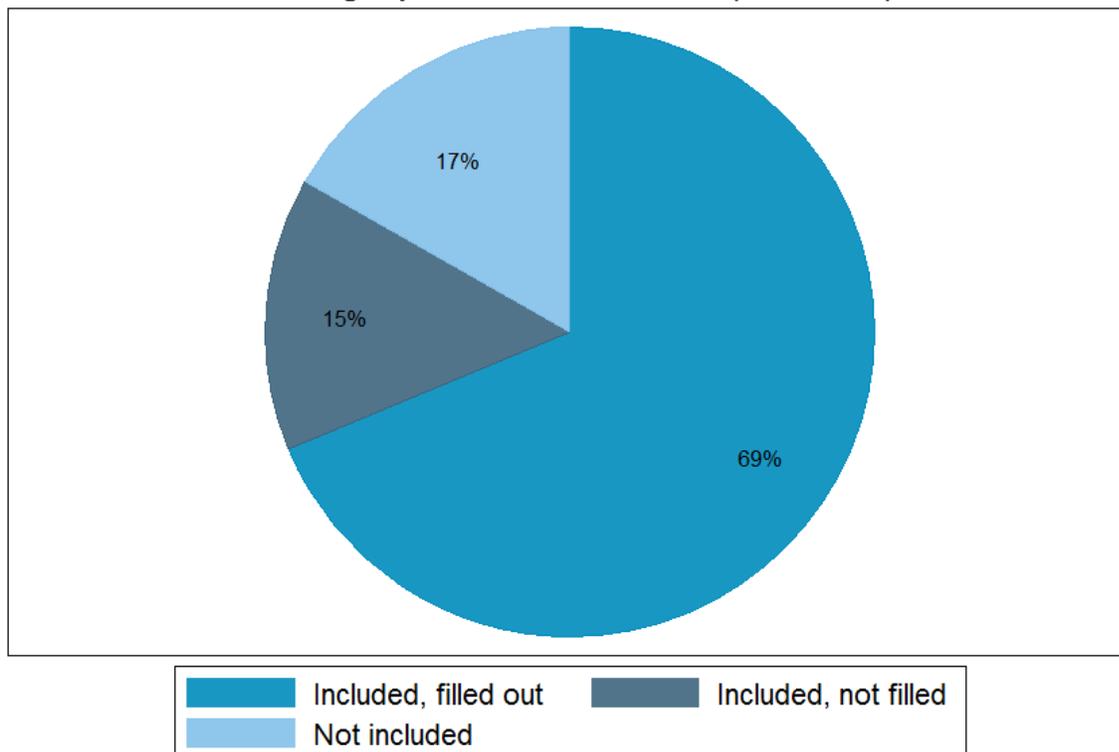
Table 6.6.2 Partograph revision

Partograph revision in Hospitals	Complete		
	N	%	SE
Partograph included and filled out or woman arrived in imminent birth or elective C-section	131	90.1	2.6
Women with dilation > 4.5 cm	90	74.4	4.6
Fetal heart rate and alert curve are recorded if dilation > 4.5 cm	67	92.5	3.2
Women with alert curve surpassed	90	21.1	4.3
There exists a note within 30 minutes if alert curve surpassed	19	5.3	5.1
Fetal heart rate < 120 bpm	90	10.0	3.2
There exists a note within 30 minutes if FHR < 120 bpm	9	0	
Partograph according to the norm	131	71.8	3.9

Figure 6.6.2 indicates that 88% of delivery records had a partograph included and filled out. Accounting for women who arrived in imminent birth and C-section, 71.8% of records met the indicator according to the norm.

Figure 6.6.2 Partograph use during birth

Partographs used in births (N = 131)



6.7 Postnatal care medical record review

6.7.1 Checks after birth performed according to the norm

Birth records were reviewed to determine whether postnatal care in the first hours after birth was adequately given. In order to meet this indicator, women should have the following checks performed and recorded 4 times in the first hour after birth, 2 times in the second hour, and once at discharge: systolic and diastolic blood pressure + temperature + pulse. The results of this review are presented in Table 6.7.1.

