SMI – Honduras

Health Facility Data Quality Report

Second Follow-up Measurement

May 2018

TABLE OF CONTENTS

This Data Quality Report on the *Salud Mesoamérica Initiative* (SMI) Honduras Health Facility Surveys was produced in agreement with the Inter-American Development Bank (IDB). All analyses and writing were conducted 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 better-informed decision-making and higher achievement in health. To that end, we strive to build the objective evidence about what does and does not improve health conditions and health system 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

Casey Johanns, BS
Data Specialist, IHME

Bernardo Hernández Prado, MS, DSc
Associate Professor, IHME

Ali H. Mokdad, PhD
Professor, IHME

Charbel El Bcheraoui, PhD, MSc
Assistant Professor, IHME

Erin Palmisano, BA
Research Manager, IHME

Contributing authors

Alexandra Schaefer, BA
Technical Project Coordinator, IHME

Katie Panhorst Harris, MPA
Evaluation Specialist, IHME

Joseph Camarda, BA
Data Analyst, IHME

Rebecca Cogen, BA
Data Analyst, IHME

Emily Dansereau, MPH
Research Assistant, IHME

Emily Linebarger, BA
Data Analyst, IHME

Max Thom, BS
Data Analyst, IHME

Acknowledgments

This measurement was funded by the Bill & Melinda Gates Foundation, the Carlos Slim Foundation, and the Spanish Agency for International Development Cooperation, through the Inter-American Development Bank. We thank all the children and families who willingly participated in the study. We thank central and local governments for the support they extended to the study teams and their facilitation of access to communities and health facilities. We extend our gratitude to UNIMER for their implementation of data collection in Honduras for this project.

Chapter 1 SURVEY METHODOLOGY

1.1 Overview

The *Salud Mesoamérica Initiative* (SMI) is a regional public-private partnership that brings together Mesoamerican governments, 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 focuses on supply- and demand-side interventions, including 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 aid (RBA) model that relies on performance measurement and enhanced transparency and accountability. The initiative focuses its resources on integrating key interventions aimed at reducing health inequalities that stem from the lack of access to quality reproductive, maternal, neonatal, and child health services (including immunization and nutrition services) for the poorest quintile of the population.

The objectives of the SMI evaluation are to assess whether countries are reaching the indicator targets set by the Initiative and to evaluate the results of specific interventions. In Honduras, baseline data were collected at households and health facilities in intervention and comparison areas (2013). The first follow-up data collection took place at health facilities in intervention areas only (2014), and this second follow-up measurement was performed at households and health facilities in intervention and comparison areas (2017). The following report details data collected from health facilities. This report focuses on health facility content and performance in intervention areas, with tables and figures for comparison areas only included in Appendix B and data for all facilities combined in Appendix C.

1.2 Health facility surveys

The use of health facility data collection methods permits the measurement of supply-side information and supply-side indicators for the Initiative. In general terms, the objectives of the health facility survey are to assess facility conditions, evaluate service provision and utilization, and measure quality of care. The medical record review (MRR) is implemented to collect retrospective data on facilities' treatment practices. Health facility data collection captures changes produced by interventions at the level of the health services access point, which may foretell changes in population health outcomes.

1.3 Contents of the 2017 second follow-up measurement in health facilities

The second follow-up health facility survey includes three components: an interview questionnaire, an observation checklist, and MRR. The questionnaire captures information reported by the facility director, manager, or individual in charge of the health facility. Data are collected on general facility characteristics, infrastructure, human resource composition, supply logistics, infection control, and services provided. The checklist captures the direct observations of the surveyors at the time of the survey using an observation checklist, and in the case of some inputs, surveyors also review administrative records to identify the presence of drug and vaccine stockouts in the three months prior to the survey. The MRR assesses the record-keeping of the facilities and captures facilities' treatment practices in the case of various medical complications that women and infants experience, as well as the care provided before, during, and after uncomplicated deliveries.

1.4 Sampling

1.4.1 Health facility sampling

For this evaluation, a sample of 60 intervention-area health facilities was selected from a list of all facilities serving the 19 intervention area municipalities covered by the SMI initiative, located in the departments of Choluteca, Copán, Intibucá, La Paz, Lempira, and Olancho. This list was constructed according to a referral network outlined by the Secretary of Health. Facilities are grouped according to three levels of Essential Obstetric and Neonatal Care (EONC) services provided: ambulatory, basic, and complete. Ambulatory facilities provide outpatient care, basic facilities are able to attend uncomplicated deliveries and provide immediate emergency obstetric and neonatal care, and complete facilities have surgical capacity in addition to the services above and have capacity to attend complicated deliveries.

All 14 basic and complete EONC facilities in the study area are included in the sample with certainty. Ambulatory-level health facilities assigned to serve a community selected for the SMI-Honduras household census are added to the sampling frame. If the size of this list exceeds the desired sample size, then the sample is randomly selected from this list of facilities. Facilities are selected at random if they were visited at baseline until a sample size of 23 in intervention areas is reached. If the sample still has not reached 23, facilities are selected at random from the list of places not visited at baseline until a sample size of 23 in intervention areas is reached. Two backup facilities per municipality are selected in case sampled facilities cannot be interviewed due to security or logistic concerns.

1.4.2 Medical record review sampling

To complete the medical record portion of the survey, records are selected according to the level of services provided at the facility and the number of facilities within the study sample. The obstetric complications, neonatal complications, uncomplicated deliveries, and immediate postpartum care records are collected from basic and complete level facilities, while prenatal care, diarrhea, and pneumonia records are collected from ambulatory level facilities.
In order to provide accurate comparisons from baseline to second follow-up evaluations given adjustments to indicator criteria over time, data from the time window of the baseline survey were recollected during the second follow-up measurement to capture two medical record review indicators: management of obstetric complications and management of neonatal complications according to the norm.

Medical record review quotas are set per facility by dividing the total number of records to be reviewed in intervention and comparison areas by the number of data entry modules to be completed at each level of care, and then among all sampled facilities at each level. Quota calculations take into account the prevalence of each type of record as measured in the SMI baseline and first follow-up survey, as well as the statistical power necessary to detect projected differences from baseline to the second follow-up for performance indicators for SMI interventions. Cases of obstetric and neonatal complications were sampled at random from Secretary of Health registries and, if required, additional cases were sampled using a systematic sampling technique in-facility.

1.5 Survey implementation

1.5.1 Data collection instruments

All surveys were conducted using a computer-assisted personal interview (CAPI). The CAPI was programmed using DatStat Illume and installed onto computer netbooks. 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, maintain a logical answering pattern across different questions, decrease data entry errors, and permit rapid data verification remotely.

1.5.2 Training and supervision of data collectors

Training sessions were conducted in Honduras in May 2017. Three doctors and three nurses were trained to conduct the health facility surveys. All UNIMER-contracted employees underwent a weeklong training, which included three days of in-classroom instruction and practice of interview application. Teams were given in-depth training and practice for each relevant component of data collection. The training included content of each survey, proper conduct of the survey, in-depth review of the instrument, and hands-on training on the CAPI software. Surveyors participated in a pilot at out-of-sample health facilities of different EONC levels where they applied the questionnaire, conducted observation exercises, and practiced medical record sampling and review. Representatives from IHME, IDB, and the Honduras Ministry of Health provided oversight during pilot exercises. IHME and UNIMER held debriefing and retraining sessions with surveyors post-pilot and provided continued training during the first week of data collection in sampled health facilities.

1.5.3 Data collection and management

As described in Section 1.5.1, data were collected using computer netbooks equipped with CAPI software. Field team leaders monitored the implementation of the 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 instruments and readily transmitted to the field. In Honduras, data collection was conducted between May 2017 and November 2017.

1.5.4 Data analysis and report writing

Data analysis was conducted at IHME. Analysis was done using STATA version 14. Performance indicators were calculated at IHME following indicator definitions provided by IDB. This report provides detailed information on results coming from the SMI health facility survey, including general characteristics and key performance indicator components from 90 facilities in both intervention and comparison areas in Honduras. The following chapters found in the report describe health facilities and indicator components for intervention facilities only, while Appendix B displays tables and figures for comparison area facilities only.

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

2.1 Study Area

A total of 60 facilities in intervention areas were surveyed for the second follow-up evaluation. Forty-six ambulatory EONC health units, eight basic EONC units, and six complete EONC units were included in the sample. At the ambulatory level, CESAR (Centros de Salud Rural) health facilities are categorized as units without a doctor, while CESAMO (Centro de Salud con Médico y Odontólogo) health facilities are defined as ambulatory units with at least one doctor on staff. The basic level is made up of CMI units (Clínica Materno-Infantil) and the complete level includes all hospitals in SMI intervention areas. These health units are broken down by facility classification in Table 2.1.1.

Table 2.1.1 Health facility classification

	Baseline	1st Follow-up	2nd Follow-up
CESAR	27	33	31
CESAMO	18	13	15
CMI	8	8	8
Hospital	6	6	6
Total	59	60	60

Figure 2.1.2 is a graph of all intervention health facilities visited at the second follow-up evaluation. Table 2.1.3 displays the locations of health facilities by department and municipality in intervention areas from the baseline to second follow-up. Over time, the health facilities have been surveyed within seven departments and 27 municipalities.

Figure 2.1.2 Map of health facilities at the second follow-up evaluation

*GPS data for two facilities are not displayed

Table 2.1.3 Geographical representation by department and municipality

		No. of facilities		
Department	Municipality	Baseline	1st Follow-up	2nd Follow-up
Choluteca	Choluteca	1	1	1
	Concepcion de Maria	8	7	8
	Duyure	1	1	0
	San Marcos de Colon	5	4	6
Copan	Cabanas	1	2	2
	Copan Ruinas	0	2	5
	San Antonio, Copan	1	1	1
	San Jeronimo	2	0	1
	Santa Rita	3	2	5
	Santa Rosa de Copan	1	1	1
Intibuca	Concepcion	3	4	2
	Intibuca	1	1	1
	Magdalena	1	1	1
	San Antonio, Intibuca	3	3	1
	Santa Lucia	2	3	2
La Paz	La Paz	1	1	1
	Santiago de Puringla	4	5	3
Lempira	Cololaca	2	2	2
	Guarita	4	3	2
	San Juan Guarita	1	2	1
	Tambla	0	2	2
	Tomala	1	1	1
	Valladolid	1	1	1
Ocotepeque	San Marcos	1	1	1
Olancho	Catacamas	1	0	0
	Dulce Nombre de Culmi	9	8	8
	Juticalpa	1	1	1
Total		59	60	60

2.2 Medical record extraction

The medical record review component of the study included a review of 1,381 medical records at the second follow-up evaluation. The number and type of medical records reviewed varied depending on the type of facility and services provided. Records of antenatal care, diarrhea, and pneumonia were collected from ambulatory facilities at the baseline, first, and second follow-up. Records of uncomplicated delivery, immediate postpartum care, and maternal and neonatal complications were collected from basic and complete facilities at the baseline, first, and second follow-up.

The neonatal and maternal complications baseline record count shown in Table 2.2.1 displays the total number of medical records collected throughout this study. Maternal and neonatal complications were collected at the baseline data collection round (years 2011–2013) and were also re-collected for the 2011–2013 time frame during the second follow-up evaluation. Maternal and neonatal medical records from 2011–2013 were recollected at the second follow-up evaluation to

capture relevant data that reflect updated indicator definitions and standards of care that were not captured in the baseline surveys. The indicators and records evaluated in Chapter 7 of this report include only medical records that were re-collected at the second follow-up evaluation for the periods of 2011–2013 (baseline) and 2015–2017 (second follow-up).

Table 2.2.1 Medical Record Review sample size

	Intervention		
	Baseline	1st Follow-Up	2nd Follow-up
Antenatal care	215	261	278
Diarrhea	177	226	258
Pneumonia	163	202	210
Uncomplicated delivery	235	257	156
Immediate postpartum care	157	130	154
Neonatal complications	295	233	167
Maternal complications	281	208	158
Total	1523	1517	1381

2.3 Referrals

In response to the question, "Do you usually receive referred patients from another health facility?" 19.6% of ambulatory facilities and 100% of basic and complete facilities answered "yes" at the second follow-up (Table 2.3.1). The facilities who reported receiving referrals were also asked if they receive referrals specifically for routine deliveries and complicated deliveries. This information was not captured at the baseline or first follow-up. All basic facilities receive referrals for routine deliveries, while only 50% of basic facilities receive referrals for complicated deliveries. All complete facilities receive routine and complicated delivery referrals.

Table 2.3.1 Facility referrals

	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
% of ambulatory facilities that receive referrals	45	36	7.1	46	26.1	6.5	46	19.6	5.8
% of basic facilities that receive referrals	8	100		8	100		8	100	
% of basic facilities that receive referrals for routine deliveries	-			-			8	100	
% of basic facilities that receive referrals for complicated deliveries	-			-			8	50	17.7
% of complete facilities that receive referrals	6	100		6	100		6	100	
% of complete facilities that receive referrals for routine deliveries	-			-			6	100	
% of complete facilities that receive referrals for complicated deliveries	-			-			6	100	

*Questions regarding referrals for routine and complicated deliveries were not asked at the baseline or first follow-up

During the second follow-up evaluation, facilities also reported the types of documents that are requested when they receive referrals for delivery. This information was not captured at the baseline or first follow-up evaluation. Interviewers were instructed to group the directors' responses into five answer categories: transfer/referral form, patient medical record, laboratory results, proof of insurance,

or other. Interviewers were able to select more than one type of documentation if the facility requests more than one. Table 2.3.2 displays the documents that facilities request for routine delivery referrals, and Table 2.3.3 displays documents requested for complicated delivery referrals. All basic and complete facilities request a transfer/referral form for routine deliveries; however, one complete level facility answered "don't know/refuse to respond" and was excluded from the analysis. All basic facilities and 83.3% of complete facilities request a transfer/referral form for complicated deliveries. The next most common form of documentation requested for both normal and complicated deliveries was not listed in the survey. The most common "other" types of documentation include prenatal cards and an identification.

Table 2.3.2 Documentation requested for routine deliveries at the second follow-up

	Basic			Complete		
	N	%	SE	N	%	SE
Transfer/referral form	8	100		5	100	
Patient medical record	8	12.5	11.7	5	40	21.9
Laboratory results	8	37.5	17.1	5	0	
Proof of insurance	8	0		5	0	
Other	8	75	15.3	5	40	21.9

*One complete facility responded "don't know/refuse to respond" when asked about the type of documentation requested for routine delivery referrals

Table 2.3.3 Documentation requested for complicated deliveries at the second follow-up

	Basic			Complete		
	N	%	SE	N	%	SE
Transfer/referral form	4	100	0	6	83.3	15.2
Patient medical record	4	25	21.7	6	33.3	19.2
Laboratory results	4	25	21.7	6	0	
Proof of insurance	4	0	0	6	0	
Other	4	100	0	6	50	20.4

2.4 Basic Infrastructure: Electricity and Water

Table 2.4.1 displays the sources of electricity and water reported at the second follow-up evaluation; facility directors were able to report more than one source of electricity and water. The first line of the table displays the percent of facilities that reported having functional electricity. If the facility reported having functional electricity, they were asked to list all sources of electricity. Facilities were also asked to report all sources of water, as shown in the bottom half of the table.

All basic and complete health facilities and 91.3% of ambulatory facilities visited have functional electricity. The most common source of electricity at the second follow-up is a central supply, and the most common source of water is piped into the facility. Tables 2.4.2–2.4.4 display the sources of electricity and water from baseline to second follow-up by facility type.

Table 2.4.1 Facility source of water and electricity in the second follow-up

2nd Follow-up									
	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Functional electricity	46	91.3	4.2	8	100		6	100	
Source of electricity									
Central supply (Comisión Federal de Electricidad)	42	90.5	4.5	8	100		6	100	
Private supply	42	0		8	0		6	33.3	19.2
In-facility generator	42	0		8	12.5	11.7	6	16.7	15.2
Solar generator	42	11.9	5.0	8	25	15.3	6	0	
Other source	42	4.8	3.3	8	37.5	17.1	6	0	
Source of water:									
Piped into facility	46	84.8	5.3	8	75	15.3	6	83.3	15.2
Public well	46	19.6	5.8	8	25	15.3	6	33.3	19.2
Facility well	46	2.2	2.2	8	0		6	16.7	15.2
Unprotected well	46	0		8	0		6	0	
Hand pump	46	0		8	0		6	0	
Bottled water	46	0		8	0		6	0	
Tanker truck	46	2.2	2.2	8	12.5	11.7	6	16.7	15.2
Rain water	46	0		8	0		6	0	
Other	46	19.6	5.8	8	50	17.7	6	0	

In Table 2.4.2, the percent of ambulatory facilities with functional electricity has increased from 84.4% at the baseline to 91.3% at the second follow-up. When asked about sources of water, the majority of ambulatory facilities have used water piped into the facility since the baseline. However, ambulatory facilities have transitioned away from using rainwater, bottled water, and an unprotected well as an additional source of water for the facility since the baseline and first follow-up.

Table 2.4.2 Facility source of water and electricity in ambulatory facilities

Ambulatory									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Functional electricity	45	84.4	5.4	46	84.8	5.3	46	91.3	4.2
Source of electricity									
Central supply (Comisión Federal de Electricidad)	38	92.1	4.4	39	82.1	6.1	42	90.5	4.5
Private supply	38	2.6	2.6	39	2.6	2.5	42	0	
In-facility generator	38	0		39	2.6	2.5	42	0	
Solar generator	38	5.3	3.6	39	10.3	4.9	42	11.9	5.0
Other source	38	0		39	5.1	3.5	42	4.8	3.3
Source of water									
Piped into facility	44	75	6.5	46	91.3	4.2	46	84.8	5.3
Public well	44	22.7	6.3	46	4.3	3.0	46	19.6	5.8
Facility well	44	4.5	3.1	46	2.2	2.2	46	2.2	2.2
Unprotected well	44	0		46	2.2	2.2	46	0	
Hand pump	44	0		46	0		46	0	
Bottled water	44	2.3	2.2	46	8.7	4.2	46	0	
Tanker truck	44	2.3	2.2	46	4.3	3.0	46	2.2	2.2
Rain water	44	2.3	2.2	46	2.2	2.2	46	0	
Other	44	6.8	3.8	46	2.2	2.2	46	19.6	5.8

*One ambulatory facility at the baseline did not know the source of water when asked, so responses regarding source of water for only 44 facilities are displayed

In Table 2.4.3, all basic facilities reported having functional electricity from the baseline to second follow-up. All facilities are using the central supply for electricity at the second follow-up and water piped into the facilities. Basic facilities have transitioned away from using facility wells, unprotected wells, and bottled water since the baseline.

Table 2.4.3 Facility source of water and electricity in basic facilities

	Basic								
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Functional electricity	8	100		8	100		8	100	
Source of electricity									
Central supply (Comisión Federal de Electricidad)	8	100		8	87.5	11.7	8	100	
Private supply	8	0		8	25	15.3	8	0	
In-facility generator	8	25	15.3	8	0		8	12.5	11.7
Solar generator	8	0		8	37.5	17.1	8	25	15.3
Other source	8	0		8	0		8	37.5	17.1
Source of water:									
Piped into facility	8	75	15.3	8	87.5	11.7	8	75	15.3
Public well	8	0		8	12.5	11.7	8	25	15.3
Facility well	8	12.5	11.7	8	0		8	0	
Unprotected well	8	12.5	11.7	8	0		8	0	
Hand pump	8	0		8	0		8	0	
Bottled water	8	50	17.7	8	0		8	0	
Tanker truck	8	0		8	25	15.3	8	12.5	11.7
Rain water	8	0		8	0		8	0	
Other	8	12.5	11.7	8	0		8	50	17.7

In Table 2.4.4, all complete facilities report having functional electricity using central supply as a source of electricity from the baseline to second follow-up. The majority of facilities use water piped into the facilities; however, the one complete facility that does not use water piped into the facility reported using both a public and facility well at the second follow-up.

Table 2.4.4 Facility source of water and electricity in complete facilities

Complete									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Functional electricity	6	100		6	100		6	100	
Source of electricity									
Central supply (Comisión Federal de Electricidad)	6	100		6	100		6	100	
Private supply	6	0		6	0		6	33.3	19.2
In-facility generator	6	66.7	19.2	6	0		6	16.7	15.2
Solar generator	6	0		6	0		6	0	
Other source	6	0		6	0		6	0	
Source of water									
Piped into facility	6	83.3	15.2	6	83.3	15.2	6	83.3	15.2
Public well	6	0		6	0		6	33.3	19.2
Facility well	6	66.7	19.2	6	33.3	19.2	6	16.7	15.2
Unprotected well	6	0		6	0		6	0	
Hand pump	6	0		6	0		6	0	
Bottled water	6	16.7	15.2	6	0		6	0	
Tanker truck	6	0		6	0		6	16.7	15.2
Rain water	6	0		6	0		6	0	
Other	6	0		6	0		6	0	

2.5 Personnel

During the interview portion of the health facility surveys, directors reported the types of staff employed at the facility. Tables 2.5.1–2.5.4 display the types of personnel employed from baseline to second follow-up by facility type. Each table displays the percent of facilities that employ at least one type of doctor or staff member listed. These tables do not reflect the total number or average number of staff within a given facility.

As shown in Table 2.5.1, all CESAR facilities have employed at least one auxiliary nurse from the baseline to second follow-up and the majority have employed at least one health promoter. While these data were not captured at the baseline, some CESAR facilities additionally employ a doctor in social services, licensed nurse, polyvalent employee, or community agent/health worker. One facility reported “don’t know” when asked if they employed a general physician at the second follow-up and was excluded from the analysis regarding general physicians.

Table 2.5.1 Personnel employed at CESAR facilities

CESAR									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
General physician	27	0		33	48.5	8.7	30	53.3	9.1
Doctor in social services	-			-			31	16.1	6.6
Pharmacist	27	0		33	3	3.0	31	0	
Licensed nurse	27	0		33	21.2	7.1	31	6.5	4.4
Auxilary nurse	27	100		33	100		31	100	
Polivalent / multipurpose	-			33	45.5	8.7	31	6.5	4.4
Community agent/health worker	-			-			31	3.2	3.2
Midwife	26	50	9.8	33	15.2	6.2	31	0	
Health promoter	27	96.3	3.6	33	78.8	7.1	31	100	

*Doctor in social services, polyvalent/multiuse, and community agent/health worker were not captured at the baseline; Doctor in social services and community agent/health worker were not captured at the first follow-up
** One facility reported "don't know/decline to respond" to a general physician at the second follow-up and was excluded

At the baseline and second follow-up, all CESAMO facilities employed at least one general physician, auxiliary nurse, and health promoter. At the second follow-up, some CESAMO facilities additionally employed a doctor in social services, licensed nurse, polyvalent, or lab technician.