Table 6.7.1 Postnatal care according to the norm

	Basic			Complete		
	N	%	SE	N	%	SE
Checks performed 4 times in 1st hour	238	50	3.2	131	29.8	4.0
Checks performed 2 times in 2nd hour	238	63	3.1	131	58.8	4.3
Checks performed at discharge	238	82.4	2.5	131	82.4	3.3
Postnatal care according to the norm	238	42.9	3.2	131	29	4.0

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 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	16	50	12.5	5	60	21.9
Non-private room without auditory nor visual privacy	16	0		5	0	
Visual privacy only	16	0		5	0	
No privacy	16	0		5	0	
Don't provide this service	16	50	12.5	5	40	21.9

7.2 Supplies and equipment needed for emergency obstetric and neonatal care

According to the indicator related to emergency obstetric and neonatal care, all basic and complete level facilities should have at least one functional piece of equipment observed on the day of the survey: blood pressure apparatus + stethoscope + portable doppler/Pinard stethoscope+ autoclave/dry heat sterilizer + oxygen tank + resuscitation bag for adults + neonatal resuscitation bag + laryngoscope + Manual vacuum aspiration (MVA) kit/curettage kit. In addition, complete level facilities should have observed at least one functional neonatal/pediatric stethoscope, equipment for anesthesia, and a kit for C-sections. This evaluation includes 8 basic facilities and 3 complete facilities that indicated that they offer emergency care services.

The percentage of basic and complete facilities with availability of functional equipment related to emergency obstetric and neonatal care is further detailed in Tables 7.2.1a-7.2.1b.

Table 7.2.1a Observed and functional equipment for emergency care in basic level units

BASIC EONC LEVEL			
Equipment type	N	%	SE
Autoclave/Dry heat sterilizer	8	100	
Blood pressure apparatus	8	50	17.7
Laryngoscope	8	50	17.7
MVA kit	8	37.5	17.1
Oxygen tank	8	62.5	17.1
Portable doppler/Pinard stethoscope	8	100	
Reanimation resuscitation bag for adult	8	100	
Neonatal resuscitation bag	8	87.5	11.7
Stethoscope	8	37.5	17.1
All equipment observed and functional	8	25	15.3

Table 7.2.1b Observed and functional equipment for emergency care in hospitals

COMPLETE EONC LEVEL			
Equipment type	N	%	SE
Anesthesia equipment	3	100	
Autoclave/Dry heat sterilizer	3	100	
Blood pressure apparatus	3	100	
Kit for C-sections	3	100	
Laryngoscope	3	100	
MVA kit/Curettage kit	3	100	
Neonatal/Pediatric stethoscope	3	0	
Oxygen tank	3	100	
Portable doppler/Pinard stethoscope	3	66.7	27.2
Reanimation resuscitation bag for adult	3	100	
Neonatal resuscitation bag	3	100	
Stethoscope	3	100	
All equipment observed and functional	3	0	

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. According to the indicator, basic facilities should have continuous availability of the following drugs: penicillin benzathine/ampicillin + calcium gluconate + dexamethasone/betamethasone + gentamicin/amikacin + hydralazine + magnesium sulfate + metronidazole/clindamycin + oxytocin/metilergovina.

If a facility did not have a drug on the day of the survey, three-month stock of that drug was not evaluated. The figures detailing pharmacy stocks below show only the stocks of each drug in facilities that had that drug on the day of the survey.

Only 12.5% of basic level facilities had the necessary drugs available on the day of the survey. When looking at the stock of all necessary drugs in the previous three months, no basic-level facilities passed this component of the indicator (Table 7.3.1a).

Table 7.3.1a Drugs needed for emergency and neonatal care in basic level facilities

BASIC EONC LEVEL			
Drug availability	N	%	SE
Penicillin benzathine/Ampicillin	8	87.5	11.7
Calcium gluconate	8	75	15.3
Dexamethasone/Betamethasone	8	50	17.7
Gentamicin/Amikacin	8	75	15.3
Hidralazine ampulla	8	62.5	17.1
Magnesium sulfate	8	87.5	11.7
Metronidazole/Clindamycin	8	100	
Oxytocin/Metilergovina	8	75	15.3
All drugs available on the day of the survey	8	12.5	11.7
Continuous availability in the previous three months	8	0	

Complete level facilities were checked for the continuous availability of the following drugs: penicillin benzathine/ampicillin + calcium gluconate + dexamethasone/betamethasone + gentamicin/amikacin + hydralazine + magnesium sulfate + metronidazole/clindamycin + oxytocin/metilergovina + ceftriaxone + chloramphenicol + hydralazine hydrochloride + nifedipine + diazepam + diphenylhydantoin.

Complete facilities had almost all drugs available on the day of the survey, with the exception of diazepam in one facility. When considering the stock of required drugs in the previous three months, two out of three facilities met the pharmacy component of the indicator (Table 7.3.1b).

Table 7.3.1b Drugs needed for emergency and neonatal care in hospitals

COMPLETE EONC LEVEL			
Drug availability	N	%	SE
Penicillin benzathine/Ampicillin	3	100	
Calcium gluconate	3	100	
Ceftriaxona	3	100	
Chloramphenicol	3	100	
Dexamethasone/Betamethasone	3	100	
Diazepam	3	66.7	27.2
Diphenylhydantoin	3	100	
Gentamicin/Amikacin	3	100	
Hydralazine hydrochloride	3	100	
Magnesium sulfate	3	100	
Metronidazole/Clindamycin	3	100	
Nifedipine	3	100	
Oxytocin/Metilergovina	3	100	
All drugs available on the day of the survey	3	66.7	27.2
Continuous availability in the previous three months	3	66.7	27.2

7.4 Distribution of obstetric and neonatal complications

This section summarizes key indicators related to the management of maternal and neonatal complications in hospitals. Interviewers reviewed records of women with complications of sepsis, hemorrhage, pre-eclampsia and eclampsia and neonates with sepsis, asphyxia, prematurity, and low birth weight. These records were evaluated for vital signs, laboratory tests, correct treatment, and appropriate procedural actions.

Records of women and infants who had one of the maternal or neonatal complications of interest in the last two years were selected systematically and reviewed. In total, interviewers reviewed the records of 417 women and 441 infants with one or more complications (Tables 7.4.1-7.4.2). Because a woman or child could have experienced more than one complication, the total number of records below exceeds the number of women or children with complications.

Table 7.4.1 Distribution of obstetric complications by facility classification

	Basic	Complete
Women with sepsis	11	36
Women with hemorrhage	151	131
Women with pre-eclampsia	35	46
Women with eclampsia	1	9
Total	198	222

Table 7.4.2 Distribution of neonatal complications by facility classification

	Basic	Complete
Neonates with low birth weight	108	111
Neonates with prematurity	18	43
Neonates with sepsis	82	62
Neonates with asphyxia	16	46
Total	224	262

7.5 Management of obstetric complications (sepsis, hemorrhage, pre-eclampsia and eclampsia) in the last two years

7.5.1 Sepsis in basic facilities

According to the country indicator manual, sepsis is managed according to the norm at basic level facilities if vital signs were checked (temperature + pulse + diastolic and systolic blood pressure), antibiotics were administered, a leukocyte count was performed, and the woman was referred to another health facility.

There were 11 records of maternal sepsis at the basic level and none noted that a leukocyte count had been performed (Table 7.5.1). Correct treatment entails that antibiotics are administered and the woman is referred to another facility, but only 1 record indicated both of these.

Table 7.5.1 Medical record review at basic level facilities: sepsis

	N	Basic	
		%	SE
Temperature + pulse + blood pressure checked	11	63.6	14.5
Leukocyte count performed	11	18.2	11.6
Antibiotics administered	11	72.7	13.4
Woman referred to another facility	11	63.6	14.5
Sepsis managed according to the norm (meets all above criteria)	11	9.1	8.7

7.5.2 Sepsis in hospitals

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), a leukocyte count was performed, 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 36 records of maternal sepsis at the complete level and all had the appropriate vital signs checked, though 77.8% had a leukocyte count performed and 75% had antibiotics administered (Table 7.5.2).