Table 2.5.2 Personnel employed at CESAMO facilities

CESAMO									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
General physician	18	100		13	92.3	7.4	15	100	
Doctor in social services	-			-			15	33.3	12.2
Pediatrician	18	0		13	7.7	7.4	15	0	
Pharmacist	18	5.6	5.4	13	0		15	0	
Licensed nurse	18	38.9	11.5	13	38.5	13.5	15	26.7	11.4
Auxilary nurse	18	100		13	84.6	10.0	15	100	
Polivalent / multipurpose	-			13	46.2	13.8	15	26.7	11.4
Community agent/health worker	-			-			15	0	
Midwife	17	35.3	11.6	13	38.5	13.5	15	0	
Lab technician	18	16.7	8.8	13	15.4	10	15	26.7	11.4
Health promoter	18	100		13	100	0	15	100	0

*Doctor in social services, polyvalent/multiuse, and community agent/health worker were not captured at the baseline; Doctor in social services and community agent/health worker were not captured at the first follow-up
** One facility reported "don't know/decline to respond" to a midwife at the baseline and was excluded from the table

At the baseline and first follow-up, all CMI facilities reported employing at least one general physician and auxiliary nurse. However, at the second follow-up, only 75% of CMI facilities reported employing at least one general physician. Of the two facilities that do not employ a general physician, one reported employing a doctor in social services.

Table 2.5.3 Personnel employed at CMI facilities

CMI									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
General physician	8	100		8	100		8	75	15.3
Doctor in social services	-			-			8	50	17.7
Pediatrician	8	0		8	0		8	0	
Nutritionist	8	0		8	0		8	0	
Pharmacist	8	0		8	0		8	0	
Licensed nurse	8	75	15.3	8	75	15.3	8	75	15.3
Auxilary nurse	8	100		8	100		8	100	
Polivalent / multipurpose	-			8	0		8	12.5	11.7
Community agent/health worker	-			-			8	0	
Midwife	8	12.5	11.7	8	12.5	11.7	8	0	
Social worker	8	0		8	0		8	0	
Lab technician	8	25	15.3	8	37.5	17.1	8	25	15.3
Health promoter	8	12.5	11.7	8	12.5	11.7	8	0	
Internist	8	0		8	0		8	0	
Gynecologist	8	0		8	0		8	0	
Surgeon	8	0		8	0		8	0	
Anesthesiologist	8	0		8	0		8	0	
Emergency medical technician	8	0		8	12.5	11.7	8	0	
Radiology technician	8	12.5	11.7	8	0		8	0	
Ambulance driver	8	87.5	11.7	8	87.5	11.7	8	87.5	11.7

*Doctor in social services, polyvalent/multiuse, and community agent/health worker were not captured at the baseline; Doctor in social services and community agent/health worker were not captured at the first follow-up

From the baseline to second follow-up, all complete facilities reported employing at least one general physician, pediatrician, licensed nurse, auxiliary nurse, lab technician, internist, gynecologist, surgeon, and ambulance driver.

Table 2.5.4 Personnel employed at hospitals

Hospital									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
General physician	6	100		6	100		6	100	
Doctor in social services	-			-			6	100	
Pediatrician	6	100		6	100		6	100	
Nutritionist	6	0		6	0		6	33.3	19.2
Pharmacist	6	66.7	19.2	6	66.7	19.2	6	66.7	19.2
Licensed nurse	6	100		6	100		6	100	
Auxilary nurse	6	100		6	100		6	100	
Polivalent / multipurpose	-			6	16.7	15.2	6	0	
Community agent/health worker	-			-			6	0	
Midwife	6	0		6	0		6	0	
Social worker	6	50	20.4	6	33.3	19.2	6	66.7	19.2
Lab technician	6	100		6	100		6	100	
Health promoter	6	0		6	16.7	15.2	6	0	
Internist	6	100		6	100		6	100	
Gynecologist	6	100		6	100		6	100	
Surgeon	6	100		6	100		6	100	
Anesthesiologist	6	66.7	19.2	6	50	20.4	6	66.7	19.2
Emergency medical technician	6	0		6	0		6	0	
Radiology technician	6	83.3	15.2	6	100		6	100	
Ambulance driver	6	100		6	100		6	100	

*Doctor in social services, polyvalent/multiuse, and community agent/health worker were not captured at the baseline; Doctor in social services and community agent/health worker were not captured at the first follow-up

2.6 Internet

During the interview, facilities were asked if they had internet connection at the unit. The percentage of facilities with an internet connection has increased slightly since the baseline, with 2.2% of ambulatory, 62.5% of basic, and 100% of complete facilities having a connection at the second follow-up. Tables 2.6.1–2.6.3 display the percent of facilities with internet connection from the baseline to second follow-up by facility type.

Table 2.6.1 Internet connection at ambulatory facilities

Ambulatory									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Facility has an internet connection	45	0		46	2.2	2.2	46	2.2	2.2

Table 2.6.2 Internet connection at basic facilities

Basic									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Facility has an internet connection	8	25	15.3	8	12.5	11.7	8	62.5	17.1

Table 2.6.3 Internet connection at complete facilities

Complete									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Facility has an internet connection	6	83.3	15.2	6	100		6	100	

Chapter 3 CHILD HEALTH

3.1 Child services offered

This chapter summarizes key indicators and information related to child health care. In the questionnaire component of the survey, facility representatives were asked about service provision. In the observation component, interviewers observed the setting of the room in which child services are provided, functionality of equipment, and stock of pharmacy inputs, vaccines, and related educational materials.

Tables 3.1.1–3.1.3 display the percentage of facilities that offer child health care services and vaccinations for children under age 5, as reported in the questionnaire. All facilities, regardless of EONC level, reported offering child health care services at the second follow-up. All ambulatory facilities, 25% of basic facilities, and 50% of complete facilities reported also offering vaccinations for children under the age of 5. Tables 3.1.1–3.1.3 also display information regarding the type of room the facility uses for child care, which is collected during the observation component of the health facility surveys. Slight discrepancies may exist between responses in the questionnaire and observation.

Table 3.1.1 Child health care services provision in ambulatory facilities

Ambulatory									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Unit offers child services	45	100		46	97.8	2.2	46	100	
Unit vaccinates children under 5	45	100		46	100		46	100	
Child care room:									
Private room with visual and auditory privacy	45	100		44	100		46	89.1	4.6
Non-private room	45	0		44	0		46	8.7	4.2
Other	45	0		44	0		46	2.2	2.2
Don't provide service/decline to respond	45	0		44	0		46	0	

*Child care room data missing for two ambulatory facilities at the first follow-up

Table 3.1.2 Child health care services provision in basic facilities

Basic									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Unit offers child services	8	87.5	11.7	8	75	15.3	8	100	
Unit vaccinates children under 5	8	25	15.3	8	50	17.7	8	25	15.3
Child care room:									
Private room with visual and auditory privacy	8	87.5	11.7	6	66.7	19.3	8	87.5	11.7
Non-private room	8	12.5	11.7	6	0		8	12.5	11.7
Other	8	0		6	0		8	0	
Don't provide service/decline to respond	8	0		6	33.3	19.3	8	0	

*Child care room data missing for two basic facilities at the first follow-up

Table 3.1.3 Child health care services provision in complete facilities

Complete									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Unit offers child services	6	100		6	50	20.4	6	100	
Unit vaccinates children under 5	6	83.3	15.2	6	50	20.4	6	50	20.4
Child care room:									
Private room with visual and auditory privacy	6	83.3	15.2	6	100		6	83.3	15.2
Non-private room	6	0		6	0		6	16.7	15.2
Other	6	0		6	0		6	0	
Don't provide service/decline to respond	6	16.7	15.2	6	0		6	0	

3.2 Child health care equipment

Specific equipment and drugs are necessary for child health care in ambulatory and basic facilities, as defined by the monitoring indicator for child health at the second follow-up evaluation (section 3.4). The equipment included in this indicator can be found in Tables 3.2.1–3.2.3 below. Facilities were only included if the interviewer entered into the child care room during the observation. If the facility reported they do not provide such services during the observation, the facility was excluded from this indicator. Interviewers were instructed to observe all listed equipment and test for functionality (if possible); unless noted otherwise, the facility only needs to have at least one functioning piece of equipment on the day of the survey. The drugs necessary for child health care can be found in section 3.3.

CESAR facilities should have all of the following functional equipment in the facility on the day of the observation survey: pediatric scale, standing scale for children, height rod, hand lamp/gooseneck lamp, measuring tape, exam table/bed, nebulizer, stethoscope. At the baseline, only 18.5% of facilities had all necessary equipment on the day of the survey, while 64.5% had all equipment at the first and second follow-up evaluations (Table 3.2.1). The two largest improvements in stock from the baseline to second follow-up are the availability of pediatric scales and hand lamp/gooseneck lamps.

Table 3.2.1 Child health care equipment available and functional in CESAR facilities

CESAR									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
All equipment available:	27	18.5	7.5	31	64.5	8.6	31	64.5	8.6
Pediatric scale	27	63	9.3	31	83.9	6.6	31	80.6	7.1
Standing scale for children	27	85.2	6.8	31	100		31	96.8	3.2
Height rod	27	88.9	6.0	31	100		31	100	
Hand lamp/goosenck lamp	27	40.7	9.5	31	83.9	6.6	31	80.6	7.1
Measuring tape	27	96.3	3.6	31	100		31	100	
Exam table/bed	27	92.6	5.0	31	96.8	3.2	31	100	
Nebulizer	27	81.5	7.5	31	90.3	5.3	31	96.8	3.2
Stethoscope	27	88.9	6.0	31	87.1	6	31	96.8	3.2

CESAMO facilities should have all of the following functional equipment in the facility on the day of the observation survey: pediatric scale, standing scale for children, height rod, hand lamp/gooseneck lamp, measuring tape, exam table/bed, nebulizer, reflex hammer, stethoscope, neonatal stethoscope. While

the percentage of facilities with all available equipment has decreased from 66.7% at the baseline to 0% at the second follow-up, as seen in Table 3.2.2, these values are not comparable due to data that were not captured at the baseline or first follow-up. Reflex hammers and neonatal stethoscopes were not captured in CESAMO facilities at the baseline, and reflex hammers were not captured in CESAMO facilities at the first follow-up. These two pieces of equipment are not commonly found at the second follow-up, which is why no CESAMO facilities have all available equipment. Additionally, the neonatal stethoscope was not distinguished from the pediatric stethoscope at the first follow-up because the two were listed as alternatives in the survey. This does not allow us to separate which type of stethoscope the facility had, and this value is not comparable either.

While not many CESAMO facilities had all the equipment necessary for childcare, 100% of facilities did have the following six pieces of equipment at the second follow-up: standing scale for children, height rod, hand lamp/gooseneck lamp, measuring tape, exam table/bed, and nebulizer. This is an improvement from the baseline, where only two pieces of equipment (an exam table/bed and nebulizer) were found at all CESAMO facilities.

Table 3.2.2 Child health care equipment available and functional in CESAMO facilities

CESAMO									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
All equipment available:	18	66.7	11.1	10	20	12.6	15	0	
Pediatric scale	18	88.9	7.4	10	60	15.5	15	80	10.3
Standing scale for children	18	94.4	5.4	10	100		15	100	
Height rod	18	88.9	7.4	10	90	9.5	15	100	
Hand lamp/goosenck lamp	18	94.4	5.4	10	100		15	100	
Measuring tape	18	94.4	5.4	10	100		15	100	
Exam table/bed	18	100		10	100		15	100	
Nebulizer	18	100		10	100		15	100	
Reflex hammer	-			-			15	66.7	12.2
Stethoscope	18	94.4	5.4	10	100		15	93.3	6.4
Neonatal stethoscope	-			10	40	15.5	15	0	

*Reflex hammer was not captured at CESAMO facilities at baseline or first follow-up; neonatal stethoscope not captured at baseline; neonatal stethoscope/pediatric stethoscope captured together at first follow-up

CMI facilities should have all of the following functional equipment in the facility on the day of the observation survey: pediatric scale, standing scale for children, height rod, hand lamp/gooseneck lamp, measuring tape, exam table/bed, nebulizer, reflex hammer, pediatric stethoscope, neonatal stethoscope, pediatric sphygmomanometer, oto-ophthalmoscope (Table 3.2.3). No facilities at the baseline or second follow-up had all necessary equipment for child care, while only 50% of facilities had the equipment at the first follow-up. The equipment that was always missing or non-functional in CMI facilities at the second follow-up was a pediatric and neonatal stethoscope; only 37.5% of facilities also had a pediatric sphygmomanometer.

Table 3.2.3 Child health care equipment available and functional in CMI facilities

CMI									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
All equipment available:	8	0		4	50	25.0	8	0	
Pediatric scale	8	87.5	11.7	4	100		8	87.5	11.7
Standing scale for children	8	75	15.3	4	100		8	100	
Height rod	8	87.5	11.7	4	100		8	75	15.3
Hand lamp/goosenck lamp	8	87.5	11.7	4	100		8	100	
Measuring tape	8	75	15.3	4	100		8	100	
Exam table/bed	8	87.5	11.7	4	100		8	100	
Nebulizer	8	100		4	100		8	100	
Reflex hammer	8	37.5	17.1	4	75	21.7	8	75	15.3
Pediatric stethoscope	8	25	15.3	4	75	21.7	8	0	
Neonatal stethoscope	8	12.5	11.7	4	75	21.7	8	0	
Pediatric sphygmomanometer	8	62.5	17.1	4	75	21.7	8	37.5	17.1
Oto-ophthalmoscope	8	87.5	11.7	4	75	21.7	8	87.5	11.7

* Neonatal stethoscope/pediatric stethoscope captured together at first follow-up

3.3 Child health care drugs and supplements

As mentioned in section 3.2, specific equipment and drugs are necessary for child health care in ambulatory and basic facilities, as defined by the monitoring indicator for child health at the second follow-up evaluation (section 3.4). The drugs included in this indicator can be found in Tables 3.3.1–3.3.3 below. Interviewers were instructed to observe the drugs and check any kardex or written documentation for stockout in the last three months. If the facility did not have documentation at the first or second follow-up regarding stock in the previous three months, the facility was considered to be stocked out of the drug and did not pass that portion of the indicator. The baseline survey did not capture whether or not the information came from a kardex, so it is assumed that all data collected on stock in the previous three months came from documentation, as was instructed.

CESAR facilities should have all of the following drugs in the last three months: packets/envelopes of oral rehydration salts, zinc sulfate/gluconate, albendazole/mebendazole. As displayed in Table 3.3.1, all CESAR facilities had the drugs on the day of the survey; however, only 83.9% of facilities had stock of the drug on the day of the survey and in the past three months. The largest improvement from baseline to second follow-up is for zinc – however, zinc gluconate was not captured at the first follow-up.

Table 3.3.1 Child health care drugs in CESAR facilities

CESAR									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Drug availability on the day of the survey:	27	7.4	5.0	31	96.8	3.2	31	100	
Packets/envelopes of oral rehydration salts	27	96.3	3.6	31	100		31	100	
Zinc sulfate/gluconate	27	7.4	5.0	31	96.8	3.2	31	100	
Albendazole/mebendazole	27	100		31	100		31	100	
Drug availability including no stock-out in the previous 3 months	27	7.4	5.0	31	96.8	3.2	31	83.9	6.6

*Zinc gluconate not captured at the first follow-up

CESAMO facilities should have all of the following drugs in the last three months: packets/envelopes of oral rehydration salts, zinc sulfate/gluconate, albendazole/mebendazole,

amoxicillin/erythromycin/benzathine penicillin. As displayed in Table 3.3.2, all CESAMO facilities had the drugs on the day of the survey at the second follow-up; however, only 93.3% of facilities had stock of the drug on the day of the survey and in the past three months. The largest improvement from baseline to second follow-up is for zinc – however, zinc gluconate was not captured at the first follow-up.

Table 3.3.1 Child health care drugs in CESAMO facilities

CESAMO									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Drug availability on the day of the survey:	18	0		10	100		15	100	
Packets/envelopes of oral rehydration salts	18	88.9	7.4	10	100		15	100	
Zinc sulfate/gluconate	18	0		10	100		15	100	
Albendazole/mebendazole	18	100		10	100		15	100	
Amoxicillin/Erythromycin/Benzathine penicillin	18	100		10	100		15	100	
Drug availability including no stock-out in the previous 3 months	18	0		10	100		15	93.3	6.4

*Zinc gluconate not captured at the first follow-up

CMI facilities should have all of the following drugs in the last three months: packets/envelopes of oral rehydration salts, zinc sulfate/gluconate, albendazole/mebendazole, amoxicillin/erythromycin/benzathine penicillin, saline/Hartmann's solution/dextrose. As displayed in Table 3.3.3, only 87.5% of CMI facilities had the drugs on the day of the survey at the second follow-up evaluation. The largest improvement from baseline to second follow-up is for zinc – however, zinc gluconate was not captured at the first follow-up.

Table 3.3.1 Child health care drugs in CMI facilities

CMI									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Drug availability on the day of the survey:	8	0		4	100		8	87.5	11.7
Packets/envelopes of oral rehydration salts	8	100		4	100		8	100	
Zinc sulfate/gluconate	8	12.5	11.7	4	100		8	100	
Albendazole/mebendazole	8	50	17.7	4	100		8	87.5	11.7
Amoxicillin/Erythromycin/Benzathine penicillin	8	100		4	100		8	100	
Saline/Hartmann's solution/Dextrose	8	100		4	100		8	100	
Drug availability including no stock-out in the previous 3 months	8	0		4	100		8	75	15.3

*Zinc gluconate not captured at the first follow-up

3.4 Composite child health care monitoring indicator

As described previously, the child health care monitoring indicator requires all equipment and drugs listed in sections 3.2 and 3.3 of this report. The tables below display the overall indicator values by facility type (Tables 3.4.1–3.4.3). Each facility needed equipment on the day of the survey, drugs on the day of the survey, and no stock-out of the drugs listed in section 3.3 in the past three months. While no CESAMO or CMI facilities met all requirements for this indicator, the majority still had all necessary drugs on the day of the survey and in the previous three months.

Table 3.4.1 Composite child health care indicator at CESAR facilities

CESAR									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
All available equipment	27	18.5	7.5	31	64.5	8.6	31	64.5	8.6
Drug availability on the day of the survey	27	7.4	5.0	31	96.8	3.2	31	100	
Drug availability including no stock-out in the previous 3 months	27	7.4	5.0	31	96.8	3.2	31	83.9	6.6
Facility has all required equipment and drugs	27	0		31	64.5	8.6	31	48.4	9.0

Table 3.4.2 Composite child health care indicator at CESAMO facilities

CESAMO									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
All available equipment	18	66.7	11.1	10	20	12.6	15	0	6.4
Drug availability on the day of the survey	18	0		10	100		15	100	
Drug availability including no stock-out in the previous 3 months	18	0		10	100		15	93.3	6.4
Facility has all required equipment and drugs	18	0		10	20	12.6	15	0	

Table 3.4.3 Composite child health care indicator at CMI facilities

CMI									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
All available equipment	8	0		4	50	25.0	8	0	
Drug availability on the day of the survey	8	0		4	100		8	87.5	11.7
Drug availability including no stock-out in the previous 3 months	8	0		4	100		8	75	15.3
Facility has all required equipment and drugs	8	0		4	50	25.0	8	0	

3.5 Micronutrients: composite monitoring indicator

All ambulatory facilities should have availability of Chispitas or other micronutrients on the day of the survey and in the past three months, as defined by the micronutrients monitoring indicator. This indicator was only measured at the first and second follow-up. Interviewers were instructed to observe the drugs and check any kardex or written documentation for stockout in the last three months. If the facility did not have documentation at the first or second follow-up regarding stock in the previous three months, the facility was considered to be stocked out of the drug and did not pass that portion of the indicator.

Almost all (90.3%) CESAR facilities at the second follow-up evaluation had availability of Chispitas or other micronutrients on the day of the survey. The majority of these facilities had Chispitas (87.1%) rather than another type. However, only 74.2% of facilities were not stocked out of these drugs in the previous three months.

Table 3.5.1 Composite micronutrients indicator at CESAR facilities

CESAR						
	1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE
Availability of Chispitas on the day of the survey	33	97	2.98	31	87.1	6.02
Availability of other micronutrients on the day of the survey	-			31	35.5	8.59
Continuous availability of Chispitas or other micronutrients in the previous 3 months	33	93.9	4.15	31	74.2	7.86

*Other micronutrients not captured at the first follow-up

100% of CESAMO facilities at the second follow-up evaluation had availability of Chispitas or other micronutrients on the day of the survey. The majority of these facilities had Chispitas (93.3%) rather than another type. However, only 93.3% of facilities were not stocked out of these drugs in the previous three months.

Table 3.5.2 Composite micronutrients indicator at CESAMO facilities

CESAMO						
	1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE
Availability of Chispitas on the day of the survey	13	100	0	15	93.3	6.44
Availability of other micronutrients on the day of the survey	-			15	46.7	12.88
Continuous availability of Chispitas or other micronutrients in the previous 3 months	13	92.3	7.39	15	93.3	6.44

*Other micronutrients not captured at the first follow-up

3.6 Educational materials

Tables 3.6.1–3.6.3 show the percent of facilities with materials about child growth and development and danger signs/symptoms in children. These materials were observed by data collectors either as cards handed to the caretaker or as illustrations of disease management hung on the unit walls. While the amount of educational material in all EONC levels has increased greatly from baseline to second follow-up, there has been a slight decline in the percentage of facilities with available educational materials from the first follow-up to second follow-up.

Table 3.6.1 Child health educational material in ambulatory facilities

Ambulatory									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Printed materials on child growth and child development	45	40	7.3	44	95.5	3.1	46	87	5.0
Printed materials on danger signs and symptoms in children	45	40	7.3	44	95.5	3.1	46	76.1	6.3

Table 3.6.2 Child health educational material in basic facilities

Basic									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Printed materials on child growth and child development	8	25	15.3	4	100		8	75	15.3
Printed materials on danger signs and symptoms in children	8	25	15.3	4	100		8	87.5	11.7

*Two basic facilities at the first follow-up were not asked about printed materials since the facility reported they do not regularly provide child care services

Table 3.6.3 Child health educational material in complete facilities

Complete									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Printed materials on child growth and child development	5	40	21.9	6	100		6	100	
Printed materials on danger signs and symptoms in children	5	20	17.9	6	100		6	66.7	19.3

*One complete facility at the baseline was not asked about printed materials since the facility reported they do not regularly provide child care services

3.7 Management of diarrhea: composite performance indicator

The appropriate treatment for child diarrhea is administration of oral rehydration salts/IV treatment and zinc, as defined by the diarrhea performance indicator at the second follow-up evaluation. To measure this, doctors and nurses systematically selected medical records for children (aged 0-59 months) with diarrhea from ambulatory facilities. The records were reviewed for the appropriate treatment of diarrhea.