Table 7.5.2 Medical record review at complete level facilities: sepsis

	Complete		
	N	%	SE
Temperature + pulse + blood pressure checked	36	100	
Leukocyte count performed	36	77.8	6.9
Antibiotics administered	36	75	7.2
Correct treatment	36	91.7	4.6
Sepsis managed according to the norm (meets all above criteria)	36	63.9	8.0

7.5.3 Hemorrhage in basic facilities

Hemorrhage is managed according to the norm if vital signs were checked (pulse + diastolic and systolic blood pressure), medication was administered (oxytocin + Ringer's lactate), the decision (transfer to another establishment) was recorded, and the woman was referred elsewhere.

Most of the evaluated records had noted that appropriate vital signs were checked, but only 30.5% indicated oxytocin administration. Those records that indicated medication administration tended not to include a referral to another unit, and therefore these cases were not managed according to the standards (Table 7.5.3).

Table 7.5.3. Medical record review at basic level facilities: hemorrhage

	Basic		
	N	%	SE
Pulse + blood pressure checked	151	88.7	2.6
Oxytocin + Ringer's lactate administered	151	30.5	3.8
Referral/transfer to another facility	151	59.6	4.0
Hemorrhage managed according to the norm (meets all above criteria)	151	13.2	2.8

7.5.4 Hemorrhage in hospitals

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.

Only about one quarter of the evaluated records had PT or PTT recorded, and all others therefore were not managed according to the standards (Table 7.5.4).

Table 7.5.4 Medical record review at complete level facilities: hemorrhage

	Complete		
	N	%	SE
Blood pressure checked	131	100	
Lab tests performed	131	26	3.8
Oxytocin/other uterotonic administered	131	59.5	4.3
Cause recorded	131	99.2	0.8
Correct treatment	131	77.1	3.7
Hemorrhage managed according to the norm (meets all above criteria)	131	9.9	2.6

7.5.5 Pre-eclampsia & eclampsia in basic facilities

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), lab tests were performed (urine protein), and correct treatment was given.

Correct treatment is evaluated as follows:

- If diastolic blood pressure is greater than 110, then administration of hydralazine/nifedipine
- Administration of magnesium sulfate

As detailed in Tables 7.5.5a-7.5.5b, only 11.4% of records of women with pre-eclampsia were managed according to the norm; all others did not include a urine protein test. The case of eclampsia at the basic facility level was not managed according to the norm, as it did not have a proper treatment or urine protein test performed.

Table 7.5.5a Medical record review at basic level facilities: pre-eclampsia

	Basic		
	N	%	SE
Blood pressure checked	35	88.6	5.4
Urine protein test performed	35	11.4	5.4
Correct treatment	35	88.6	5.4
Pre-eclampsia managed according to the norm (meets all above criteria)	35	11.4	5.4

Table 7.5.5b Medical record review at basic level facilities: eclampsia

	Basic		
	N	%	SE
Blood pressure checked	1	100	0
Urine protein test performed	1	0	0
Correct treatment	1	0	0
Pre-eclampsia managed according to the norm (meets all above criteria)	1	0	0

7.5.6 Pre-eclampsia & eclampsia in hospitals

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 + 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 Tables 7.5.6a-7.5.6b, only one record of pre-eclampsia was managed according to the norm. Very few records indicated that all lab tests were performed and vital signs were checked. Among women with eclampsia, only 55.6% had both lab tests performed, and 33.3% had correct treatment.

Table 7.5.6a Medical record review at complete level facilities: pre-eclampsia

	Complete		
	N	%	SE
Vital signs checked	46	37	7.1
Urine protein test + platelet count performed	46	21.7	6.1
Correct treatment	46	58.7	7.3
Outcome recorded	46	82.6	5.6
Pre-eclampsia managed according to the norm (meets all above criteria)	46	2.2	2.2

Table 7.5.6b Medical record review at complete level facilities: eclampsia

	Complete		
	N	%	SE
Vital signs checked	9	44.4	16.6
Urine protein test + platelet count performed	9	55.6	16.6
Correct treatment	9	33.3	15.7
Outcome recorded	9	100	
Pre-eclampsia managed according to the norm (meets all above criteria)	9	0	

7.6 Management of neonatal complications (low birth weight, prematurity, sepsis and asphyxia) in the last two years

7.6.1 Low birth weight (LBW) and prematurity in basic facilities

According to the country indicator manual, low birth weight and prematurity are managed according to the standards if all checkups recorded (weight + height + head circumference + skin examination + pulse, respiratory rate + abdominal exam + Downes/Silverman score), gestational age and the method of calculating it was recorded, lab tests were performed (glycemia + oxygen saturation), neonate was evaluated by a doctor at admission, and neonate was referred to a hospital.

None of the evaluated records of neonates with low birth weight or prematurity reported management according to the standards. Although most infants were referred to a hospital, few had record of abdominal exam, Silverman score or Downes score. Only two neonates with low birth weight and two premature neonates had record of glycemia test or oxygen saturation (Tables 7.6.1a-7.6.1b).

Table 7.6.1a Medical record review in basic level facilities: low birth weight

	Basic		
	N	%	SE
All checkups recorded	108	0.9	0.9
Gestational age + method of calculating it recorded	108	63	4.7
Glycemia + oxygen saturation level tests performed	108	0.9	0.9
Neonate evaluated by a doctor at admission	108	71.3	4.3
Neonate referred to a hospital	108	89.8	2.9
Low birth weight managed according to the norm (meets all above criteria)	108	0	

Table 7.6.1b Medical record review in basic level facilities: prematurity

	Basic		
	N	%	SE
All checkups recorded	18	0	
Gestational age + method of calculating it recorded	18	55.6	11.7
Glycemia + oxygen saturation level tests performed	18	5.6	5.4
Neonate evaluated by a doctor at admission	18	55.6	11.7
Neonate referred to a hospital	18	83.3	8.8
Prematurity managed according to the norm (meets all above criteria)	18	0	

7.6.2 Low birth weight (LBW) and prematurity in hospitals

According to the country indicator manual, low birth weight and prematurity are managed according to the standards if all vital signs checked (pulse + respiratory rate + Downes/Silverman score), lab tests were performed (glycemia + oxygen saturation level), correct treatment was given, and neonate was evaluated by a doctor at admission. Correct treatment entails IV feeding if respiratory rate is greater than 80, and the child must have been kept in an incubator or administered oxygen in some form.

Few of the evaluated records of neonates with low birth weight reported management according to the standards, due to a lack of checking all necessary vital signs. Although almost all infants were evaluated by a doctor at admission and over half were given correct treatment, only six prematurity records and six LBW records had Silverman score or Downes score.

Table 7.6.2a Medical record review in complete level facilities: low birth weight

	Complete		
	N	%	SE
Vital signs checked	111	3.6	1.8
Glycemia + oxygen saturation level tests performed	111	12.6	3.2
Neonate evaluated by a doctor at admission	111	99.1	0.9
Correct treatment	111	55	4.7
Low birth weight managed according to the norm (meets all above criteria)	111	0	

Table 7.6.2b Medical record review in complete level facilities: prematurity

	Complete		
	N	%	SE
Vital signs checked	43	7	3.9
Glycemia + oxygen saturation level tests performed	43	9.3	4.4
Neonate evaluated by a doctor at admission	43	100	
Correct treatment	43	79.1	6.2
Prematurity managed according to the norm (meets all above criteria)	43	0	

7.6.3 Sepsis in basic facilities

According to the country indicator manual, sepsis is managed according to the standards if gestational age is recorded, all vital signs checked (temperature + pulse + respiratory rate + skin examination + abdominal examination + distal coldness), lab tests were performed (leukocyte count + neutrophil morphology + platelet count + glycemia), treatment with ampicillin/gentamicin, neonate was evaluated by a doctor at admission, and neonate was referred to a hospital.