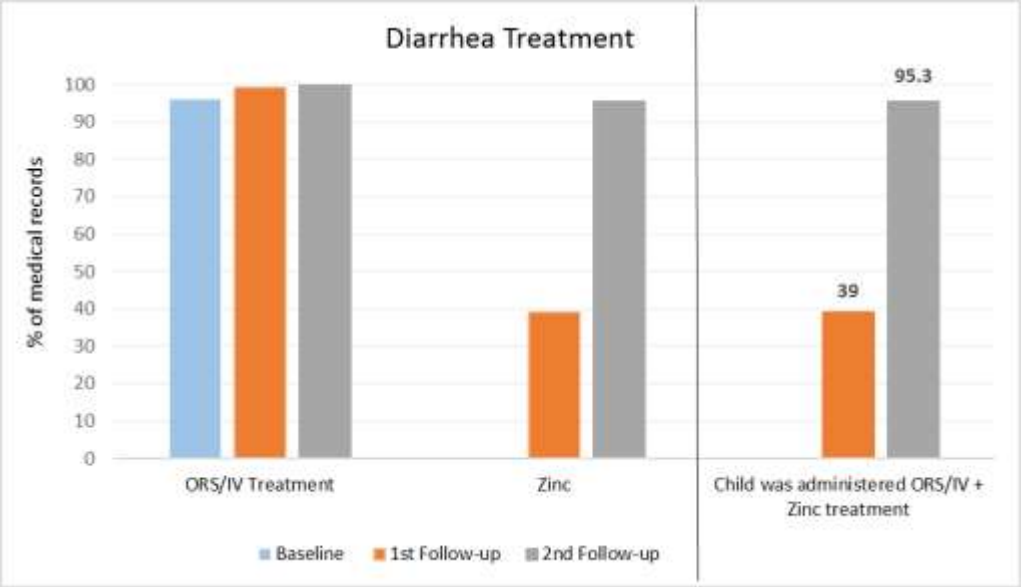
Table 3.7.1 shows treatment by facility type at the second follow-up evaluation. All selected medical records of children with diarrhea at CESAMO facilities and 93.1% of records at CESAR facilities were treated with both ORS/IV treatment and zinc.

Table 3.7.1 ORS and zinc consumption by facility type at the second follow-up evaluation

	Cesar			Cesamo		
	N	%	SE	N	%	SE
ORS or IV treatment administered	174	100		84	100	
Zinc administered	174	93.1	1.9	84	100	
Meets all criteria listed above	174	93.1	1.9	84	100	

Figure 3.7.2 displays appropriate treatment by evaluation round. 39% of selected medical records at first follow-up and 95.3% of selected medical records at the second follow-up indicated appropriate treatment. The majority of medical records at the first follow-up were not treated with zinc. Zinc administration was not captured at the baseline for diarrhea medical records.

Figure 3.7.2 Appropriate diarrhea treatment by evaluation round



*Data regarding zinc treatment were not collected during the baseline measurement

3.8 Management of pneumonia: composite performance indicator

Children diagnosed with pneumonia, excluding severe pneumonia, should have a follow-up appointment within two days, as defined by the pneumonia performance indicator at the second follow-up evaluation. To measure this, doctors and nurses systematically selected medical records for children (aged 0-59 months) with pneumonia from ambulatory facilities. The records were reviewed for the appropriate care of pneumonia.

Figure 3.8.1 displays the timing of the pneumonia follow-up appointment by facility type at the second follow-up evaluation. The timing by each facility type can be found to the left of the divider, and all ambulatory medical records collectively are displayed to the right of the divider. While 95.3% of all children were seen within two days of diagnosis, more children at CESAR facilities were seen again on the day of the diagnosis to treat pneumonia (62.1%), while children at CESAMOs tended to be seen two days after diagnosis (65.3%). Figure 3.8.2 displays follow-up appointment timing by round of data collection for all ambulatory facilities.

Figure 3.8.1 Pneumonia follow-up appointment timing at the second follow-up evaluation

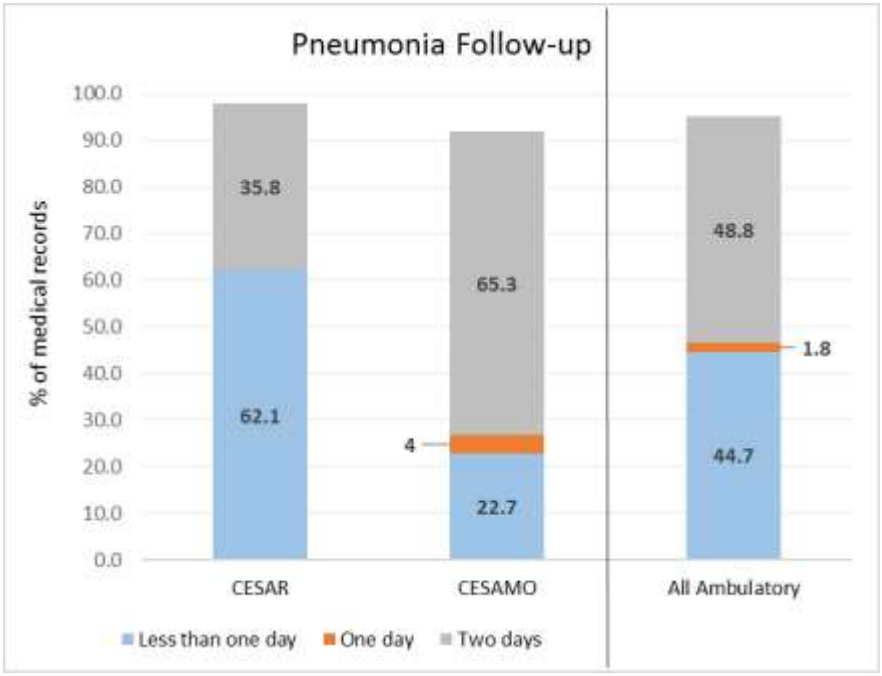
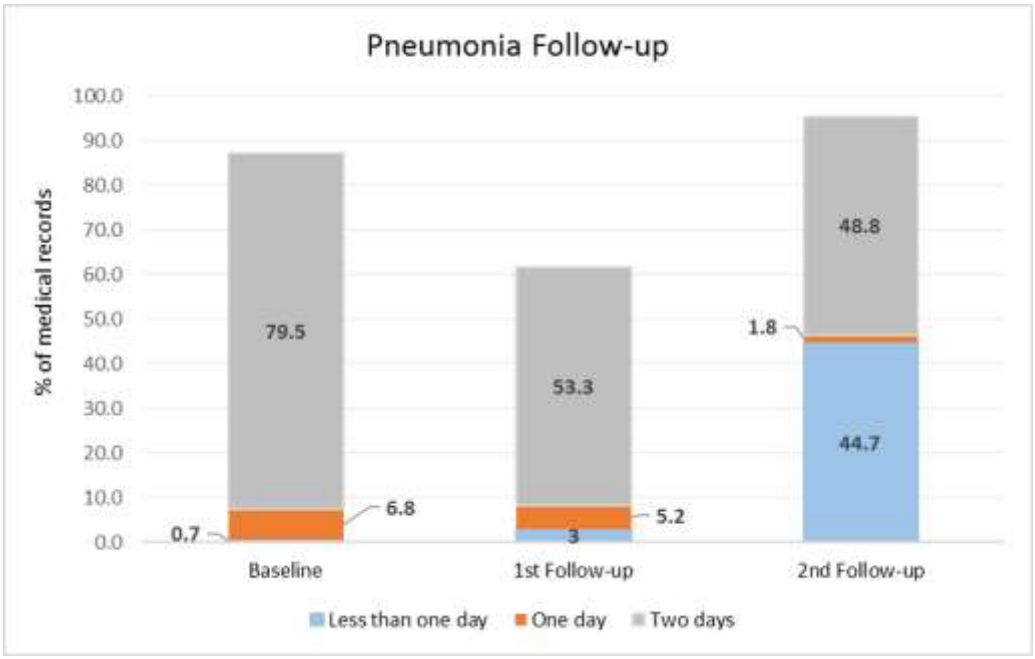


Figure 3.8.2 Pneumonia follow-up appointment timing by evaluation round



*The severity of pneumonia was not captured at the baseline or first follow-up, and records could not be excluded based on this criterion

Chapter 4 VACCINES

4.1 Vaccination services

At the first and second follow-up evaluations, facilities reported on general vaccination services as well as child vaccination services. When asked about child vaccination services during the second follow-up measurement, all ambulatory health facilities, 25% of basic, and 50% of complete facilities reported that they vaccinate children under 5 years old. Interviewers then observed and recorded the setting of the room used for immunization during the observation component of the survey. While some basic and complete facilities report that they do not vaccinate children under 5 as a regular service during the questionnaire, the facility may still have a functional vaccination room that was observed during the observation component of the health facility survey. As shown in Tables 4.1.1–4.1.3 below, the majority of facilities have a private vaccination room with visual and auditory privacy.

Table 4.1.1 Vaccination services in ambulatory facilities

Ambulatory									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Unit provides vaccination services	-			46	97.8	2.2	46	100	
Unit vaccinates children under 5	45	100		46	100		46	100	
Immunization room:									
Private room with visual and auditory privacy	44	84.1	5.5	44	93.2	3.8	46	78.3	6.1
Non-private room without auditory or visual privacy	44	13.6	5.2	44	4.5	3.1	46	13	5.0
Visual privacy only	44	0		44	2.3	2.3	46	0	
No privacy	44	2.3	2.3	44	0		46	8.7	4.2
Other	44	0		44	0		46	0	
Don't provide service/decline to respond	44	0		44	0		46	0	

*General vaccination services not captured at the baseline
**Immunization room data missing for one ambulatory facility at the baseline and two ambulatory facilities at the first follow-up

Table 4.1.2 Vaccination services in basic facilities

Basic									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Unit provides vaccination services	-			8	75	15.3	8	75	15.3
Unit vaccinates children under 5	8	25	15.3	8	50	17.7	8	25	15.3
Immunization room:									
Private room with visual and auditory privacy	8	87.5	11.7	6	50	20.4	8	75	15.3
Non-private room without auditory or visual privacy	8	0		6	0		8	12.5	11.7
Visual privacy only	8	12.5	11.7	6	0		8	0	
No privacy	8	0		6	0		8	0	
Other	8	0		6	0		8	12.5	11.7
Don't provide service/decline to respond	8	0		6	50	20.4	8	0	

*General vaccination services not captured at the baseline
**Immunization room data missing for two basic facilities at the first follow-up

Table 4.1.3 Vaccination services in complete facilities

Complete									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Unit provides vaccination services	-			6	100		6	100	
Unit vaccinates children under 5	6	83.3	15.2	6	50	20.4	6	50	20.4
Immunization room:									
Private room with visual and auditory privacy	6	16.7	15.2	4	100		6	66.7	19.3
Non-private room without auditory or visual privacy	6	83.3	15.2	4	0		6	33.3	19.3
Visual privacy only	6	0		4	0		6	0	
No privacy	6	0		4	0		6	0	
Other	6	0		4	0		6	0	
Don't provide service/decline to respond	6	0		4	0		6	0	

*General vaccination services not captured at the baseline
**Immunization room data missing for two complete facilities at the first follow-up

4.2 Vaccination logistics: Storage

In the questionnaire component of the survey, interviewers asked about vaccine storage. At the baseline, only facilities that vaccinated children were asked about vaccine storage. At the first and second follow-up evaluations, all facilities that reported providing vaccination services, regardless of age, were asked about storage. All facilities in Tables 4.2.1–4.2.3 below reported storing vaccines in-facility at the second follow-up evaluation.

Table 4.2.1 Vaccination storage at ambulatory facilities

Ambulatory									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Storage:									
Stored in facility	45	93.3	3.7	45	95.6	3.1	46	100	
Picked up from another facility	45	4.4	3.1	45	2.2	2.2	46	0	
Delivered when services are being provided	45	2.2	2.2	45	0		46	0	
None of the above	45	0		45	2.2	2.2	46	0	

*At the baseline, only facilities that reported providing child vaccinations were asked about vaccine storage; this was a single response option question
**At the first and second follow-ups, facilities that reported providing vaccinations (regardless of age) were asked about vaccination storage; this was a multi-response option

Table 4.2.2 Vaccination storage at basic facilities

Basic									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Storage									
Stored in facility	2	50	35.4	6	100		6	100	
Picked up from another facility	2	0		6	0		6	0	
Delivered when services are being provided	2	50	35.4	6	0		6	0	
None of the above	2	0		6	0		6	0	

*At the baseline, only facilities that reported providing child vaccinations were asked about vaccine storage; this was a single response option question
**At the first and second follow-ups, facilities that reported providing vaccinations (regardless of age) were asked about vaccination storage; this was a multi-response option

Table 4.2.3 Vaccination storage at complete facilities

Complete									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Storage									
Stored in facility	5	100		6	100		6	100	
Picked up from another facility	5	0		6	0		6	0	
Delivered when services are being provided	5	0		6	0		6	0	
None of the above	5	0		6	0		6	0	

*At the baseline, only facilities that reported providing child vaccinations were asked about vaccine storage; this was a single response option question
**At the first and second follow-ups, facilities that reported providing vaccinations (regardless of age) were asked about vaccination storage; this was a multi-response option

4.3 Vaccines logistics: Supply

Facilities that store vaccines were asked logistical questions during the questionnaire about how supplies are ordered. All facilities reported determining how many vaccines to order at the second follow-up evaluation, rather than another person or organization determining this for them. Almost all facilities currently receive their vaccines within one week, and the majority always receive the quantity that was ordered. This is an improvement in ambulatory facilities from the baseline, where only 59.5% reported receiving their supplies within one week and 81% reported always receiving the quantity ordered. Tables 4.3.1–4.3.3 display vaccination supply logistics by facility type and round.

Table 4.3.1 Vaccination supply logistics at ambulatory facilities

Ambulatory									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Ordering Strategy									
Determines own needs	42	100		43	100		46	100	
Need determined elsewhere	42	0		43	0		46	0	
Both(differ by vaccine)	42	0		43	0		46	0	
Time to receive supplies									
< 1 week	42	59.5	7.6	43	74.4	6.7	46	82.6	5.6
1-2 weeks	42	40.5	7.6	43	23.3	6.4	46	17.4	5.6
> 2 weeks	42	0		43	2.3	2.3	46	0	
Reception of quantity ordered									
Always	42	81	6.1	43	79.1	6.2	46	93.5	3.6
Almost always	42	19	6.1	43	18.6	5.9	46	6.5	3.6
Almost never	42	0		43	2.3	2.3	46	0	

*At the baseline, only facilities that store vaccines and reported providing child vaccinations were asked about vaccine logistics
**At the first and second follow-ups, facilities that store vaccines and reported providing vaccinations (regardless of age) were asked about vaccination logistics

Table 4.3.2 Vaccination supply logistics at basic facilities

Basic									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Ordering Strategy									
Determines own needs	1	0		6	100		6	100	
Need determined elsewhere	1	100		6	0		6	0	
Both(differ by vaccine)	1	0		6	0		6	0	
Time to receive supplies									
< 1 week	1	100		6	83.3	15.2	6	100	
1-2 weeks	1	0		6	16.7	15.2	6	0	
> 2 weeks	1	0		6	0		6	0	
Reception of quantity ordered									
Always	1	100		6	100		6	83.3	15.2
Almost always	1	0		6	0		6	16.7	15.2
Almost never	1	0		6	0		6	0	

*At the baseline, only facilities that store vaccines and reported providing child vaccinations were asked about vaccine logistics
**At the first and second follow-ups, facilities that store vaccines and reported providing vaccinations (regardless of age) were asked about vaccination logistics

Table 4.3.3 Vaccination supply logistics at complete facilities

Complete									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Ordering Strategy									
Determines own needs	5	100		6	100		6	100	
Need determined elsewhere	5	0		6	0		6	0	
Both(differ by vaccine)	5	0		6	0		6	0	
Time to receive supplies									
< 1 week	5	100		6	100		6	100	
1-2 weeks	5	0		6	0		6	0	
> 2 weeks	5	0		6	0		6	0	
Reception of quantity ordered									
Always	4	50	25.0	6	100		6	100	
Almost always	4	50	25.0	6	0		6	0	
Almost never	4	0		6	0		6	0	

*At the baseline, only facilities that store vaccines and reported providing child vaccinations were asked about vaccine logistics
**At the first and second follow-ups, facilities that store vaccines and reported providing vaccinations (regardless of age) were asked about vaccination logistics
*One complete facility at the baseline reported "don't know/refuse to respond" regarding the reception of quantity ordered, excluding them from this section of the table

4.4 Vaccines observed

Tables 4.4.1–4.4.3 indicate the percentage of facilities for which at least one unit of a specified vaccine was observed on the day of the survey. DPT alone, HepB alone, and Hib alone were only checked for if pentavalent was stocked out on the day of the survey. The previous sections, 4.2 and 4.3, display information on vaccine storage and supply that were asked during the interview only if the facility provides vaccination services. The vaccine stocks displayed in the following section were observed if the facility reported storing any vaccines and a registry of vaccines was observed on the day of the survey, regardless of whether or not they reported providing these services regularly. As shown in Table 4.4.1, the amount of vaccines in ambulatory facilities on the day of the survey has increased from baseline to second follow-up. However, only the BCG vaccine is found in the all basic and complete facilities, as shown in Tables 4.4.2 and 4.4.3.

Table 4.4.1 Vaccines observed on the day of the survey at ambulatory facilities

Ambulatory									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Measles, mumps, and rubella	42	97.6	2.3	42	92.9	4.0	41	100	
Pentavalent	42	97.6	2.3	42	100		41	100	
Polio	42	97.6	2.3	42	97.6	2.3	41	100	
Influenza	42	9.5	4.5	42	47.6	7.7	41	85.4	5.5
Rotavirus	42	92.9	4.0	42	95.2	3.3	41	100	
Pneumococcal conjugate	42	97.6	2.3	42	97.6	2.3	41	100	
BCG	42	88.1	5.0	42	97.6	2.3	41	90.2	4.6
DPT alone	1	0		0			0		
HepB alone	1	0		0			0		
Hib alone	-			-			0		

*Hib alone not captured at baseline or first follow-up

Table 4.4.2 Vaccines observed on the day of the survey at basic facilities

Basic									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Measles, mumps, and rubella	7	0		7	14.3	13.2	7	0	
Pentavalent	7	0		7	42.9	18.7	7	14.3	13.2
Polio	7	0		7	14.3	13.2	7	0	
Influenza	7	0		7	14.3	13.2	7	0	
Rotavirus	7	0		7	14.3	13.2	7	0	
Pneumococcal conjugate	7	0		7	14.3	13.2	7	0	
BCG	7	71.4	17.1	7	100		7	100	
DPT alone	7	0		4	0		6	0	
HepB alone	7	85.7	13.2	4	75	21.6	6	100	
Hib alone	-			-			6	0	

*Hib alone not captured at baseline or first follow-up

Table 4.4.3 Vaccines observed on the day of the survey at complete facilities

Complete									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Measles, mumps, and rubella	6	50	20.4	6	50	20.4	6	50	20.4
Pentavalent	6	50	20.4	6	66.7	19.3	6	50	20.4
Polio	6	50	20.4	6	50	20.4	6	50	20.4
Influenza	6	33.3	19.3	6	83.3	15.2	6	66.7	19.3
Rotavirus	6	50	20.4	6	66.7	19.3	6	50	20.4
Pneumococcal conjugate	6	50	20.4	6	66.7	19.3	6	50	20.4
BCG	6	100		6	100		6	100	
DPT alone	3	0		2	0		3	0	
HepB alone	3	100		2	100		3	100	
Hib alone	-			-			3	0	

*Hib alone not captured at baseline or first follow-up

4.5 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 the cold chain. Interviewers observed the type of fridges used to store vaccines, as well as the types of thermometers used to measure the temperature. All basic and complete facilities and 89.1% of ambulatory facilities at the second follow-up use an electric fridge to store vaccines; however, all facilities, regardless of EONC level, have some type of storage device and thermometer. Tables 4.5.1–4.5.3 display the types of fridges and thermometers by facility type and data collection round.

Table 4.5.1 Vaccine storage at ambulatory facilities

Ambulatory									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Storage									
Electric fridge	45	86.7	5.1	45	86.7	5.1	46	89.1	4.6
Kerosene fridge	45	0		45	0		46	0	
Gas fridge	45	2.2	2.2	45	2.2	2.2	46	0	
Solar fridge	45	0		45	4.4	3.1	46	10.9	4.6
Cold box	45	62.2	7.2	45	68.9	6.9	46	52.2	7.4
Any of the above	45	93.3	3.7	45	95.6	3.1	46	100	
Thermometers									
Digital thermometers	45	57.8	7.4	45	62.2	7.2	46	47.8	7.4
Alcohol thermometers	45	0		45	26.7	6.6	46	82.6	5.6
Other thermometers	45	66.7	7.0	26	61.5	9.5	34	32.4	8.0
Any of the above	45	93.3	3.7	45	82.2	5.7	46	100	

*Other thermometers was not a required response, so denominators and responses vary

Table 4.5.2 Vaccine storage at basic facilities

Basic									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Storage									
Electric fridge	8	87.5	11.7	7	100		8	100	
Kerosene fridge	8	0		7	0		8	0	
Gas fridge	8	0		7	0		8	0	
Solar fridge	8	0		7	0		8	0	
Cold box	8	50	17.7	7	71.4	17.1	8	75	15.3
Any of the above	8	87.5	11.7	7	100		8	100	
Thermometers									
Digital thermometers	8	50	17.7	7	71.4	17.1	8	25	15.3
Alcohol thermometers	8	0		7	28.6	17.1	8	62.5	17.1
Other thermometers	8	37.5	17.1	5	40	21.9	6	33.3	19.3
Any of the above	8	75	15.3	7	85.7	13.2	8	87.5	11.7

*Other thermometers was not a required response, so denominators and responses vary

Table 4.5.3 Vaccine storage at complete facilities

Complete									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Storage									
Electric fridge	6	100		6	100		6	100	
Kerosene fridge	6	0		6	0		6	0	
Gas fridge	6	0		6	0		6	0	
Solar fridge	6	0		6	0		6	0	
Cold box	6	83.3	15.2	6	66.7	19.3	6	83.3	15.2
Any of the above	6	100		6	100		6	100	
Thermometers									
Digital thermometers	6	66.7	19.3	6	83.3	15.2	6	83.3	15.2
Alcohol thermometers	6	0		6	50	20.4	6	100	
Other thermometers	6	50	20.4	5	100		4	0	
Any of the above	6	100		6	100		6	100	

*Other thermometers was not a required response, so denominators and responses vary

Chapter 5 FAMILY PLANNING

5.1 Service provision and storage

This chapter summarizes key information and indicators related to family planning. In the questionnaire component of the survey, facility representatives were asked about service provision and storage. In the observation component of the survey, interviewers observed the stock of certain family planning methods in the previous three months. All health facilities reported providing family planning services in-facility, with the majority having a private room with visual and auditory privacy, as shown in Tables 5.1.1–5.1.3.

Table 5.1.1 Family planning provision at ambulatory facilities

Ambulatory									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Offers FP services	45	100		46	100		46	100	
FP room									
Private room with visual and auditory privacy	45	95.6	3.1	46	100		46	89.1	4.6
Non-private room without auditory or visual privacy	45	2.2	2.2	46	0		46	0	
Visual privacy only	45	0		46	0		46	6.5	3.6
No privacy	45	2.2	2.2	46	0		46	2.2	2.2
Don't provide service/decline to respond	45	0		46	0		46	0	
Other	45	0		46	0		46	2.2	2.2

Table 5.1.2 Family planning provision at basic facilities

Basic									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Offers FP services	8	100		8	100		8	100	
FP room									
Private room with visual and auditory privacy	8	62.5	17.1	7	85.7	13.2	8	87.5	11.7
Non-private room without auditory or visual privacy	8	25	15.3	7	0		8	0	
Visual privacy only	8	0		7	0		8	0	
No privacy	8	0		7	0		8	12.5	11.7
Don't provide service/decline to respond	8	0		7	14.3	13.2	8	0	
Other	8	12.5	11.7	7	0		8	0	

*Family planning room data missing for one basic facility at first follow-up

Table 5.1.3 Family planning provision at complete facilities

Complete									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Offers FP services	6	100		6	100		6	100	
FP room									
Private room with visual and auditory privacy	6	100		6	100		6	100	
Non-private room without auditory or visual privacy	6	0		6	0		6	0	
Visual privacy only	6	0		6	0		6	0	
No privacy	6	0		6	0		6	0	
Don't provide service/decline to respond	6	0		6	0		6	0	
Other	6	0		6	0		6	0	

Facilities were also asked about contraceptive storage during the questionnaire. All facilities reported storing contraceptives, rather than contraceptives being delivered only during times when services are provided. At the baseline not all ambulatory and basic facilities reported storing family planning methods at all times, as shown in Tables 5.4.1 and 5.4.2.

Table 5.1.4 Family planning storage at ambulatory facilities

Ambulatory									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
FP storage									
Yes, stores contraceptives	45	95.6	3.1	46	97.8	2.2	46	100	
No, delivered when services are being provided	45	4.4	3.1	46	2.2	2.2	46	0	

Table 5.1.5 Family planning storage at basic facilities

Basic									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
FP storage									
Yes, stores contraceptives	8	87.5	11.7	8	100		8	100	
No, delivered when services are being provided	8	12.5	11.7	8	0		8	0	

Table 5.1.6 Family planning storage at complete facilities

Complete									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
FP storage									
Yes, stores contraceptives	6	100		6	100		6	100	
No, delivered when services are being provided	6	0		6	0		6	0	

5.2 Family planning methods observed

Tables 5.2.1–5.2.4 display the family planning methods observed by surveyors on the day of the visit (only if the facility reports storing family planning methods). These tables indicate if at least one unit of each contraception method was observed on the day of the survey.

Family planning method storage has increased since the baseline in CESAR facilities (Table 5.2.1), with the exception of progestin-only pill and combined injectable. No CESAR facilities stored these contraceptive methods at the second follow-up. All CESAR facilities now offer pregnancy tests and 93.5% have a trained doctor or nurse to perform IUD insertion. At the second follow-up, 90.3% of CESAR facilities have a trained doctor or nurse to perform implant insertion; these data were not captured at the baseline or first follow-up.

Table 5.2.1 Family planning methods observed at CESAR facilities

CESAR									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Observed FP methods									
Any pill	27	100		33	97	3.0	31	100	
Combined oral pill	27	96.3	3.6	33	87.9	5.7	31	100	
Progestin only pill	27	3.7	3.6	33	39.4	8.5	31	0	
Any injectable	27	100		33	100		31	100	
Combined injectable (1 month)	27	0		33	27.3	7.8	31	0	
Progestin only injectable (3 months)	27	100		33	97	3.0	31	100	
Male condom	27	96.3	3.6	33	100		31	100	
IUD	27	51.9	9.6	33	84.8	6.2	31	93.5	4.4
Reported services									
Offers pregnancy tests	27	88.9	6.1	33	100		31	100	
Trained doctor or nurse to perform IUD insertion	26	50	9.81	33	63.6	8.37	31	93.5	4.4
Trained doctor or nurse to perform implant insertion	-			-			31	90.3	5.31

*Trained doctor or nurse to perform implant insertion was not captured at the baseline or first follow-up; baseline and first follow-up only measured if facility has trained doctor to perform IUD insertion
**One facility at the baseline responded “don’t know/decline to respond” when asked if there was a doctor to perform IUD insertion; this facility was excluded

Family planning method storage has increased since the baseline in CESAMO facilities (Table 5.2.2), with the exception of progestin-only pill and combined injectable. All CESAMO facilities offer pregnancy tests and have a trained doctor or nurse to perform IUD or implant insertion at the second follow-up.

Table 5.2.2 Family planning methods observed at CESAMO facilities

CESAMO									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Observed FP methods									
Any pill	18	100		13	100		15	100	
Combined oral pill	18	83.3	8.8	13	92.3	7.4	15	100	
Progestin only pill	18	16.7	8.8	13	38.5	13.5	15	0	
Any injectable	18	94.4	5.4	13	100		15	100	
Combined injectable (1 month)	18	0		13	23.1	11.7	15	0	
Progestin only injectable (3 months)	18	94.4	5.4	13	92.3	7.4	15	100	
Male condom	18	94.4	5.4	13	100		15	100	
IUD	18	88.9	7.4	13	100		15	100	
Reported services									
Offers pregnancy tests	18	94.4	5.4	13	100		15	100	
Trained doctor or nurse to perform IUD insertion	18	88.9	7.41	13	92.3	7.39	15	100	
Trained doctor or nurse to perform implant insertion	-			-			15	100	

*Trained doctor or nurse to perform implant insertion was not captured at the baseline or first follow-up; baseline and first follow-up only measured if facility has trained doctor to perform IUD insertion

In general, family planning method storage of injectable and pills has decreased in CMI facilities at the second follow-up, however all CMI facilities store male condoms, IUDs, and IUD insertion kits (Table 5.2.3). All CMI facilities offer pregnancy tests but none have a trained doctor to perform tubal ligation or a vasectomy.

Table 5.2.3 Family planning methods observed at CMI facilities

CMI									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Observed FP methods									
Any pill	8	87.5	11.7	6	83.3	15.2	8	50	17.7
Combined oral pill	8	75	15.3	6	83.3	15.2	8	50	17.7
Progestin only pill	8	25	15.3	6	33.3	19.3	8	0	
Any injectable	8	87.5	11.7	6	100		8	62.5	17.1
Combined injectable (1 month)	8	25	15.3	6	16.7	15.2	8	0	
Progestin only injectable (3 months)	8	75	15.3	6	100		8	62.5	17.1
Male condom	8	87.5	11.7	6	100		8	100	
IUD	8	87.5	11.7	6	100		8	100	
IUD insertion kit	8	87.5	11.7	6	100		8	100	
Reported services									
Offers pregnancy tests	8	62.5	17.1	6	83.3	15.2	8	100	
Trained doctor to perform tubal ligation	8	0		6	16.7	15.2	8	0	
Trained doctor to perform vasectomy	8	0		6	0		8	0	

*Trained doctor or nurse to perform implant insertion was not captured at the baseline or first follow-up; baseline and first follow-up only measured if facility has trained doctor to perform IUD insertion
**Family planning data missing in two CMI facilities at the first follow-up

Hospitals have continuously kept family planning methods in stock, from the baseline to second follow-up (Table 5.2.4), with the exception of progestin-only pills and combined injectables. All hospitals offer pregnancy tests and have a trained doctor to perform tubal ligation at the second follow-up.

Table 5.2.4 Family planning methods observed at hospitals

Hospital									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Observed FP methods									
Any pill	6	100		5	100		6	100	
Combined oral pill	6	100		5	100		6	100	
Progestin only pill	6	16.7	15.2	5	80	17.9	6	0	
Any injectable	6	100		5	100		6	100	
Combined injectable (1 month)	6	0		5	80	17.9	6	16.7	15.2
Progestin only injectable (3 months)	6	100		5	100		6	100	
Male condom	6	100		5	100		6	100	
IUD	6	100		5	100		6	100	
IUD insertion kit	6	100		5	100		6	100	
Reported services									
Offers pregnancy tests	5	100		6	100		6	100	
Trained doctor to perform tubal ligation	6	100		6	100		6	100	
Trained doctor to perform vasectomy	6	83.3	15.21	6	66.7	19.25	6	83.3	15.21

*Trained doctor or nurse to perform implant insertion was not captured at the baseline or first follow-up; baseline and first follow-up only measured if facility has trained doctor to perform IUD insertion
**One facility at the baseline responded “don’t know/decline to respond” when asked if they offered pregnancy tests; this facility was excluded
***Family planning data missing in one hospital at the first follow-up

5.3 Teaching and awareness

Tables 5.3.1–5.3.3 illustrate the percent of facilities that promote family planning through individual and group family planning counseling. All facilities report providing these services from baseline to the second follow-up, with the exception of one basic facility at the baseline which did not offer group counseling and one ambulatory facility at the first follow-up which did not know if they offered group counseling.

Table 5.3.1 Family planning counseling provided at ambulatory facilities

Ambulatory									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Individual fp counseling	45	100		46	100		46	100	
Group FP counseling	45	100		45	100		46	100	

*One facility at the first follow-up reported “don’t know/decline to respond” when asked about group FP counseling; this facility was excluded

Table 5.3.2 Family planning counseling provided at basic facilities

Basic									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Individual fp counseling	8	100		8	100		8	100	
Group FP counseling	8	87.5	11.7	8	100		8	100	

Table 5.3.3 Family planning counseling provided at complete facilities

Complete									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Individual fp counseling	6	100		6	100		6	100	
Group FP counseling	6	100		6	100		6	100	

5.4 Composite family planning monitoring indicator

Facilities that meet the requirements of the composite family planning monitoring indicator offer family planning services and have, as observed by surveyors, certain family planning methods and no stock-out of those methods in the last three months. Each facility level requires varying methods, as displayed in Tables 5.4.1–5.4.4. Interviewers were instructed to observe the methods and check any kardex or written documentation for stock-out in the last three months. If the facility did not have documentation at the first or second follow-up regarding stock in the previous three months, the facility was considered to be stocked out of the family planning method and did not pass that portion of the indicator. The baseline survey did not capture whether or not the information came from a kardex, so it is assumed that all data collected on stock in the previous three months came from documentation, as was instructed.

All CESAR facilities had condoms, pills, and injectables on the day of the survey, but only 74.2% of facilities had these methods in the previous three months with no stock-out at the second follow-up evaluation (Table 5.4.1). This is a slight decrease from the 88.9% of CESAR facilities who had stock of all methods in the previous three months at the baseline.

Table 5.4.1 Composite family planning indicator at CESAR facilities

CESAR									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Condoms	27	96.3	3.6	33	100		31	100	
Any pill	27	100		33	97	3.0	31	100	
Any injectable	27	100		33	100		31	100	
Continuous availability of condoms, pills, and injectables in the previous three months	27	88.9	6.0	33	97	3.0	31	74.2	7.9

All CESAMO facilities had condoms, pills, injectables, and intrauterine devices (IUDs) on the day of the survey (Table 5.4.2). Only 86.7% of CESAMO facilities had stock of these four methods on the day of the survey as well as no stockout of condoms, pills, and injectables in the previous three months. IUDs were only required on the day of the survey. This is a slight decrease from the first follow-up evaluation, where all CESAMO facilities had stock of these methods in the previous three months.

Table 5.4.2 Composite family planning indicator at CESAMO facilities

CESAMO									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Condoms	18	94.4	5.4	13	100		15	100	
Any pill	18	100		13	100		15	100	
Any injectable	18	94.4	5.4	13	100		15	100	
Intrauterine device	18	88.9	7.4	13	100		15	100	
Continuous availability of condoms, pills, and injectables in the previous three months	18	88.9	7.4	13	100		15	86.7	8.8

All CMI facilities had condoms, injectables, and IUDs on the day of the survey, but only 87.5% had any pill on the day of the survey (Table 5.4.3). CMI facilities at the first and second follow-up evaluations were asked if there was a CESAMO nearby that provided the family planning methods. If this applied, the interviewers were instructed to observe the methods at the CESAMO facility and they would be applied to the indicator for CMIs; this was not captured at the baseline. Kardex observation was also not captured in these circumstances when methods were checked at the nearby CESAMO, and it is assumed that all stockout information at the CESAMO was captured using the kardex, as instructed.

Table 5.4.3 Composite family planning indicator at CMI facilities

CMI									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Condoms	8	87.5	11.7	6	100		8	100	
Any pill	8	87.5	11.7	6	83.3	15.2	8	87.5	11.7
Any injectable	8	87.5	11.7	6	100		8	100	
Intrauterine device	8	87.5	11.7	6	100		8	100	
Continuous availability of condoms, pills, and injectables in the previous three months	8	75	15.3	6	83.3	15.2	8	87.5	11.7

*At the first and second follow-ups, CMI facilities met the indicator if either the CMI facility itself or a nearby CESAMO facility carried the methods; these data were not captured at the baseline

All hospitals had condoms, pills, injectables, and IUDs on the day of the survey (Table 5.4.4). Only 83.3% of hospitals had stock of these four methods on the day of the survey as well as no stockout of condoms, pills, and injectables in the previous three months. IUDs were only required on the day of the survey.

Table 5.4.4 Composite family planning indicator at hospitals

Hospital									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Condoms	6	100		5	100		6	100	
Any pill	6	100		5	100		6	100	
Any injectable	6	100		5	100		6	100	
Intrauterine device	6	100		5	100		6	100	
Continuous availability of condoms, pills, and injectables in the previous three months	6	100		5	100		6	83.3	15.2

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

6.1 Service provision

This chapter summarizes key indicators and information 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 reviewed antenatal care medical records in ambulatory facilities, as well as delivery and postpartum care medical records in facilities at basic and complete level facilities.

Table 6.1.1 displays antenatal care (ANC) service provision for ambulatory facilities, while Tables 6.1.2 and 6.1.3 display antenatal care, delivery (DEL), and immediate postpartum care (PPM) provision in basic and complete facilities. All ambulatory facilities offer ANC services when asked in the questionnaire (Table 6.1.1). However, one ambulatory facility reported “don’t provide service/decline to respond” when asked to view the room during the observation component of the survey at the second follow-up evaluation.

Table 6.1.1 ANC service provision at ambulatory facilities

Ambulatory									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Offers ANC services	45	97.8	2.2	46	100		46	100	
ANC room									
Private room with auditory and visual privacy	44	100		45	93.3	3.7	46	89.1	4.6
Non-private room without auditory or visual privacy	44	0		45	6.7	3.7	46	0	
Visual privacy only	44	0		45	0		46	6.5	3.6
Other	44	0		45	0		46	2.2	2.2
No privacy	44	0		45	0		46	0	
Don't provide service/decline to respond	44	0		45	0		46	2.2	2.2

*ANC room data missing for one ambulatory facility at the baseline and first follow-up

No CMI facilities reported offering routine ANC services in the second follow-up questionnaire; however, 75% of these facilities reported having a room for ANC-PPM care when asked during the observation (Table 6.1.2). All CMI facilities reported offering delivery and immediate postpartum care services (PPC).

Table 6.1.2 ANC/DEL/PPM service provision at CMI facilities

CMI									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Offers ANC services	8	12.5	11.7	8	25	15.3	8	0	
Offers routine delivery services (non-urgent)	8	100		8	100		8	100	
Offers immediate PPC services	8	100		8	87.5	11.7	8	100	
ANC - PPC room									
Private room with auditory and visual privacy	7	71.4	17.1	6	100		8	75	15.3
Non-private room without auditory or visual privacy	7	0		6	0		8	0	
Visual privacy only	7	0	0	6	0	0	8	0	0
Other	7	0	0	6	0	0	8	0	0.0
No privacy	7	0	0	6	0	0	8	0	0
Don't provide service/decline to respond	7	28.6	17.07	6	0	0	8	25	15.31
Delivery room									
Private room with auditory and visual privacy	8	87.5	11.69	7	100	0	8	87.5	11.69
Non-private room with neither auditory or visual privacy	8	12.5	11.69	7	0	0	8	0	0
Visual privacy only	8	0	0	7	0	0	8	0	0
No privacy	8	0	0	7	0	0	8	0	0
Other	8	0	0	7	0	0	8	12.5	11.69
Don't provide service/decline to respond	8	0	0	7	0	0	8	0	0

*ANC room data missing for one basic facility at the baseline
**ANC room data missing for two basic facilities at the first follow-up; DEL room data missing for one basic facility at the first follow-up

All hospitals report offering routine delivery and immediate postpartum care services at the second follow-up (Table 6.1.3). Almost all hospitals also report offering antenatal care services; however, one hospital reported “don’t provide service/decline to respond” and was excluded. The rooms for antenatal care and delivery are all private with auditory and visual privacy at the second follow-up.

Table 6.1.3 ANC/DEL/PPM service provision at hospitals

	Hospital								
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Offers ANC services	6	66.7	19.3	6	100		5	100	
Offers routine delivery services (non-urgent)	6	100		6	100		6	100	
Offers immediate PPC services	6	100		6	66.7	19.3	6	100	
ANC - PPC room									
Private room with auditory and visual privacy	6	100		6	100		6	100	
Non-private room without auditory or visual privacy	6	0		6	0		6	0	
Visual privacy only	6	0		6	0		6	0	
Other	6	0		6	0		6	0	
No privacy	6	0		6	0		6	0	
Don't provide service/decline to respond	6	0		6	0		6	0	
Delivery room									
Private room with auditory and visual privacy	6	83.3	15.21	6	100		6	100	
Non-private room with neither auditory or visual privacy	6	16.7	15.21	6	0		6	0	
Visual privacy only	6	0		6	0		6	0	
No privacy	6	0		6	0		6	0	
Other	6	0		6	0		6	0	
Don't provide service/decline to respond	6	0		6	0		6	0	

*One hospital reported “don’t provide service/decline to respond” when asked if they offer ANC services at the second follow-up; this facility was excluded

6.2 ANC–PPC equipment

Facilities were checked for the availability of equipment necessary for antenatal and postpartum care (if they reported providing the service in the observation survey). All equipment was observed by data collectors during the observation survey. Interviewers were instructed to observe and test for functionality (if possible) and, unless noted otherwise, the facility only needs to have at least functioning piece of equipment on the day of the survey. Tables 6.2.1–6.2.4 list the equipment and percent of facilities with each input at each type of facility.

64.5% of CESAR facilities had all equipment necessary for ANC–PPM care at the second follow-up evaluation. The stock of hand lamp/gooseneck lamps improved the most, with only 40.7% of CESAR facilities having this at the baseline on the day of the survey.

Table 6.2.1 ANC–PPM equipment at CESAR facilities

CESAR									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
All equipment available:	27	66.7	9.1	32	71.9	7.9	31	64.5	8.6
Standing scale	27	81.5	7.5	33	100		31	96.8	3.2
Height rod	27	88.9	6.0	32	100		31	100	
Gynecological exam table/bed	27	81.5	7.5	32	71.9	7.9	31	64.5	8.6
Obstetrical tape/measuring tape	27	96.3	3.6	32	100		31	100	
Hand lamp/goosenck lamp	27	40.7	9.5	32	84.4	6.4	31	80.6	7.1
Perinatal maternal medical history	27	96.3	3.6	32	100		31	100	
Perinatal maternal card	27	96.3	3.6	32	100		31	100	

*When including all examination tables, not solely gynecological exam beds (with stirrups), 92.6% of baseline, 97% of first follow-up, and 100% of second follow-up facilities had a functional exam bed/table

All CESAMO facilities had the required equipment on the day of the survey at the second follow-up evaluation. This is an improvement from the baseline and first follow-up, where only 93.8% and 83.3% had the equipment, respectively. At the baseline, data were not captured for perinatal maternal medical history and perinatal maternal card at one CESAMO facility.

Table 6.2.2 ANC–PPM equipment at CESAMO facilities

CESAMO									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
All equipment available:	16	93.8	6.1	12	83.3	10.8	14	100	
Standing scale	17	94.1	5.7	12	100		14	100	
Height rod	17	94.1	5.7	12	91.7	8	14	100	
Gynecological exam table/bed	17	100		12	91.7	8	14	100	
Obstetrical tape/measuring tape	17	100		12	100		14	100	
Hand lamp/goosenck lamp	17	94.1	5.7	12	91.7	8	14	100	
Perinatal maternal medical history	16	100		12	100		14	100	
Perinatal maternal card	16	100		12	100		14	100	

*Perinatal maternal medical history and perinatal maternal card were not captured at one facility at the baseline
**When including all examination tables, not solely gynecological exam beds (with stirrups), 100% of first follow-up facilities had a functional exam bed/table

Only 16.7% of CMI facilities had stock of all equipment on the day of the survey at the second follow-up evaluation. While this is a large decrease from the 83.3% of facilities that had stock at the first follow-up, the only piece of equipment that was not present at the second follow-up was the perinatal maternal card. CMI facilities had all other equipment, as displayed in Table 6.2.3.

Table 6.2.3 ANC–PPM equipment at CMI facilities

CMI									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
All equipment available:	5	60	21.9	6	83.3	15.2	6	16.7	15.2
Standing scale	5	80	17.9	6	100		6	100	
Height rod	5	100		6	100		6	100	
Gynecological exam table/bed	5	100		6	100		6	100	
Obstetrical tape/measuring tape	5	80	17.9	6	100		6	100	
Hand lamp/goosenck lamp	5	100		6	100		6	100	
Blood pressure apparatus	5	100		6	100		6	100	
Stethoscope	5	100		6	100		6	100	
IUD insertion kit	5	100		6	100		6	100	
Perinatal maternal medical history	5	80	17.9	6	100		6	100	
Perinatal maternal card	5	80	17.9	6	83.3	15.2	6	16.7	15.2

Almost all hospitals had the equipment necessary for ANC–PPM care at the second follow-up (Table 6.2.4). Only one hospital did not have a perinatal maternal card available on the day of the survey. This is a large improvement from the baseline, where only 33.3% of hospitals had all available equipment.