As detailed in Table 7.6.3, 1.2% of the evaluated records showed sepsis managed according to the norm for neonates. This is largely due to the absence of lab tests performed and record of gestational age. Only three records noted glycemia test performed, therefore all other records did not meet the requirements of the indicator.

Table 7.6.3 Medical record review in basic level facilities: infants with sepsis

	Basic		
	N	%	SE
Vital signs checked	82	32.9	5.2
Gestational age recorded	82	8.5	3.1
Lab tests performed	82	3.7	2.1
Ampicillin/gentamicin administered	82	48.8	5.5
Neonate evaluated by a doctor at admission	82	63.4	5.3
Neonate referred to a hospital	82	97.6	1.7
Sepsis managed according to the norm (meets all above criteria)	82	1.2	1.2

7.6.4 Sepsis in hospitals

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

As detailed in Table 7.6.4, 0.0% of the evaluated records showed neonates managed according to the norm for sepsis. This is largely due to the absence of laboratory tests (erythrocyte sedimentation rate was recorded in only 11.3% of cases) and correct treatment (9.7% of cases showed treatment with any antibiotic).

Table 7.6.4 Medical record review in complete level facilities: infants with sepsis

	Complete		
	N	%	SE
Temperature + pulse checked	62	93.5	3.1
Lab tests performed	62	8.1	3.5
Any antibiotic administered	62	9.7	3.8
Neonate evaluated by a doctor at admission	62	100	
Sepsis managed according to the norm (meets all above criteria)	62	0	

7.6.5 Asphyxia in basic facilities

According to the country indicator manual, asphyxia is managed according to the standards if all vital signs were checked (temperature + skin examination + pulse + respiratory rate + abdominal examination + APGAR), lab tests were performed (complete blood count (CBC) + glycemia), and neonate was evaluated by a doctor at admission.

6.3% of the evaluated records of neonates with asphyxia reported management according to the standards, as shown by Table 7.6.5. Although 56.3% of infants were evaluated by a doctor at admission, only one had a glycemia test (CBC could not be calculated at the basic level). Abdominal examination could not be calculated at the basic level.

Table 7.6.5 Medical record review in basic level facilities: infants with asphyxia

	Basic		
	N	%	SE
Vital signs checked	16	56.3	12.4
Gestational age recorded	16	62.5	12.1
Glycemia test performed	16	6.3	6.1
Neonate evaluated by a doctor at admission	16	56.3	12.4
Asphyxia managed according to the norm (meets all above criteria)	16	6.3	6.1

7.6.6 Asphyxia in hospitals

According to the country indicator manual, asphyxia is managed according to the standards if all vital signs were checked (pulse + respiratory rate + chest radiograph + APGAR), and all lab tests were performed (oxygen saturation level + glycemia + hemoglobin + C-reactive protein + erythrocyte sedimentation rate). APGAR could not be evaluated at the complete level.

Only one of the evaluated records of neonates with asphyxia reported management according to the standards because only one showed all lab tests performed. Although half of infants had all checks on the infant reported, only two had erythrocyte sedimentation rate (Table 7.6.6).

Table 7.6.6 Medical record review in complete level facilities: infants with asphyxia

	Complete		
	N	%	SE
Vital signs checked	46	50	7.4
Lab tests performed	46	2.2	2.2
Asphyxia managed according to the norm (meets all above criteria)	46	2.2	2.2

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
Incinerator at facility	39	12.8	5.3	0	16	12.5	8.3	0	5	20	17.9
Contract with other facility for biohazard disposal	28	28.6	8.5	6	13	61.5	13.5	1	4	100	0
Manual for decontamination	39	12.8	5.3	0	16	25	10.8	0	5	100	0

8.2 Decontamination and sterilization

Table 8.2.1 lists the different techniques used for decontaminating and sterilizing equipment. Units that chose “other” when responding to the decontamination question often specified that autoclave was the decontamination method of choice. Units that selected “other” when responding to the sterilization question often specified that they use a pressure sterilizer or heat the equipment in a pot.