Table 6.2.4 ANC–PPM equipment at hospitals

Hospital									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
All equipment available:	6	33.3	19.2	6	83.3	15.2	6	83.3	15.2
Standing scale	6	83.3	15.2	6	100		6	100	
Height rod	6	100		6	100		6	100	
Gynecological exam table/bed	6	100		6	100		6	100	
Obstetrical tape/measuring tape	6	83.3	15.2	6	100		6	100	
Hand lamp/goosenck lamp	6	100		6	100		6	100	
Blood pressure apparatus	6	100	0	6	100		6	100	
Stethoscope	6	100	0	6	100		6	100	
IUD insertion kit	6	100	0	6	83.3	15.2	6	100	
Perinatal maternal medical history	6	83.3	15.2	6	100		6	100	
Perinatal maternal card	6	83.3	15.2	6	100		6	83.3	15.2

6.3 ANC medical record review: 4 ANC visits with quality performance indicator

Doctors and nurses systematically selected antenatal care (ANC) records from ambulatory facilities for women who delivered in the last two years. ANC visits with quality are defined by the performance indicator, which includes 4 ANC visits minimum, with physical checkups performed at each ANC visit. Additionally, specific laboratory tests must be performed at least once during the pregnancy. The indicator is comprised of the following:

1. The woman had at least four antenatal care visits throughout her pregnancy with the following checked and documented at each visit in the record:
    a. Weight
    b. Blood pressure
    c. Fetal movement (if the pregnancy was > 20 weeks gestation)
    d. Fetal heart rate (if the pregnancy was > 20 weeks gestation)

e. Fundal height (if the pregnancy was >= 22 weeks gestation)

2. The woman was administered all of the following laboratory tests at least once during her pregnancy:
   a. Hemoglobin (Hb)
   b. Blood glucose
   c. Rh factor
   d. Urinalysis
   e. Blood group
   f. VDRL/RPR
   g. HIV

Figure 6.3.1 displays a breakdown of this indicator from the baseline to second follow-up evaluation. The first line displays if there was a minimum of four visits, regardless of whether or not any checks were recorded. The second line displays if there was a minimum of four visits that had the appropriate checks, listed above as checks 1a–1e. 94.1% of all medical records had 4 ANC visits with the necessary checks and laboratory tests at the second follow-up evaluation. This is a large improvement from the 23.2% of baseline medical records that passed the indicator. At the baseline, the laboratory test that was least performed or recorded was blood glucose, which was found in only 30.4% of records.

Figure 6.3.1 4 ANC visits with quality

	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
At least 4 ANC visits	125	86.4	3.1	236	69.9	3.0	272	95.6	1.2
At least 4 ANC visits according to the norm	125	85.6	3.1	236	68.2	3.0	272	94.5	1.4
All lab tests performed at least once during pregnancy:	125	27.2	4.0	236	88.1	2.1	272	98.2	0.8
Hb	125	83.2	3.3	236	91.1	1.9	272	98.5	0.7
Blood glucose	125	30.4	4.1	236	96.6	1.2	272	98.5	0.7
Rh factor	125	85.6	3.1	236	96.6	1.2	272	98.5	0.7
Urinalysis	125	81.6	3.5	236	93.2	1.6	272	98.9	0.6
Blood group	125	85.6	3.1	236	97	1.1	272	98.5	0.7
VDRL/RPR	125	84	3.3	236	91.9	1.8	272	98.9	0.6
HIV	125	94.4	2.1	236	96.2	1.2	272	99.3	0.5
4 ANC visits with appropriate checks and laboratory tests	125	23.2	3.8	236	66.1	3.1	272	94.1	1.4

*4 ANC visits according to the norm include: weight checked + blood pressure checked + fetal movement and fetal heart rate (if gestational age > 20 weeks) + fundal height checked (if gestational age >=22 weeks)
**RPR was not captured at baseline or the first follow-up as an alternative to VDRL. At the baseline, all checks were only captured at the first visit.

6.4 ANC medical record review: Timely first ANC visit performance indicator

Doctors and nurses systematically selected antenatal care (ANC) records from ambulatory facilities for women who delivered in the last two years. Records were evaluated on the timeliness of the first ANC visit using reported gestational age in the record. According to the timely ANC performance indicator definition, the first visit should be at or before 12 weeks' gestation. Among the records sampled, 89.7% of women had their first ANC visit within this timeframe at the second follow-up evaluation. This is an improvement from the baseline and first follow-up evaluation, where only 59.2% and 63.6% had a timely first ANC visit, respectively.

Figure 6.4.1 displays the distribution of gestational age at the first ANC visit from baseline to second follow-up; the blue box shows the 50% interquartile range of first ANC visits. As shown in the figure below, the majority of women are consistently being checked much earlier in their pregnancy than at the baseline.

Figure 6.4.1 Gestational age at first ANC visit

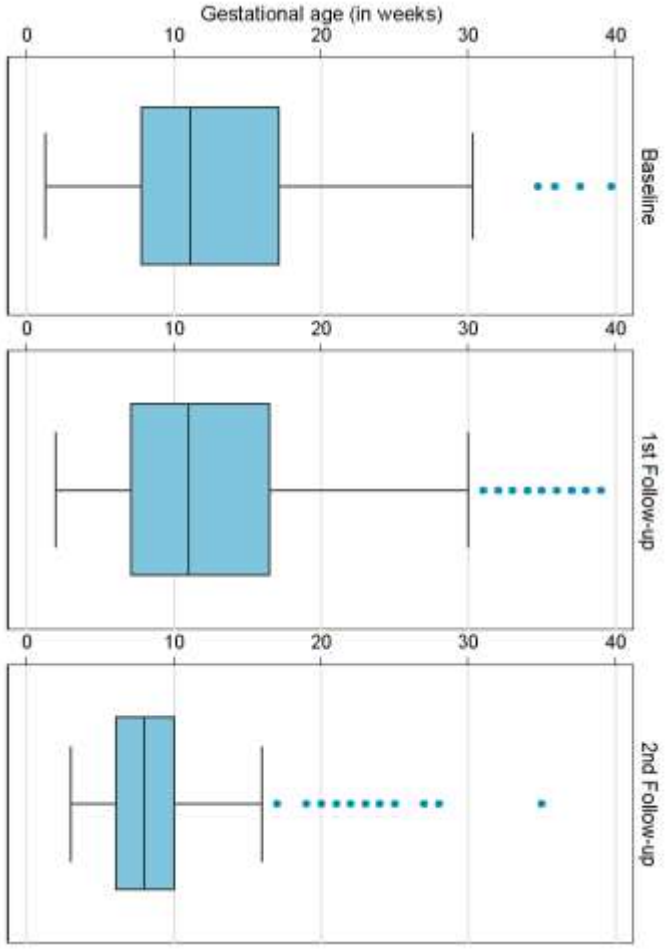
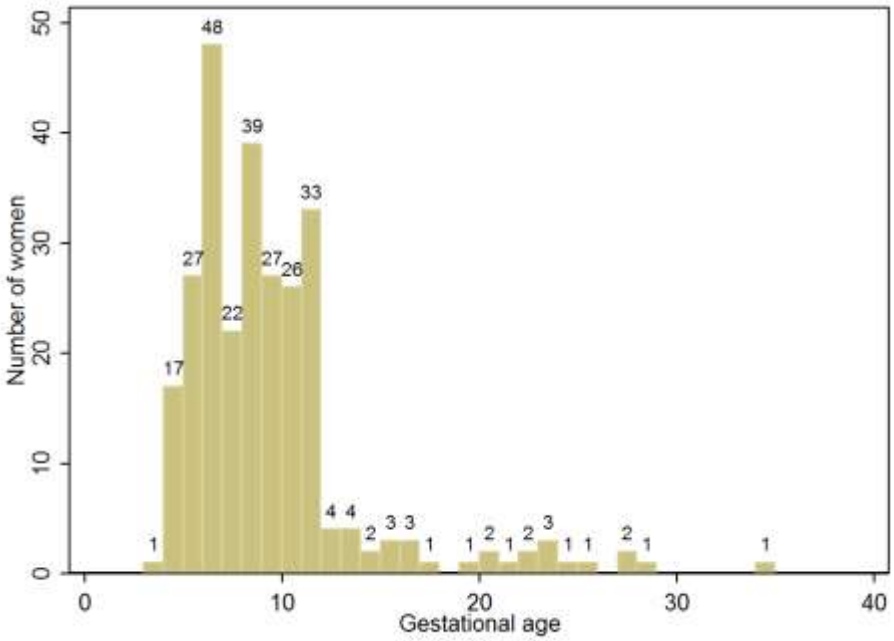


Figure 6.4.2 displays the distribution of gestational ages at the first ANC visit at the second follow-up evaluation.

Figure 6.4.2 Gestational age at the first ANC visit of women who delivered in the last two years



6.5 Delivery medical record review: partograph performance indicator

Doctors and nurses selected records of uncomplicated deliveries in the last two years from basic facilities that were systematically sampled in advance by IHME. These records were evaluated for a complete partograph, as defined by the partograph performance indicator. According to the definition, a woman who arrived in imminent delivery or for an elective caesarian section is not required to have a complete partograph for the purposes of this indicator; however, if a complete partograph was included in the record, regardless of the type of delivery, the partograph was evaluated for completeness and correctness.

Figure 6.5.1 displays each component of this indicator. As stated previously, a woman is required to have a complete partograph record if she did not arrive in imminent birth (one record), but if a complete partograph was found in the record it was included and evaluated. In total, 94 records were evaluated (84 records of women who arrived in imminent birth, one woman who did not arrive in imminent birth, four records where delivery type was not recorded). In total, 97.9% of partographs were complete at the second follow-up evaluation. This indicator was captured only at the first and second follow-up evaluations, with 91.3% of partographs completed at the first follow-up.

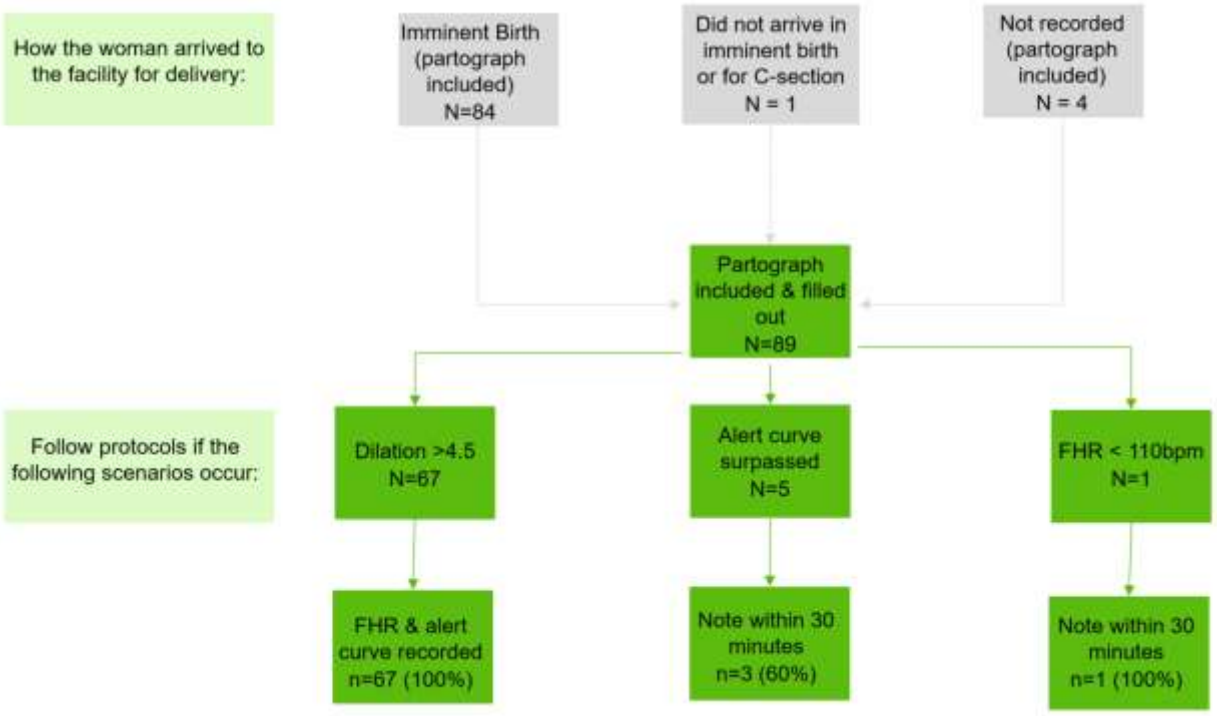
If the woman has a complete partograph and never encountered the following situation, the medical record passes this indicator. If the woman encountered any of three scenarios, the appropriate action must be met in the record:

1. If the dilation was ever >4.5cm in the record, the alert curve and fetal heart rate must be recorded
2. If the alert curve was surpassed, a note must exist within 30 minutes of the incident in the record

3. If the fetal heart rate (FHR) dropped below 110 beats per minute, a note must exist within 30 minutes of the incident in the record

*(At the first follow-up only FHR that dropped below 120 bpm was captured and used to calculate this indicator)

Figure 6.5.1 Partograph completion at the second follow-up evaluation



6.6 Delivery medical record review: oxytocin administration

During the review of uncomplicated delivery medical records in basic and complete facilities, interviewers reported administration of oxytocin after deliveries in the last two years. Women should be administered oxytocin or another uterotonic, as shown in Tables 6.6.1 and 6.6.2. The majority of women are administered oxytocin, as opposed to another uterotonic, in basic and complete facilities. The 1.5% of women in basic facilities and 1.8% of women in complete facilities that were administered another uterotonic were also given oxytocin.

Figure 6.6.1 Oxytocin/other uterotonic administration in CMI medical records

CMI									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Oxytocin was administered after birth	120	97.5	1.4	99	92.9	2.6	67	98.5	1.5
Other uterotonic was administered after birth	120	0		38	10.5	5	67	1.5	1.5
Oxytocin/other uterotonic was administered after delivery	120	97.5	1.4	99	92.9	2.6	67	98.5	1.5

Figure 6.6.2 Oxytocin/other uterotonic administration in hospital medical records

Hospital									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Oxytocin was administered after birth	114	93	2.4	136	95.6	1.8	55	100	
Other uterotonic was administered after birth	114	0.9	0.9	4	0		55	1.8	1.8
Oxytocin/other uterotonic was administered after delivery	114	93	2.4	136	95.6	1.8	55	100	

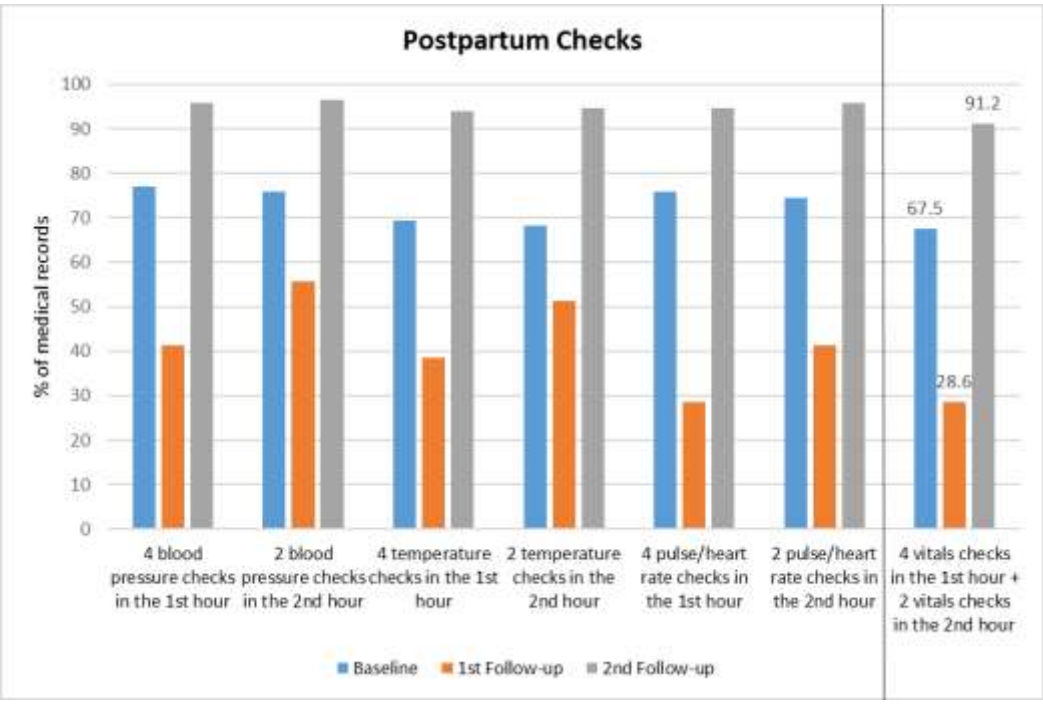
6.7 Postpartum medical record review: immediate postpartum care performance indicator

Doctors and nurses reviewed postpartum records of uncomplicated deliveries in the last two years from basic and complete facilities that were systematically sampled in advance by IHME. These records were evaluated for quality postpartum care for women, as defined by the institutional postpartum indicator. This indicator does not evaluate women who were referred to the facility, and who delivered by caesarean section. The indicator criteria include:

1. Four checks during the first hour after delivery for:
    a. blood pressure
    b. temperature
    c. pulse/heart rate
2. Two checks during the second hour after delivery for:
    a. blood pressure
    b. temperature
    c. pulse/heart rate

Figure 6.7.1 displays the components of this indicator during the second follow-up evaluation. 91.2% of women were checked six times or more for blood pressure, temperature, and pulse/heart rate at the second follow-up.

Figure 6.7.1 Postpartum checks from baseline to second follow-up



*Baseline and first follow-up did not capture if the woman was referred from another facility or delivery type; baseline and first follow-up did not capture heart rate as an alternative to pulse

Chapter 7 MATERNAL & NEONATAL HEALTH: COMPLICATIONS

7.1 Emergency obstetric and neonatal care service provision

This chapter summarizes key indicators and information related to the management of maternal and neonatal complications at the basic and complete level facilities. Tables 7.1.1 and 7.1.2 display the setting of the emergency care provision in CMIs and hospitals, all of which offer emergency care in a private room with auditory and visual privacy at the second follow-up evaluation.

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

CMI									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Emergency room:									
Private room with visual and auditory privacy	8	87.5	11.7	7	100		8	100	
Non-private room without visual or auditory privacy	8	12.5	11.7	7	0		8	0	
Visual privacy only	8	0		7	0		8	0	
No privacy	8	0		7	0		8	0	
Don't provide service/decline to respond	8	0		7	0		8	0	

Table 7.1.2 Emergency obstetric and neonatal care service provision in complete facilities

Hospital									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Emergency room:									
Private room with visual and auditory privacy	6	83.3	15.2	6	100		6	100	
Non-private room without visual or auditory privacy	6	16.7	15.2	6	0		6	0	
Visual privacy only	6	0		6	0		6	0	
No privacy	6	0		6	0		6	0	
Don't provide service/decline to respond	6	0		6	0		6	0	

7.2 Composite emergency drug monitoring indicator for CMIs

Specific drugs are necessary for emergency care in basic facilities, as defined by the CMI monitoring indicator for emergency care at the second follow-up evaluation. The drugs included in this indicator can be found in Table 7.2.1 below. Interviewers were instructed to observe the drugs and check any kardex or written documentation for stockout in the last three months. If the facility did not have documentation at the first or second follow-up regarding stock in the previous three months, the facility was considered to be stocked out of the drug and did not pass that portion of the indicator. The baseline survey did not capture whether or not the information came from a kardex, so it is assumed that all data collected on stock in the previous three months came from documentation, as was instructed.

As shown in Table 7.2.1, all CMI facilities had the required drugs on the day of the survey, but only 87.5% had no stockout in the previous three months. Stock in the previous three months for these

specific drugs was not captured at the baseline.

Table 7.2.1 Emergency drug availability in CMI facilities

CMI									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Availability of all drugs on the day of the survey:	8	75	15.3	7	85.7	13.2	8	100	
Ampicillin	8	87.5	11.7	7	100		8	100	
Ergometrine/oxytocin/ergobasine	8	100		7	100		8	100	
Gentamicin	8	87.5	11.7	7	85.7	13.2	8	100	
Magnesium sulfate	8	100		7	100		8	100	
Continuous availability of all drugs in the previous three months	-			7	85.7	13.2	8	87.5	11.7

*Availability of ampicillin, ergometrine/oxytocin/ergobasine, gentamicin, & magnesium sulfate was not captured for the previous three months at the baseline

7.3 Composite emergency equipment and drug monitoring indicator for hospitals

Specific equipment and drugs are necessary for emergency care in hospitals, as defined by the hospital monitoring indicator for emergency care at the second follow-up evaluation. The equipment included in this indicator can be found in Table 7.3.1 below. All equipment was observed by data collectors during the observation survey. Interviewers were instructed to observe and test for functionality (if possible) and, unless noted otherwise, the facility only needs to have at least functioning piece of equipment on the day of the survey. The drugs included in this indicator can be found in Table 7.3.2 below. Interviewers were instructed to observe the drugs and check any kardex or written documentation for stockout in the last three months. If the facility did not have documentation at the first or second follow-up regarding stock in the previous three months, the facility was considered to be stocked out of the drug and did not pass that portion of the indicator. The baseline survey did not capture whether or not the information came from a kardex, so it is assumed that all data collected on stock in the previous three months came from documentation, as was instructed.

As shown in Table 7.3.1, all hospitals had the required equipment at the second follow-up evaluation. This was an improvement from the baseline, where no hospitals had all required equipment.

Table 7.3.1 Emergency equipment availability in hospitals

Hospitals									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
All of the following functional equipment:	6	0		6	50	20.4	6	83.3	15.2
Blood pressure apparatus	6	83.3	15.2	6	100		6	100	
Stethoscope	6	66.7	19.2	6	100		6	83.3	15.2
Pediatric/neonatal stethoscope	6	0		6	83.3	15.2	6	83.3	15.2
Doppler portatil/Pinard stethoscope	6	100		6	100		6	100	
Autoclave/heat sterilizer	6	100		6	100		6	100	
Oxygen tank	6	83.3	15.2	6	100		6	100	
Adult resuscitation bag	6	83.3	15.2	6	100		6	100	
Neonatal resuscitation bag	6	100		6	100		6	100	
Laryngoscope	6	100		6	83.3	15.2	6	100	
MVA equipment	6	66.7	19.2	6	100		6	100	
Anesthesia equipment	6	66.7	19.2	6	66.7	19.2	6	100	

As shown in Table 7.3.2, all hospitals had the required drugs on the day of the survey at the first and second follow-up evaluations. However, only stockout data were captured for these drugs at the second follow-up evaluation, where only 33.3% of facilities had stock in the previous three months.

Table 7.3.2 Emergency drug availability in hospitals

Hospitals									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Drug availability on the day of the survey:	6	0		6	100		6	100	
Adrenaline	6	100		6	100		6	100	
Isotonic crystalloids (saline solution or Ringer's lactate)	6	83.3	15.2	6	100		6	100	
Sodium bicarbonate	6	100		6	100		6	100	
Amoxicillin/Ampicillin/Amikacin sulfate/Crystalline penicillin G/Clindamycin/ Cephalexin/Dicloxacillin/Doxycycline/ Gentamicin/Metronidazole	6	100		6	100		6	100	
Furosemide	6	100		6	100		6	100	
Diazepam	6	100		6	100		6	100	
Magnesium sulfate	6	100		6	100		6	100	
Phenobarbital/Phenobarbital sodium	6	100		6	100		6	100	
Hydralazine/Hydralazine hydrochloride/Methyldopa/ Propanolol/Nifedipine	6	100		6	100		6	100	
Tetracycline opthalmic ointment	6	16.7	15.2	6	100		6	100	
Naloxone hydrochloride	6	83.3	15.2	6	100		6	100	
Dextrose	6	66.7	19.2	6	100		6	100	
Normal saline solution for washing	6	66.7	19.2	6	100		6	100	
Dexamethasone/Betamethasone	6	83.3	15.2	6	100		6	100	
Ergometrine/Ergobasine maleate/Oxytocin	6	100		6	100		6	100	
Atropine/Atropine sulfate/Epinephrine	6	100		6	100		6	100	
Continous availability of all drugs for the previous 3 months	-			-			6	33.3	19.2

*Stockout information not captured at the baseline; stockout information for atropine sulfate was not captured at the second follow-up

**Epinephrine, crystalline penicillin G, phenobarbital sodium not captured at baseline. Baseline instruments specified drug amounts while second follow-up did not.

Table 7.3.3 displays the composite indicator of all the components listed in the tables above. It is important to note that while the overall indicator value decreased from the first follow-up (50%) to second follow-up (33.3%), these values are not comparable because continuous availability of drugs was not captured.

Table 7.3.3 Composite emergency monitoring indicator for hospitals

Hospitals									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
All equipment available	6	0		6	50	20.4	6	83.3	15.2
Drug availability on the day of the survey	6	0		6	100		6	100	
Continous availability of all drugs for the previous 3 months	-			-			6	33.3	19.2
All available drugs and equipment for emergency care	6	0		6	50	20.4	6	33.3	19.2

7.4 Uterine balloon availability

During the questionnaire, interviewers asked the facility about their use of and training on uterine balloons. This information was only captured at the second follow-up. As shown in Table 7.4.1, 50% of basic facilities and all complete facilities use a uterine tamponade balloon for obstetric hemorrhage. If the facility reported using a uterine tamponade balloon, they were asked all of the following questions displayed in the table about type of balloon, disposable balloons, and training.

The Bakri balloon is the most common type used at both basic and complete facilities. Facilities that utilize the balloon were also asked if they have a disposable tamponade kit, and if so, whether this is commercial or prepared by facility personnel. Only three basic facilities reported using a disposable kit, two of which prepare the materials themselves. Three complete facilities also reported using a disposable tamponade kit, all three of which are commercial. As shown at the bottom of Table 7.4.1, all complete facilities reported training personnel how to use the balloon and how to assemble a hydrostatic balloon in the last year.

Table 7.4.1 Uterine balloon use at the second follow-up evaluation

	Basic			Complete		
	N	%	SE	N	%	SE
Facility uses a uterine tamponade balloon for obstetric hemorrhage:	8	50	17.7	6	100	0
Type of balloon used most often:						
Bakri	3	66.7	27.2	6	66.7	19.2
Rusch	3	0	0	6	0	0
Ebb (Belfort-Dildy)	3	0	0	6	0	0
Tube Sengstaken-Blakemore	3	0	0	6	0	0
Condom-based balloon	3	33.3	27.2	6	16.7	15.2
Foley catheter	3	0	0	6	16.7	15.2
Other	3	0	0	6	0	0
Facility has a dispsable tamponade kit:	4	75	21.7	6	50	20.4
Disposable kit is commercial	3	33.3	27.2	3	100	0
Disposable kit is prepared with materials by facilty personnel	3	66.7	27.2	3	0	0
Personnel was trained in the last year to use the balloon for hemorrhage	4	75	21.7	6	100	0
Personnel was trained in the last year to assemble a hydrostatic balloon	3	33.3	27.2	6	100	0

*One basic facility responded “Don’t know” to the type of balloon used most often and was excluded; one basic facility responded “Don’t know” when asked if personnel were trained in the last year to assemble a hydrostatic balloon. This facility

was excluded

7.5 Medical record review: neonatal complications performance & monitoring indicators

Doctors and nurses evaluated records of neonatal complications (prematurity, sepsis, and asphyxia) from facilities that were systematically sampled in advance by IHME. These records were used to evaluate quality of care, as defined by the neonatal complications performance and monitoring indicators. The neonatal performance indicator includes only the data from complete facilities, while the monitoring indicator includes all data from basic and complete facilities found below. Each following section displays the components of the medical record that should be met for both basic and complete facilities.

Tables 7.5.1 and 7.5.2 display the amount of data collected for each type of complication at basic and complete facilities.

Table 7.5.1 Neonatal complications in basic facilities

Basic		
	Baseline	2nd Follow-up
Prematurity	1	13
Sepsis	10	33
Asphyxia	8	13
Total	19	59

Table 7.5.2 Neonatal complications in complete facilities

Complete		
	Baseline	2nd Follow-up
Prematurity	10	11
Sepsis	47	60
Asphyxia	13	15
Total	72	87

PREMATURITY

There were 12 records from basic and 11 records from complete facilities of premature neonates at the second follow-up. Tables 7.5.3 and 7.5.4 display all of the conditions the medical record must meet in order to pass the indicator. Each category can be found highlighted in light gray in the tables with its subcomponents listed below. The following criteria must be met in the medical record for prematurity:

1. The neonate must have the following **vital signs** checked:
    - Weight
    - Pulse/heart rate
    - Respiratory rate
    - Silverman-Anderson test
    - Head circumference

- APGAR score (at 1 or 5 minutes)/skin color

2. The neonate must have the following **laboratory tests** performed (if record is from a complete facility):
    - Glycemia
    - Oxygen saturation

3. The following must have been performed:
    - Gestational age calculated using Capurro/Ballard method (if neonate was not referred from another facility)
    - Classification according to gestational age (if neonate was not referred from another facility)
    - Heat application
    - Breastfed/given glucose
    - Evaluated by a doctor (if record is from a basic facility)
    - Evaluated by a specialist (if record is from a complete facility)

4. Neonate was referred (if <2000 gr, or had pneumonia, diarrhea, neurological complications, convulsions, or hypoglycemia) (if record is from a basic facility)

5. The child must have the following appropriate management of complications (pneumonia, diarrhea, convulsions, neurologic complications, and hypoglycemia) as shown in the table (if record is from a complete facility).

No records from basic facilities at the baseline or second follow-up were managed appropriately. As seen in Table 7.5.3, the Silverman-Anderson test was not recorded on any of the medical records, causing no medical records to pass the prematurity component of the indicator. The one neonatal record from the baseline did not have additional complications or weigh less than 2,000 grams, so the neonate was not required to be referred to a complete facility, however, all 12 neonates from the second follow-up had either an additional complication or weighed less than 2,000 grams. Of these 12 records, only 58.3% were referred to a complete facility.

Table 7.5.3 Premature neonates in basic facilities

	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Gestational age calulated using the Capurro or Ballard test (if neonate was not referred from another facility)	1	100		12	91.7	8.0
Classification based on gestational age (if neonate was not referred from another facility)	1	100		12	83.3	10.8
Vital signs checked:	1	0		12	0	
Weight	1	100		12	100	
Heart rate/pulse	1	0		12	83.3	10.8
Respiratory rate	1	100		12	91.7	8.0
Silverman-Anderson test	1	0		12	0	
Head circumference	1	100		12	83.3	10.8
APGAR score (at 1 or 5 minutes)/skin color	1	100		12	100	
Heat application	1	100		12	75	12.5
Neonate was fed glucose	1	100		12	50	14.4
Evaluated by a doctor	1	100		12	91.7	8.0
Referred to a complete facility (if <2000 gr or had pneumonia, diarrhea, neurological complications, convulsions, or hypoglycemia)	0			12	58.3	14.2
Prematurity managed according to the norm	1	0		12	0	

72.7% of the records in complete facilities that were evaluated for prematurity were managed according to the norm, as shown in Table 7.5.4. This is an improvement from the baseline records, where only 20% were managed according to the norm. This is largely due to the lack of laboratory tests found in the records.

Table 7.5.4 Premature neonates in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Gestational age calulated using the Capurro or Ballard test (if neonate was not referred from another facility)	10	100		11	100	
Classification based on gestational age (if neonate was not referred from another facility)	10	100		11	90.9	8.7
Vital signs checked:	10	70	14.5	11	81.8	11.6
Weight	10	100		11	100	
Heart rate/pulse	10	90	9.5	11	100	
Respiratory rate	10	100		11	100	
Silverman-Anderson test	10	80	12.6	11	81.8	11.6
Head circumference	10	100		11	100	
APGAR score (at 1 or 5 minutes)/skin color	10	100		11	100	
Laboratory tests:	10	20	12.6	11	90.9	8.7
Glucose test	10	50	15.8	11	90.9	8.7
Oxygen saturation	10	50	15.8	11	100	
Heat application	10	100		11	100	
Neonate was fed glucose	10	100		11	100	
Evaluated by a specialist	10	100		11	100	
Appropriate treatment of the following:	1	0		3	100	
If pneumonia: antibiotics	1	0		3	100	
If diarrhea: IV solution + antibiotics	0			0		
If seizures: anticonvulsants	0			0		
If hypoglycemia: Glucose IV	0			0		
Prematurity managed according to the norm	10	20	12.6	11	72.7	13.4

SEPSIS

There were 33 records from basic and 60 records from complete facilities of neonates with sepsis at the second follow-up. Tables 7.5.5 and 7.5.6 display all of the conditions the medical record must meet in order to pass the indicator. Each category can be found highlighted in light gray in the tables with its subcomponents listed below. The following criteria must be met in the medical record for sepsis:

1. The neonate must have the following **vital signs** checked:
    - Pulse/heart rate
    - Respiratory rate
    - Temperature

2. The neonate must have the following **laboratory tests** performed (if record is from a complete facility):
    - Oxygen saturation
    - Complete blood count : platelets + leukocytes + hemoglobin + hematocrit
    - Blood culture

- C-reactive protein
- Neutrophil band ratio/Absolute ratio of neutrophils

3. The neonate was administered antibiotics

4. The neonate was evaluated by a specialist (if record is from a complete facility)

5. The neonate was evaluated by a doctor (if record is from a basic facility)

6. The neonate was referred to a complete facility (if record is from a basic facility)

As shown in Table 7.5.5, only 20% of basic records from the baseline were managed according to the norm, while 51.5% of records from the second follow-up were managed according to the norm. The largest improvement was the doctor's evaluation, where only 40% of records met this requirement at the baseline and increased to 78.8% at the second follow-up.

Table 7.5.5 Neonates with sepsis in basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	10	70	14.5	33	90.9	5.0
Heart rate/pulse	10	80	12.6	33	93.9	4.2
Respiratory rate	10	80	12.6	33	97	3.0
Temperature	10	100		33	100	
Administered antibiotics	10	80	12.6	33	90.9	5.0
Evaluated by a doctor	10	40	15.5	33	78.8	7.1
Referred to a complete facility	10	70	14.5	33	63.6	8.4
Sepsis managed according to the norm	10	20	12.6	33	51.5	8.7

Of the 60 neonates that were evaluated for sepsis at complete facilities, only 28.3% were managed according to the norm. This is due to the lack of laboratory tests found in the medical records, especially the blood culture and neutrophil band ratio/absolute ratio of neutrophils.

Table 7.5.6 Neonates with sepsis in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	
Vital signs checked:	47	97.9	2.1	60	100	
Heart rate/pulse	47	100		60	100	
Respiratory rate	47	97.9	2.1	60	100	
Temperature	47	97.9	2.1	60	100	
Labortory tests:	47	2.1	2.1	60	30	5.9
Oxygen saturation	47	17	5.5	60	60	6.3
Complete blood count / (platelets + leukocytes + hemoglobin + hematocrit)	47	76.6	6.2	60	86.7	4.4
Blood culture	47	4.3	2.9	60	46.7	6.4
C-reactive protein	47	76.6	6.2	60	91.7	3.6
Neutrophil band ratio/Absolute ratio of neutrophils	47	2.1	2.1	60	41.7	6.4
Administered antibiotics	47	97.9	2.1	60	100	
Evaluated by a specialist	47	89.4	4.5	60	95	2.8
Sepsis managed according to the norm	47	2.1	2.1	60	28.3	5.8

ASPHYXIA

There were 13 records from basic and 15 records from complete facilities of neonates with asphyxia at the second follow-up. Tables 7.5.7 and 7.5.8 display all of the conditions the medical record must meet in order to pass the indicator. Each category can be found highlighted in light gray in the tables with its subcomponents listed below. The following criteria must be met in the medical record for asphyxia:

1. The neonate must have the following **vital signs** checked:
    - Pulse/heart rate
    - Respiratory rate
    - APGAR score at 1 minute
    - APGAR score at 5 minutes

2. The neonate must have the following **laboratory tests** performed (if record is from a complete facility):
    - Oxygen saturation

3. Heat was applied to the neonate

4. The neonate was administered one of the following medications if severe asphyxia (defined as an APGAR score of <=3 at 5 minutes):
    - Ambu/mechanical ventilation/positive pressure ventilation/cardiac massage/tracheal intubation

- Oxygen administered

5. The neonate was evaluated by a specialist (if record is from a complete facility)

6. The neonate was evaluated by a doctor (if record is from a basic facility)

7. The neonate was referred to a complete facility (if severe asphyxia and neonate did not die in the facility) (if record is from a basic facility)

76.9% of asphyxia records from basic facilities were managed according to the norm at the second follow-up evaluation. As shown in Table 7.5.7, only three records from the baseline and only two records from the second follow-up had severe asphyxia and needed to meet the requirements for oxygen, other procedures, and referrals.

Table 7.5.7 Neonates with asphyxia in basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	8	75	15.3	13	92.3	7.4
Heart rate/pulse	8	75	15.3	13	92.3	7.4
Respiratory rate	8	100		13	100	
APGAR at 1 minute	8	100		13	100	
APGAR at 5 minutes	8	100		13	100	
Heat application	8	87.5	11.7	13	92.3	7.4
Oxygen administration (if severe asphyxia)	3	100		2	50	35.4
Other procedures (one of the following if severe asphyxia):	3	100		2	100	
Ambu (positive pressure ventilation)/mechanical ventilation	3	100		2	100	
Cardiac massage	3	66.7	27.2	2	50	35.4
Tracheal intubation	3	0		2	0	
Evaluated by a doctor	8	75	15.3	13	100	
Referred to a complete facility (if severe asphyxia & neonate did not die in the facility)	3	100		2	100	
Asphyxia managed according to the norm	8	50	17.7	13	76.9	11.7

The management of asphyxia improved in complete facilities from baseline to the second follow-up, as shown in Table 7.5.8. Specifically, the laboratory test component was met in only 30.8% of records at the baseline and improved to 86.7% of records at the second follow-up.

Table 7.5.8 Neonates with asphyxia in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	13	92.3	7.4	15	93.3	6.4
Heart rate/pulse	13	92.3	7.4	15	100.0	
Respiratory rate	13	100		15	100	
APGAR at 1 minute	13	100		15	93.3	6.4
APGAR at 5 minutes	13	100		15	93.3	6.4
Labortory test: oxygen saturation	13	30.8	12.8	15	86.7	8.8
Heat application	13	100		15	100	
Oxygen administration (if severe asphyxia)	0			3	100	
Other procedures (one of the following if severe asphyxia):	0			3	100	
Ambu (positive pressure ventilation)/ mechanical ventilation	0			3	66.7	27.2
Cardiac massage	0			3	100.	
Tracheal intubation	0			3	66.7	27.2
Evaluated by a specialist	13	100		15	100	
Asphyxia managed according to the norm	13	30.8	12.8	15	80	10.3

7.6 Medical record review: maternal complications performance indicator

Doctors and nurses evaluated records of maternal complications (hemorrhage, severe pre-eclampsia, eclampsia, sepsis) from facilities that were systematically sampled in advance by IHME. These records were used to evaluate quality of care, as defined by the maternal complications performance indicator. The maternal performance indicator includes all data from basic and complete facilities found below. Each following section displays the components of the medical record that should be met for both basic and complete facilities.

Tables 7.6.1 and 7.6.2 display the amount of data collected for each type of complication at basic and complete facilities.

Table 7.6.1 Maternal complications in basic facilities

Basic		
	Baseline	2nd Follow-up
Sepsis	0	7
Hemorrhage	7	23
Pre-eclampsia	2	15
Eclampsia	0	8
Total	9	53

Table 7.6.2 Maternal complications in complete facilities

Complete		
	Baseline	2nd Follow-up
Sepsis	18	20
Hemorrhage	30	27
Pre-eclampsia	46	51
Eclampsia	6	7
Total	100	105

HEMORRHAGE

There were 23 records in basic facilities and 27 records in complete facilities of women with hemorrhage at the second follow-up. Tables 7.6.3 and 7.6.4 display all of the conditions the medical record must meet in order to pass the indicator. Each category can be found highlighted in light gray in the tables with its subcomponents listed below. The following criteria must be met in the medical record for hemorrhage:

1. The woman must have the following **vital signs** checked:
    - Pulse/heart rate
    - Blood pressure

2. The woman must have the following **laboratory tests** performed (if record is from a complete facility):
    - Hematocrit
    - Hemoglobin
    - Platelet count

3. The woman was administered one of the following medications:
    - Ringer's lactate/Hartmann's solution/Saline solution

4. The woman must also have appropriate care for the specific causes of hemorrhage listed below:

    Tables 7.6.5 and 7.6.6 show the breakdown of women in basic and complete facilities that were treated appropriately for these causes. Not all women encountered one of the scenarios listed below; if that is the case, the medical record only needs to meet the requirements listed in 1-3 above.

    For medical records at basic facilities:
    - If incomplete complicated abortion with hemorrhage or hemorrhage after abortion: AMEU/refer to complete facility
    - If ectopic pregnancy/broken ectopic pregnancy: refer to complete facility
    - If placenta previa with hemorrhage: refer to complete facility
    - If placental abruption: refer to complete facility
    - If uterine rupture: refer to complete facility
    - If uterine atony/hypotonia: uterotonic + refer to complete facility

- If uterine inversion: uterotonic + (reposition/restoration of the uterus under sedation or anesthesia with surgical or non-surgical technique/refer to complete facility)
- If total or partial placental retention/placental remnants/accretion: uterotonic + refer to complete facility

For medical records at complete facilities:

- If incomplete complicated abortion with hemorrhage or hemorrhage after abortion: AMEU/curettage
- If ectopic pregnancy/broken ectopic pregnancy: laparotomy/salpingectomy/surgical repair
- If placenta previa with hemorrhage: caesarean section
- If placental abruption: vaginal birth or caesarean section
- If uterine rupture: laparotomy/hysterectomy/surgical repair
- If uterine atony: uterotonic + uterine massage/bimanual compression/aortic compression/uterine plug/hydrostatic balloon/compressive sutures/hysterectomy
- If uterine inversion: uterotonic + reposition/restoration of the uterus under sedation or anesthesia with surgical or non-surgical techniques
- If total or partial placental retention/placental remnants/accretion: uterotonic + manual extraction/curettage/hysterectomy

As shown below in table 7.6.3, 91.3% of the women evaluated for hemorrhage in basic facilities were treated according to the norm. Table 7.6.4 shows that 88.9% of records from complete facilities were managed according to the norm. Tables 7.6.5 and 7.6.6 display how the 19 women from basic facilities and 20 women from complete facilities who encountered one of the scenarios/causes of hemorrhage listed above were managed.

Table 7.6.3 Women with hemorrhage at basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	7	100		23	100	
Pulse/heart rate	7	100		23	100	
Blood pressure	7	100		23	100	
Medications administered (at least one of the following):	7	100		23	100	
Ringer's Lactate/Hartmann's solution	7	42.9	18.7	23	91.3	5.9
Saline Solution	7	71.4	17.1	23	69.6	9.6
Appropriate management of specific causes of hemorrhage	4	75	21.7	19	89.5	7.0
Hemorrhage managed according to the norm	7	85.7	13.2	23	91.3	5.9

Table 7.6.4 Women with hemorrhage at complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	30	100		27	100	
Pulse/heart rate	30	100		27	100	
Blood pressure	30	100		27	100	
Medications administered (at least one of the following):	30	90	5.5	27	96.3	3.6
Ringer's Lactate/Hartmann's solution	30	83.3	6.8	27	88.9	6.
Saline Solution	30	46.7	9.1	27	55.6	9.6
Laboratory tests:	30	90	5.5	27	96.3	3.6
Hematocrit	30	80	7.3	27	100	
Hemoglobin	30	80	7.3	27	100	
Platelets	30	70	8.4	27	100	
Appropriate management of specific causes of hemorrhage	19	78.9	9.4	20	90	6.7
Hemorrhage managed according to the norm	30	56.7	9.0	27	88.9	6.0

The majority of women at basic facilities experienced hemorrhage due to uterine atony/hypotonia; however, women could experience more than one cause listed below. Of the 19 women who hemorrhaged because of an abortion, uterine atony/hypotonia, or retained placenta, 89% were managed according to the norm at the second follow-up.

Table 7.6.5 Appropriate treatment for specific causes of hemorrhage in basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Appropriate management of the following causes of hemorrhage:	4	75	21.7	19	89.5	7.0
Abortion	0			1	100	
Uterine atony/Hypotonia	1	100		10	80	12.6
Retained placenta	3	66.7	27.2	9	100	

The majority of women at complete facilities experienced hemorrhage due to uterine atony; however, women could experience more than one cause listed below. Of the 20 women who hemorrhaged because of uterine rupture, uterine atony, uterine inversion, or retained placenta, 90% were managed according to the norm at the second follow-up.

Table 7.6.6 Appropriate treatment for specific causes of hemorrhage in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Appropriate management of the following causes of hemorrhage:	19	78.9	9.4	20	90	6.7
Uterine rupture	0			1	100	
Uterine atony	6	66.7	19.2	11	90.9	8.7
Uterine inversion	0			1	0	
Retained placenta	13	84.6	10.0	10	100	

SEVERE PRE-ECLAMPSIA

There were 15 records in basic facilities and 51 records in complete facilities of women with severe pre-eclampsia at the second follow-up. Tables 7.6.7 and 7.6.8 display all of the conditions the medical record must meet in order to pass the indicator. Each category can be found highlighted in light gray in the tables with its subcomponents listed below. The following criteria must be met in the medical record for severe pre-eclampsia:

1. The woman must have the following **vital signs** checked:
    - Blood pressure
    - Pulse/heart rate (if record is from a complete facility)
    - Respiratory rate (if record is from a complete facility)
    - Patellar reflex (if record is from a complete facility)

2. The woman must have the following **laboratory tests** performed:
    - Urine protein
    - Platelet count (if record is from a complete facility)
    - Creatinine (if record is from a complete facility)
    - Uric acid (if record is from a complete facility)
    - Aspartate aminotransferase/Glutamic-oxaloacetic transaminase (GOT) (if record is from a complete facility)
    - Alanine transaminase/Glutamate-pyruvate transaminase (GPT) (if record is from a complete facility)
    - Lactate dehydrogenase (if record is from a complete facility)

3. The woman was administered one of the following medications:
    - Magnesium sulfate
    - Ringer's lactate/Hartmann's solution/saline solution (if record is from a basic facility)
    - Hydralazine/labetalol/nifedipine (if diastolic blood pressure at first check was > 105 & record is from a complete facility)

4. Woman was referred to a complete facility (if record is from a basic facility)

In basic facilities, 40% of women were managed according to the norm, as shown below in Table 7.6.7. In complete facilities, 37.3% of women managed according to the norm, as shown below in table 7.6.8. While less than half of the records at both basic and complete facilities were managed according to the norm, this is a great improvement from the baseline, where no basic records and only 17.4% of complete facility records were managed according to the norm.