Table 8.2.1 Decontamination and sterilization

	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Decontamination methods									
Submerged in disinfectant, then scrubbed with a brush, soap and water	39	38.5	7.8	16	56.3	12.4	5	20	17.9
Scrubbed with a brush, soap and water, then submerged in disinfectant	39	23.1	6.8	16	18.8	9.8	5	40	21.9
Scrubbed with a brush, soap and water only	39	2.6	2.5	16	0		5	0	
Submerged in disinfectant, without scrubbing with brush	39	7.7	4.3	16	0		5	0	
Cleaned with water and soap, without scrubbing with a brush	39	2.6	2.5	16	0		5	0	
Equipment never reused	39	0		16	6.3	6.1	5	0	
Other	39	38.5	7.8	16	25	10.8	5	80	17.9
Sterilization methods									
Dry heat	39	0	0.0	16	6.3	6.1	5	0	
Autoclave	39	66.7	7.6	16	81.3	9.8	5	80	17.9
Boiling	39	5.1	3.5	16	0		5	0	
Steam	39	5.1	3.5	16	0		5	20	17.9
Chemical sterilization	39	10.3	4.9	16	12.5	8.3	5	20	17.9
Processed away from facility	39	2.6	2.5	16	0		5	0	
Facility doesn't sterilize	39	0		16	6.3	6.1	5	0	
Other	39	41	7.9	16	37.5	12.1	5	20	17.9

Appendix A: SM2015 Health Facility Indicators

All indicators in the baseline performance assessment were measured from the health facility observation checklist and questionnaire survey. The table below (Table A.1.1) provides health facility indicator values from the baseline data collection round. All specifics regarding these indicators have been detailed in the corresponding chapters of this report, where the components of these indicators are disaggregated, providing a more comprehensive assessment.

Table A.1.1 Facility indicators matrix

#	Indicator	BASELINE		
		N	n	Percent (95% CI)
7020	Health facilities with permanent availability of inputs and equipment necessary for prenatal and postpartum care	60	7	11.7% (4.8-22.6%)
7030	Health facilities with permanent availability of inputs and equipment necessary for emergency obstetric and neonatal care	11	0	0.0% (0.0%-28.5%)
7010	Health facilities with permanent availability of inputs and equipment necessary for pediatric, vaccination and nutrition health care	58	1	1.7% (0.0-9.2%)
7050	Health facilities with stock-out of modern family planning supplies (oral, injectable, barrier, IUD)	57	40	70.2% (56.6-81.6%)
7160	Municipal Health Districts that can access data and generate regular reports in immunization, maternal, newborn, and child care	16	15	93.8% (69.8-99.8%)
8610	Children aged 0-23 months who received growth monitoring according to their age in their most recent visit	559	360	64.4% (60.3-68.4%)
3030	Women of reproductive age (15-49) who received ≥ 4 ANC visits by qualified personnel according to best practices for a birth in the last two years	516	36	7.0% (4.9-9.5%)
3040	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	540	90	16.7% (13.6-20.1%)
4050	Institutional postpartum patients evaluated and registered in clinical records, at least every 15 min during the first hour and 30 min until 2 hours after birth, and upon leaving hospital in the last two years	369	140	37.9% (33.0-43.1%)
4060	Partograph filled according to the norm for births in the last two years	131	94	71.8% (63.2-79.3%)
4070	Neonates with complications (low birth weight, prematurity, birth asphyxia and sepsis) managed according to standards in the last two years	440	2	0.45% (0.1-1.6%)
4080	Women with obstetric complications (sepsis, hemorrhage, severe pre-eclampsia and eclampsia) managed according to the norm in the last two years	417	62	14.9% (11.6-18.7%)
4660	Births attended in CAPs and CAIMIs managed according to the norm	287	146	50.9% (44.9-56.8%)