Table 7.6.7 Women with severe pre-eclampsia at basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	2	100		15	100	
Blood pressure	2	100		15	100	
Laboratory tests:	2	0		15	100	
Urine protein	2	0		15	100	
Medications Administered:	2	50	35.4	15	93.3	6.4
Magnesium Sulfate	2	50	35.4	15	100	
Ringer's lactate/Hartmann's/Saline Solution	2	50	35.4	15	93.3	6.4
Transferred to a complete facility	2	100		15	40	12.6
Pre-eclampsia managed according to the norm	2	0		15	40	12.6

Table 7.6.8 Women with severe pre-eclampsia at complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	46	84.8	5.3	51	86.3	4.8
Pulse/heart rate	46	100		51	100	
Blood pressure	46	97.8	2.2	51	100	
Respiratory rate	46	97.8	2.2	51	100	
Patellar reflex	46	89.1	4.6	51	86.3	4.8
Laboratory tests:	46	19.6	5.8	51	43.1	6.9
Platelet count	46	91.3	4.2	51	94.1	3.3
Urine protein	46	82.6	5.6	51	90.2	4.2
Creatinine	46	84.8	5.3	51	88.2	4.5
Uric acid	46	73.9	6.5	51	82.4	5.3
Aspartate aminotransferase/Glutamic Transaminase Oxalacetic (GOT)	46	73.9	6.5	51	86.3	4.8
Alanine transaminase/Glutamic transaminase pyruvic (GPT)	46	73.9	6.5	51	86.3	4.8
Lactate dehydrogenase	46	23.9	6.3	51	47.1	7.0
Medications Administered:	46	91.3	4.2	51	94.1	3.3
Magnesium Sulfate	46	91.3	4.2	51	100	
Hydralazine/Labelatol/Nifedipine (if diastolic blood pressure > 105)	18	100		15	80	10.3
Pre-eclampsia managed according to the norm	46	17.4	5.6	51	37.3	6.8

ECLAMPSIA

There were eight records in basic facilities and seven records in complete facilities of women with severe eclampsia at the second follow-up. Tables 7.6.9 and 7.6.10 display all of the conditions the medical record must meet in order to pass the indicator. Each category can be found highlighted in light gray in the tables with its subcomponents listed below. The following criteria must be met in the medical record for severe eclampsia:

5. The woman must have the following **vital signs** checked:
    - Blood pressure
    - Pulse/heart rate (if record is from a complete facility)
    - Respiratory rate (if record is from a complete facility)
    - Patellar reflex (if record is from a complete facility)

6. The woman must have the following **laboratory tests** performed:
    - Urine protein
    - Platelet count (if record is from a complete facility)
    - Creatinine (if record is from a complete facility)
    - Uric acid (if record is from a complete facility)
    - Aspartate aminotransferase/Glutamic-oxaloacetic transaminase (GOT) (if record is from a complete facility)
    - Alanine transaminase/Glutamate-pyruvate transaminase (GPT) (if record is from a complete facility)
    - Lactate dehydrogenase (if record is from a complete facility)

7. The woman was administered one of the following medications:
    - Magnesium sulfate
    - Ringer's lactate/Hartmann's solution/saline solution (if record is from a basic facility)
    - Hydralazine/labetalol/nifedipine (if diastolic blood pressure at first check was > 105 & record is from a complete facility)

8. Woman was referred to a complete facility (if record is from a basic facility)

As shown in table 7.6.9, 12.5% of women in basic facilities who were included in the indicator were managed according to the norm; no cases of women with eclampsia were selected from basic facilities at the baseline.

Table 7.6.9 Women with eclampsia in basic facilities.

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	0			8	100	
Blood pressure	0			8	100	
Laboratory tests:	0			8	75	15.3
Urine protein	0			8	75	15.3
Medications Administered:	0			8	75	15.3
Magnesium Sulfate	0			8	87.5	11.7
Ringer's lactate/Hartmann's/Saline Solution	0			8	87.5	11.7
Transferred to a complete facility	0			8	37.5	17.1
Eclampsia managed according to the norm	0			8	12.5	11.7

In complete facilities, 71.4% of women were managed according to the norm, as shown below in Table 7.6.10. The largest improvement from the baseline is in the laboratory records, specifically for the creatinine and lactate dehydrogenase tests.

Table 7.6.10 Women with eclampsia in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	6	100		7	71.4	17.1
Pulse/heart rate	6	100		7	100	
Blood pressure	6	100		7	100	
Respiratory rate	6	100		7	85.7	13.2
Patellar reflex	6	100		7	85.7	13.2
Laboratory tests:	6	33.3	19.2	7	85.7	13.2
Platelet count	6	83.3	15.2	7	100	
Urine protein	6	100		7	100	
Creatinine	6	33.3	19.2	7	100	
Uric acid	6	50	20.4	7	100	
Aspartate aminotransferase/Glutamic Transaminase Oxalacetic (GOT)	6	50	20.4	7	85.7	13.2
Alanine transaminase/Glutamic transaminase pyruvic (GPT)	6	50	20.4	7	85.7	13.2
Lactate dehydrogenase	6	33.3	19.2	7	85.7	13.2
Medications Administered:	6	83.3	15.2	7	100	
Magnesium Sulfate	6	100		7	100	
Hydralazine/Labelatol/Nifedipine (if diastolic blood pressure > 105)	2	50	35.4	1	100	
Eclampsia managed according to the norm	6	33.3	19.2	7	71.4	17.1

SEPSIS

There were seven records in basic facilities and 20 records in complete facilities of women with sepsis at the second follow-up. Tables 7.6.11 and 7.6.12 display all of the conditions the medical record must meet in order to pass the indicator. Each category can be found highlighted in light gray in the tables with its subcomponents listed below. The following criteria must be met in the medical record for sepsis:

1. The woman must have the following **vital signs** checked:
    - Pulse/heart rate
    - Blood pressure
    - Temperature

2. The woman must have the following **laboratory tests** performed (if record is from a complete facility):
    - Complete blood test OR (hemoglobin + hematocrit + platelets + leukocyte)

3. The woman was administered antibiotics

4. The woman must also have appropriate care for the specific causes of sepsis listed below:

    Tables 4.8.11 and 4.8.12 show the breakdown of women in basic and complete facilities that were treated appropriately for these causes. Not all women encountered one of the scenarios listed below; if that is the case, the medical record only needs to meet the requirements listed in 1-3 above.

    For medical records at basic facilities:
    - If postpartum or post-cesarean endometritis: antibiotics + transfer to complete facility
    - If fever: antibiotics + transfer to complete facility
    - If pelvic abscess: antibiotics + transfer to complete facility

    For medical records at complete facilities:
    - If postpartum or post-cesarean endometritis: antibiotics
    - If fever: antibiotics
    - If pelvic abscess: antibiotics + drainage/laparotomy/hysterectomy/surgical repair
    - If retention of placental remains: antibiotics + curettage/MVA/laparotomy/hysterectomy

As shown in table 7.6.11, 85.7% of women in basic facilities were managed according to the norm; no cases of women with sepsis were selected from basic facilities in the baseline. At the second follow-up, women in all seven records experienced postpartum endometritis or a fever, or a combination of both.

Table 7.6.11 Women with sepsis in basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	0			7	100	
Pulse/heart rate	0			7	100	
Blood pressure	0			7	100	
Temperature	0			7	100	
Antibiotics administered	0			7	85.7	13.2
Appropriate management of the following:	0			7	85.7	13.2
Postpartum endometritis	0			2	100	
Fever	0			6	83.3	15.2
Sepsis managed according to the norm	0			7	85.7	13.2

In complete facilities, 85% of women were managed according to the norm as shown in table 7.6.12. At the second follow-up, women in all 19 records experienced postpartum endometritis, a fever, or retained placenta, or a combination of these; 89.5% of these cases were managed appropriately at the second follow-up. At the baseline, only 50% of the women were managed according to the norm, largely because the record did not contain a hematic biometry laboratory test.

Table 7.6.12 Women with sepsis in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	18	88.9	7.4	20	95	4.9
Pulse/heart rate	18	94.4	5.4	20	100	
Blood pressure	18	94.4	5.4	20	100	
Temperature	18	88.9	7.4	20	95	4.9
Laboratory test: Hematic Biometry	18	55.6	11.7	20	95	4.9
Antibiotics administered	18	94.4	5.4	20	100	
Appropriate management of the following:	15	93.3	6.4	19	89.5	7.0
Postpartum endometritis	12	91.7	8.0	16	100	
Fever	4	100		7	100	
Retained placenta	0			5	60	21.9
Sepsis managed according to the norm	18	50	11.8	20	85	8.0

Chapter 8 INFECTION CONTROL

8.1 Equipment for disposal and disposal methods

Staff at health facilities were asked about their infection control. Specifically, facilities were asked about incinerators, manuals that specify decontamination methods, and contracts with other facilities for biohazard disposal. Tables 8.1.1–8.1.3 display the percent of facilities that have the listed items. 71.7% of ambulatory facilities, 100% of basic, and only 16.7% of complete facilities have an incinerator at the facility. While only 16.7% of complete facilities have an incinerator, 66.7% have a contract with another facility for biohazard disposal.

Table 8.1.1 Ambulatory facility infection control

Ambulatory									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Incinerator at facility	45	88.9	4.7	46	71.7	6.6	46	71.7	6.6
Contract with other facility for biohazard disposal	44	4.5	3.1	46	2.2	2.2	46	4.3	3.0
Manual for decontamination	42	16.7	5.8	46	41.3	7.3	46	58.7	7.3

*One ambulatory facility at the baseline responded “don’t know/decline to respond” when asked about the contract; this facility is excluded; three ambulatory facilities at the baseline responded “don’t know/decline to respond” when asked about the manual; these facilities are excluded

Table 8.1.2 Basic facility infection control

Basic									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Incinerator at facility	8	87.5	11.7	8	75	15.3	8	100	
Contract with other facility for biohazard disposal	8	12.5	11.7	8	12.5	11.7	8	0	
Manual for decontamination	8	75	15.3	8	75	15.3	8	75	15.3

Table 8.1.3 Complete facility infection control

Complete									
	Baseline			1st Follow-up			2nd Follow-up		
	N	%	SE	N	%	SE	N	%	SE
Incinerator at facility	6	16.7	15.2	6	16.7	15.2	6	16.7	15.2
Contract with other facility for biohazard disposal	5	40	21.9	6	50	20.4	6	66.7	19.3
Manual for decontamination	6	100		6	83.3	15.2	6	100	

Appendix A HEALTH FACILITY INDICATORS

In total, eight health facility performance indicators and six monitoring indicators were measured at the second follow-up evaluation payment tranche.

Table A.1.1 details payment indicators from baseline to second follow-up, and Table A.1.2 details monitoring indicators from baseline to second follow-up. Performance and monitoring indicator definitions can be in Appendix D or in their respective chapters.

Table A.1.1 Performance indicator matrix

	Baseline			1st Follow-up			2nd Follow-up		
Indicator	**N**	**%**	**CI**	**N**	**%**	**CI**	**N**	**%**	**CI**
Children 0-59 months with diarrhea who were prescribed treatment according to the norm	N/A			223	39	(32.6- 45.8)	258	95.3	(92.0- 97.6)
Children 0-59 months with pneumonia who attended a follow-up appointment <= two days after diagnosis	146	87	(80.4- 92.0)	135	61.5	(52.7- 69.7)	170	95.3	(90.9- 97.9)
Women of a reproductive age who received the minimum required number of ANC care according to best practices for a birth in the last two years	125	23.2	(16.1- 31.6)	236	66.1	(59.7- 72.1)	272	94.1	(90.6- 96.6)
Women of a reproductive age who received their first ANC care within the appropriate time	125	59.2	(50.1- 67.9)	228	63.6	(57.0- 69.8)	272	89.7	(85.5- 93.0)
Partograph filled according to the norm for births in the last two years	N/A			104	91.3	(84.2- 96.0)	94	97.9	(92.5- 99.7)
Institutional postpartum patients of a reproductive age who were evaluated appropriately during the first two hours after birth in the last two years	157	67.5	(59.6- 74.8)	70	28.6	(18.4- 40.6)	147	91.2	(85.4- 95.2)
Neonates with complications managed according to the norm in the last two years	70	10	(4.1- 19.5)	N/A			84	42.9	(32.1- 54.1)
Women with obstetric complications managed according to the norm in the last two years	109	39	(29.4- 48.3)	N/A			158	62.7	(54.6- 70.2)

***Diarrhea:** Zinc administration not captured at baseline; indicator value is not comparable
***Pneumonia:** Severity of pneumonia was not captured at the baseline or first follow-up so records were not excluded based on this criteria
***Minimum ANC visits:** The baseline only captured fetal heart rate, fetal movement, and uterine height at the first visit if at the appropriate gestational age. RPR was not captured at baseline or first follow-up as an alternative to VDRL lab test.
***Partograph**: At the first follow-up only FHR that dropped below 120 bpm was captured and used to calculate this indicator
***Institutional PPM:** Baseline and first follow-up did not capture if the woman was referred from another facility or delivery type; baseline and first follow-up did not capture heart rate as an alternative to pulse

Table A.1.2 Monitoring indicator matrix

Indicator	Baseline			1st Follow-up			2nd Follow-up		
	N	%	CI	N	%	CI	N	%	CI
Child health care equipment & drug availability	53	0	(0.0- 6.7)	45	53.3	(37.9- 68.3)	54	27.8	(16.5- 41.6)
Chispitas/micronutrient continuous availability	N/A			46	93.5	(82.1- 98.6)	46	80.4	(66.1- 90.6)
Family planning method continuous availability	59	88.1	(77.1- 95.1)	57	96.5	(87.9- 99.6)	60	80	(67.7- 89.2)
Emergency drug availability in CMIs	8	75	(34.9- 96.8)	7	85.7	(42.1- 99.6)	8	87.5	(47.3- 99.7)
Emergency equipment & drug availability in hospitals	6	0	(0.0- 45.9)	6	50	(11.8- 88.2)	6	33.3	(4.3- 77.7)
Neonates with complications managed according to the norm in the last two years	89	14.6	(8.0- 23.7)	N/A			140	44.3	(35.9- 52.9)

*All drugs captured from baseline to second follow-up vary. At baseline many times a specific dosage of drug was requested, while at the second follow-up the drug was captured regardless of dosage. Kardex observation for drugs was not captured at the baseline and many times at the first follow-up – it is assumed that the data collectors were able to view the kardex unless noted otherwise.

***Child health care:** Reflex hammer & neonatal stethoscope not captured at CESAMO facilities at the baseline.

***Family planning methods:** Baseline did not capture family planning method availability at neighboring facilities for CMIs. At the second follow-up the data on kardex observation was not captured at the neighboring facility for CMIs.

***Emergency drugs in CMIs:** Drug stockout in the previous three months was not captured at baseline

***Emergency equipment & drugs in hospitals:** Drug stockout in the previous three months was not captured at baseline or first follow-up

***Neonates with complications**: Monitoring indicator includes records from both basic and complete facilities

Appendix B COMPARISON AREA TABLES & FIGURES

Table B2.1.1 Health facility classification

	Baseline	2nd Follow-up
CESAR	7	6
CESAMO	13	10
CMI	7	8
Hospital	4	6
Total	31	30

Figure B2.1.2 Map of health facilities at the second follow-up evaluation

*GPS data for one facility is not displayed

Table B2.1.3 Geographical representation by department and municipality

		No. of facilities	
Department	Municipality	Baseline	2nd Follow-up
Comayagua	Comayagua	1	1
	San Jose de Comayagua	2	2
	Taulabe	2	3
Copan	Copan Ruinas	1	0
	La Jigua	2	0
	Nueva Arcadia	4	1
	San Nicolas	2	1
Cortes	San Pedro Sula	1	0
	Santa Cruz de Yojoa	2	5
El Paraiso	Danli	0	1
Intubica	San Francisco de Opalaca	2	2
	San Miguelito	2	2
La Paz	Aguanqueterique	0	2
Lempira	Candelaria	2	1
	Gracias	1	1
	La Virtud	1	1
	Piraera	2	1
Olancho	Catacamas	0	1
Santa Barbara	Santa Barbara	0	1
Valle	Langue	3	2
	San Lorenzo	1	1
Yoro	Progreso	0	1
Total		31	30

Table B2.2.1 Medical Record Review sample size

	Comparison	
	Baseline	2nd Follow-up
Antenatal care	72	84
Diarrhea	80	101
Pneumonia	71	92
Uncomplicated delivery	183	175
Immediate postpartum care	90	175
Neonatal complications	224	131
Maternal complications	220	138
Total	940	896

Table B2.3.1 Facility referrals

	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
% of ambulatory facilities that receive referrals	20	50	11.2	16	62.5	12.1
% of basic facilities that receive referrals	7	100		8	87.5	11.7
% of basic facilities that receive referrals for routine deliveries	-			7	85.7	13.2
% of basic facilities that receive referrals for complicated deliveries	-			7	14.3	13.2
% of complete facilities that receive referrals	4	100		6	100	
% of complete facilities that receive referrals for routine deliveries	-			6	100	
% of complete facilities that receive referrals for complicated deliveries	-			6	100	

*Questions regarding referrals for routine and complicated deliveries were not asked at the baseline

Table B2.3.2 Documentation requested for routine deliveries at the second follow-up

	Basic			Complete		
	N	%	SE	N	%	SE
Transfer/referral form	6	100		6	100	
Patient medical record	6	16.7	15.2	6	0	
Laboratory results	6	16.7	15.2	6	16.7	15.2
Proof of insurance	6	0		6	16.7	15.2
Other	6	66.7	19.2	6	33.3	19.2

Table B2.3.3 Documentation requested for complicated deliveries at the second follow-up

	Basic			Complete		
	N	%	SE	N	%	SE
Transfer/referral form	1	100	0	6	100	0
Patient medical record	1	0	0	6	0	0
Laboratory results	1	0	0	6	0	0
Proof of insurance	1	0	0	6	0	0
Other	1	100	0	6	50	20.4

Table B2.4.1 Facility source of water and electricity in the second follow-up

2nd Follow-up									
	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Functional electricity	16	100		8	87.5	11.7	6	100	
Source of electricity									
Central supply (Comisión Federal de Electricidad)	16	93.8	6.1	7	100		6	100	
Private supply	16	0		7	0		6	0	
In-facility generator	16	6.3	6.1	7	0		6	0	
Solar generator	16	6.3	6.1	7	0		6	0	
Other source	16	12.5	8.3	7	28.6	17.1	6	0	
Source of water:									
Piped into facility	16	75	10.8	8	75	15.3	6	100	
Public well	16	25	10.8	8	12.5	11.7	6	0	
Facility well	16	0		8	12.5	11.7	6	0	
Unprotected well	16	0		8	0		6	0	
Hand pump	16	0		8	0		6	0	
Bottled water	16	0		8	0		6	0	
Tanker truck	16	0		8	12.5	11.7	6	0	
Rain water	16	0		8	0		6	0	
Other	16	37.5	12.1	8	37.5	17.1	6	0	

*One basic facility at the baseline responded 'don't know/decline to respond' when asked about the source of electricity; this facility was excluded from the source of electricity

Table B2.4.2 Facility source of water and electricity in ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Functional electricity	20	100		16	100	
Source of electricity						
Central supply (Comisión Federal de Electricidad)	20	100		16	93.8	6.1
Private supply	20	0		16	0	
In-facility generator	20	0		16	6.3	6.1
Solar generator	20	0		16	6.3	6.1
Other source	20	0		16	12.5	8.3
Source of water:						
Piped into facility	20	90	6.7	16	75	10.8
Public well	20	10	6.7	16	25	10.8
Facility well	20	0		16	0	
Unprotected well	20	0		16	0	
Hand pump	20	0		16	0	
Bottled water	20	15	8.0	16	0	
Tanker truck	20	5	4.9	16	0	
Rain water	20	0		16	0	
Other	20	15	8.0	16	37.5	12.1

Table B2.4.3 Facility source of water and electricity in basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Functional electricity	7	100		8	87.5	11.7
Source of electricity						
Central supply (Comisión Federal de Electricidad)	6	100		7	100	
Private supply	6	0		7	0	
In-facility generator	6	16.7	15.2	7	0	
Solar generator	6	0		7	0	
Other source	6	0		7	28.6	17.1
Source of water:						
Piped into facility	7	100		8	75	15.3
Public well	7	14.3	13.2	8	12.5	11.7
Facility well	7	0		8	12.5	11.7
Unprotected well	7	0		8	0	
Hand pump	7	0		8	0	
Bottled water	7	0		8	0	
Tanker truck	7	14.3	13.2	8	12.5	11.7
Rain water	7	0		8	0	
Other	7	0		8	37.5	17.1

*One basic facility at the baseline responded 'don't know/decline to respond' when asked about the source of electricity; this facility was excluded from the source of electricity

Table B2.4.4 Facility source of water and electricity in complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Functional electricity	4	100		6	100	
Source of electricity						
Central supply (Comisión Federal de Electricidad)	4	100		6	100	
Private supply	4	0		6	0	
In-facility generator	4	0		6	0	
Solar generator	4	0		6	0	
Other source	4	0		6	0	
Source of water:						
Piped into facility	4	75	21.7	6	100	
Public well	4	0		6	0	
Facility well	4	25	21.7	6	0	
Unprotected well	4	0		6	0	
Hand pump	4	0		6	0	
Bottled water	4	50	25.0	6	0	
Tanker truck	4	0		6	0	
Rain water	4	0		6	0	
Other	4	0		6	0	

Table B2.5.1 Personnel employed at CESAR facilities

CESAR						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
General physician	7	0		6	50	20.4
Doctor in social services	-			6	33.3	19.2
Pharmacist	7	0		6	0	
Licensed nurse	7	0		6	0	
Auxilary nurse	7	100		6	100	
Polivalent / multipurpose	-			6	16.7	15.2
Community agent/health worker	-			6	0	
Midwife	7	42.9	18.7	6	0	
Health promoter	7	85.7	13.2	6	66.7	19.2

*Doctor in social services, polyvalent/multiuse, and community agent/health worker were not captured at the baseline

Table B2.5.2 Personnel employed at CESMO facilities

CESAMO						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
General physician	13	100		10	90	9.5
Doctor in social services	-			10	50	15.8
Pediatrician	13	0		10	10	9.5
Pharmacist	13	0		10	0	
Licensed nurse	13	46.2	13.8	10	30	14.5
Auxilary nurse	13	100		10	100	
Polivalent / multipurpose	-			10	20	12.6
Community agent/health worker	-			10	0	
Midwife	13	76.9	11.7	10	0	
Lab technician	13	38.5	13.5	10	40	15.5
Health promoter	13	100		10	100	0

*Doctor in social services, polyvalent/multiuse, and community agent/health worker were not captured at the baseline

Table B2.5.3 Personnel employed at CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
General physician	7	100		8	62.5	17.1
Doctor in social services	-			8	75	15.3
Pediatrician	7	0		8	0	
Nutritionist	7	0		8	0	
Pharmacist	7	0		8	0	
Licensed nurse	7	28.6	17.1	8	62.5	17.1
Auxilary nurse	7	100		8	100	
Polivalent / multipurpose	-			8	0	
Community agent/health worker	-			8	0	
Midwife	7	28.6	17.1	8	0	
Social worker	7	0		7	0	
Lab technician	6	0		8	12.5	11.7
Health promoter	7	0		8	0	
Internist	7	0		8	0	
Gynecologist	7	0		8	12.5	11.7
Surgeon	7	0		8	0	
Anesthesiologist	7	0		8	0	
Emergency medical technician	7	0		8	0	
Radiology technician	7	0		8	0	
Ambulance driver	7	71.4	17.1	8	100	

*Doctor in social services, polyvalent/multiuse, and community agent/health worker were not captured at the baseline
**One CMI at the baseline responded 'don't know/decline to respond' when asked about lab technician employment; this facility was excluded
**One CMI at the second follow-up responded 'don't know/decline to respond' when asked about social worker employment; this facility was excluded

Table B2.5.4 Personnel employed at Hospitals

Hospital						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
General physician	4	100		6	100	
Doctor in social services	-			6	100	
Pediatrician	4	100		6	100	
Nutritionist	4	0		6	0	
Pharmacist	4	100		6	100	
Licensed nurse	4	100		6	100	
Auxilary nurse	4	100		6	100	
Polivalent / multipurpose	-			6	0	
Community agent/health worker	-			6	16.7	15.2
Midwife	4	0		6	0	
Social worker	4	75	21.7	6	66.7	19.2
Lab technician	4	100		6	100	
Health promoter	4	0		6	0	
Internist	4	100		6	100	
Gynecologist	4	100		6	100	
Surgeon	4	100		6	100	
Anesthesiologist	4	50	25.0	6	66.7	19.2
Emergency medical technician	4	0		6	0	
Radiology technician	4	100		6	100	
Ambulance driver	4	100		6	100	

*Doctor in social services, polyvalent/multiuse, and community agent/health worker were not captured at the baseline

Table B2.6.1 Internet connection at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Facility has an internet connection	20	5	4.9	16	6.3	6.1

Table B2.6.2 Internet connection at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Facility has an internet connection	7	14.3	13.2	8	12.5	11.7

Table B2.6.3 Internet connection at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Facility has an internet connection	4	75	21.7	6	100	

Table B3.1.1 Child health care services provision in ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Unit offers child services	20	100		16	100	
Unit vaccinates children under 5	20	100		16	100	
Child care room:						
Private room with visual and auditory privacy	19	78.9	9.4	16	100	
Non-private room	19	21.1	9.4	16	0	
Other	19	0		16	0	
Don't provide service/decline to respond	19	0		16	0	

*Child care room data missing for one ambulatory facility at the baseline

Table B3.1.2 Child health care services provision in basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Unit offers child services	7	71.4	17.1	8	100	
Unit vaccinates children under 5	7	28.6	17.1	8	0	
Child care room:						
Private room with visual and auditory privacy	7	100		8	100	
Non-private room	7	0		8	0	
Other	7	0		8	0	
Don't provide service/decline to respond	7	0		8	0	

Table B3.1.3 Child health care services provision in complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Unit offers child services	4	100		6	100	
Unit vaccinates children under 5	4	75	21.6	6	50	20.4
Child care room:						
Private room with visual and auditory privacy	4	100		6	100	
Non-private room	4	0		6	0	
Other	0	0		6	0	
Don't provide service/decline to respond	0	0		6	0	

Table B3.2.1 Child health care equipment in CESAR facilities

CESAR						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available:	7	14.3	13.2	6	16.7	15.2
Pediatric scale	7	85.7	13.2	6	33.3	19.2
Standing scale for children	7	85.7	13.2	6	83.3	15.2
Height rod	7	85.7	13.2	6	100	
Hand lamp/goosenck lamp	7	28.6	17.1	6	100	
Measuring tape	7	100		6	100	
Exam table/bed	7	100		6	83.3	15.2
Nebulizer	7	85.7	13.2	6	100	
Stethoscope	7	71.4	17.1	6	100	0

Table B3.2.2 Child health care equipment in CESAMO facilities

CESAMO						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available:	13	46.2	13.8	9	0	
Pediatric scale	13	76.9	11.7	9	88.9	10.5
Standing scale for children	13	84.6	10.0	9	100	
Height rod	13	84.6	10.0	9	100	
Hand lamp/goosenck lamp	13	84.6	10.0	9	88.9	10.5
Measuring tape	13	100		9	100	
Exam table/bed	13	100		9	100	
Nebulizer	13	84.6	10.0	9	100	
Reflex hammer	-			9	55.6	16.6
Stethoscope	13	92.3	7.4	9	88.9	10.5
Neonatal stethoscope	-			9	0	

*Reflex hammer and neonatal stethoscope was not captured at CESAMO facilities at baseline

Table B3.2.3 Child health care equipment in CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available:	7	0		8	0	
Pediatric scale	7	57.1	18.7	8	87.5	11.7
Standing scale for children	7	85.7	13.2	8	100	
Height rod	7	85.7	13.2	8	75	15.3
Hand lamp/goosenck lamp	7	85.7	13.2	8	100	
Measuring tape	7	100		8	100	
Exam table/bed	7	100		8	100	
Nebulizer	7	85.7	13.2	8	100	
Reflex hammer	7	42.9	18.7	8	25	15.3
Pediatric stethoscope	7	28.6	17.1	8	25	15.3
Neonatal stethoscope	7	0		8	0	
Pediatric sphygmomanometer	7	14.3	13.2	8	0	
Oto-ophthalmoscope	7	57.1	18.7	8	62.5	17.1

Table B3.3.1 Child health care drugs in CESAR facilities

CESAR						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Drug availability on the day of the survey:	7	0		6	83.3	15.2
Packets/envelopes of oral rehydration salts	7	85.7	13.2	6	100	
Zinc sulfate/gluconate	7	0		6	83.3	15.2
Albendazole/mebendazole	7	100		6	100	
Drug availability including no stock-out in the previous 3 months	7	0		6	66.7	19.2

Table B3.3.2 Child health care drugs in CESAMO facilities

CESAMO						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Drug availability on the day of the survey:	13	7.7	7.4	9	88.9	10.5
Packets/envelopes of oral rehydration salts	13	92.3	7.4	9	100	
Zinc sulfate/gluconate	13	7.7	7.4	9	88.9	10.5
Albendazole/mebendazole	13	100		9	100	
Amoxicillin/Erythromycin/Benzathine penicillin	13	100		9	100	
Drug availability including no stock-out in the previous 3 months	13	7.7	7.4	9	77.8	13.9

Table B3.3.3 Child health care drugs in CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Drug availability on the day of the survey:	7	0		8	75	15.3
Packets/envelopes of oral rehydration salts	7	57.1	18.7	8	100	
Zinc sulfate/gluconate	7	14.3	13.2	8	87.5	11.7
Albendazole/mebendazole	7	42.9	18.7	8	75	15.3
Amoxicillin/Erythromycin/Benzathine penicillin	7	85.7	13.2	8	100	
Saline/Hartmann's solution/Dextrose	7	85.7	13.2	8	100	
Drug availability including no stock-out in the previous 3 months	7	0		8	50	17.7

Table B3.4.1 Composite child health care indicator at CESAR facilities

CESAR						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All available equipment	7	14.3	13.2	6	16.7	15.2
Drug availability on the day of the survey	7	0		6	83.3	15.2
Drug availability including no stock-out in the previous 3 months	7	0		6	66.7	19.2
Facility has all required equipment and drugs	7	0		6	16.7	15.2

Table B3.4.2 Composite child health care indicator at CESAMO facilities

CESAMO						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All available equipment	13	46.2	13.8	9	0	
Drug availability on the day of the survey	13	7.7	7.4	9	88.9	10.5
Drug availability including no stock-out in the previous 3 months	13	7.7	7.4	9	77.8	13.9
Facility has all required equipment and drugs	13	0		9	0	

Table B3.4.3 Composite child health care indicator at CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All available equipment	7	0		8	0	
Drug availability on the day of the survey	7	0		8	75	15.3
Drug availability including no stock-out in the previous 3 months	7	0		8	50	17.7
Facility has all required equipment and drugs	7	0		8	0	

Table B3.5.1 Composite micronutrients indicator at CESAR facilities

CESAR			
	2nd Follow-up		
	N	%	SE
Availability of Chispitas on the day of the survey	6	16.7	15.2
Availability of other micronutrients on the day of the survey	6	50	20.4
Continuous availability of Chispitas or other micronutrients in the previous 3 months	6	33.3	19.3

*Indicator only measured at first and second follow-up

Table B3.5.2 Composite micronutrients indicator at CESAMO facilities

CESAMO			
	2nd Follow-up		
	N	%	SE
Availability of Chispitas on the day of the survey	10	20	12.6
Availability of other micronutrients on the day of the survey	10	40	15.5
Continuous availability of Chispitas or other micronutrients in the previous 3 months	10	20	12.6

*Indicator only measured at first and second follow-up

Table B3.6.1 Child health educational material in ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Printed materials on child growth and child development	19	52.6	11.4	16	81.3	9.8
Printed materials on danger signs and symptoms in children	19	57.9	11.3	16	87.5	8.3

*Missing data on child health education materials from one ambulatory facility at the baseline

Table B3.6.2 Child health educational material in basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Printed materials on child growth and child development	7	14.3	13.2	8	50	17.7
Printed materials on danger signs and symptoms in children	7	42.9	18.7	8	50	17.7

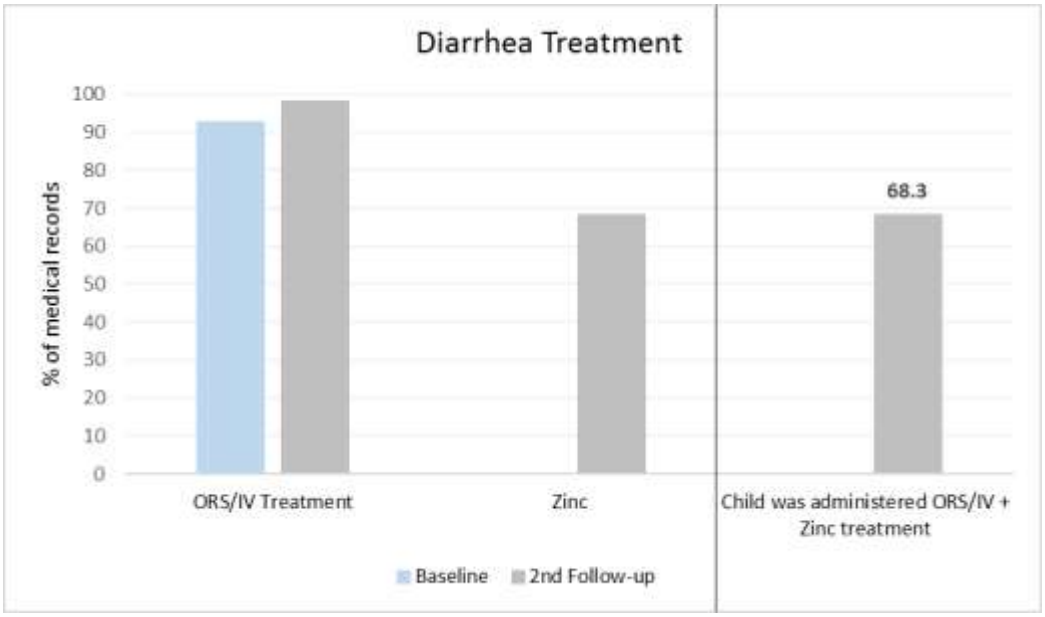
Table B3.6.3 Child health educational material in complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Printed materials on child growth and child development	4	25	21.9	6	100	
Printed materials on danger signs and symptoms in children	4	25	17.9	6	100	

Table B3.7.1 ORS and zinc consumption by facility type at the second follow-up evaluation

	Cesar			Cesamo		
	N	%	SE	N	%	SE
ORS or IV treatment administered	40	100		61	96.7	2.3
Zinc administered	40	52.5	7.9	61	78.7	5.2
Meets all criteria listed above	40	52.5	7.9	61	78.7	5.2

Figure B3.7.2 Appropriate diarrhea treatment by evaluation round



*Data regarding zinc treatment were not collected during the baseline measurement

Figure B3.8.1 Pneumonia follow-up appointment timing at the second follow-up evaluation

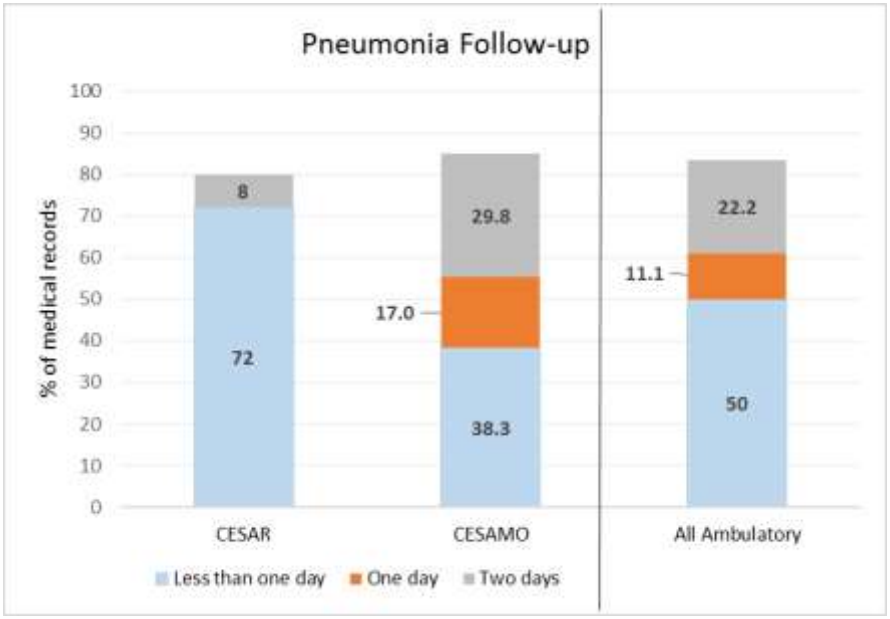
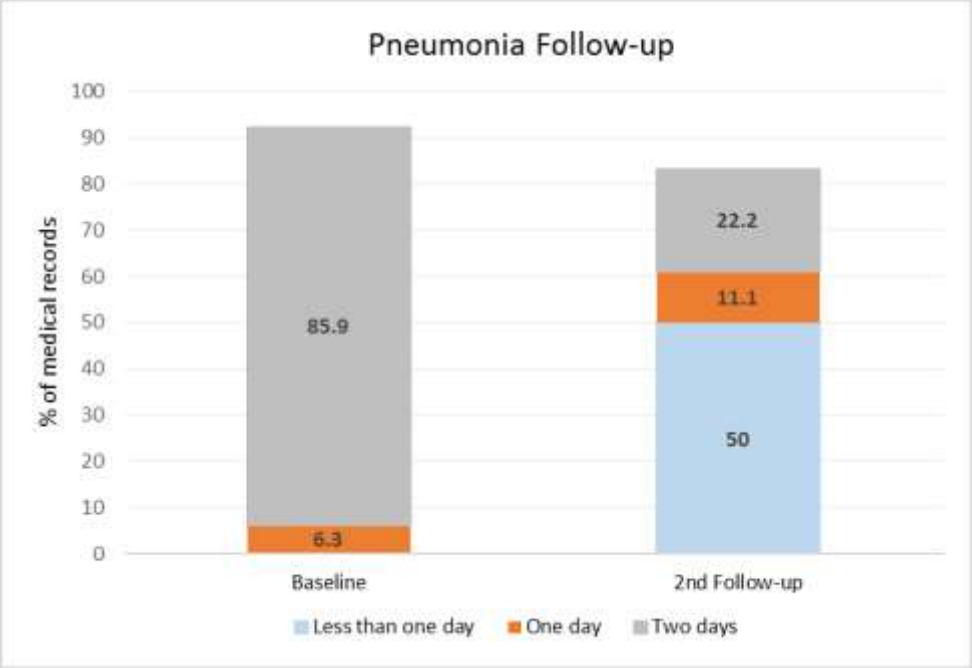


Figure B3.8.2 Pneumonia follow-up appointment timing by evaluation round



*The severity of pneumonia was not captured at the baseline and records could not be excluded based on this criteria

Table B4.1.1 Vaccination services in ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Unit provides vaccination services	-			16	100	
Unit vaccinates children under 5	20	100		16	100	
Immunization room:						
Private room with visual and auditory privacy	19	73.7	10.1	16	100	
Non-private room without auditory or visual privacy	19	15.8	8.4	16	0	
Visual privacy only	19	10.5	7.0	16	0	
No privacy	19	0		16	0	
Other	19	0		16	0	
Don't provide service/decline to respond	19	0		16	0	

*General vaccination services not captured at the baseline
**Immunization room data missing for one ambulatory facility at the baseline

Table B4.1.2 Vaccination services in basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Unit provides vaccination services	-			8	87.5	11.7
Unit vaccinates children under 5	7	28.6	17.1	8	0	
Immunization room:						
Private room with visual and auditory privacy	7	71.4	17.1	8	87.5	11.7
Non-private room without auditory or visual privacy	7	14.3	13.2	8	0	
Visual privacy only	7	0		8	0	
No privacy	7	0		8	0	
Other	7	0		8	0	
Don't provide service/decline to respond	7	14.3	13.2	8	12.5	11.7

*General vaccination services not captured at the baseline

Table B4.1.3 Vaccination services in complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Unit provides vaccination services	-			6	100	
Unit vaccinates children under 5	4	75	21.6	6	50	20.4
Immunization room:						
Private room with visual and auditory privacy	4	50	25.0	6	100	
Non-private room without auditory or visual privacy	4	50	25.0			
Visual privacy only	4	0		6	0	
No privacy	4	0		6	0	
Other	4	0		6	0	
Don't provide service/decline to respond	4	0		6	0	

*General vaccination services not captured at the baseline

Table B4.2.1 Vaccination storage at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Storage:						
Stored in facility	20	100		16	100	
Picked up from another facility	20	0		16	0	
Delivered when services are being provided	20	0		16	0	
None of the above	20	0		16	0	

*At the baseline only facilities who reported providing child vaccinations were asked about vaccine storage; this was a single response option question
**At the second follow-up, facilities who reported providing vaccinations (regardless of age) were asked about vaccination storage; this was a multi-response option

Table B4.2.2 Vaccination storage at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Storage						
Stored in facility	2	100		7	100	
Picked up from another facility	2	0		7	0	
Delivered when services are being provided	2	0		7	0	
None of the above	2	0		7	0	

*At the baseline only facilities who reported providing child vaccinations were asked about vaccine storage; this was a single response option question
**At the second follow-up, facilities who reported providing vaccinations (regardless of age) were asked about vaccination storage; this was a multi-response option

Table B4.2.3 Vaccination storage at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Storage						
Stored in facility	3	100		6	100	
Picked up from another facility	3	0		6	0	
Delivered when services are being provided	3	0		6	0	
None of the above	3	0		6	0	

*At the baseline only facilities who reported providing child vaccinations were asked about vaccine storage; this was a single response option question
**At the second follow-up, facilities who reported providing vaccinations (regardless of age) were asked about vaccination storage; this was a multi-response option

Table B4.3.1 Vaccination supply logistics at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Ordering Strategy						
Determines own needs	20	95	4.9	16	100	
Need determined elsewhere	20	5	4.9	16	0	
Both(differ by vaccine)	20	0		16	0	
Time to receive supplies						
< 1 week	20	90	6.7	16	62.5	12.1
1-2 weeks	20	10	6.7	16	37.5	12.1
> 2 weeks	20	0		16	0	
Reception of quantity ordered						
Always	20	80	8.9	16	100	
Almost always	20	20	8.9	16	0	
Almost never	20	0		16	0	

*At the baseline only facilities who store vaccines and reported providing child vaccinations were asked about vaccine logistics
**At the second follow-up facilities who store vaccines and reported providing vaccinations (regardless of age) were asked about vaccination logistics

Table B4.3.2 Vaccination supply logistics at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Ordering Strategy						
Determines own needs	2	100		7	85.7	13.2
Need determined elsewhere	2	0		7	14.3	13.2
Both(differ by vaccine)	2	0		7	0	
Time to receive supplies						
< 1 week	2	100		7	100	
1-2 weeks	2	0		7	0	
> 2 weeks	2	0		7	0	
Reception of quantity ordered						
Always	2	100		7	100	
Almost always	2	0		7	0	
Almost never	2	0		7	0	

*At the baseline only facilities who store vaccines and reported providing child vaccinations were asked about vaccine logistics
**At the second follow-up facilities who store vaccines and reported providing vaccinations (regardless of age) were asked about vaccination logistics

Table B4.3.3 Vaccination supply logistics at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Ordering Strategy						
Determines own needs	3	100		6	100	
Need determined elsewhere	3	0		6	0	
Both(differ by vaccine)	3	0		6	0	
Time to receive supplies						
< 1 week	2	100		6	100	
1-2 weeks	2	0		6	0	
> 2 weeks	2	0		6	0	
Reception of quantity ordered						
Always	2	100		6	100	
Almost always	2	0		6	0	
Almost never	2	0		6	0	

*At the baseline only facilities who store vaccines and reported providing child vaccinations were asked about vaccine logistics
**At the second follow-up facilities who store vaccines and reported providing vaccinations (regardless of age) were asked about vaccination logistics
***One complete facility responded 'don't know/decline to respond' when asked about the time to receive supplies and the reception of quantity ordered; this facility was excluded

Table B4.4.1 Vaccines observed on the day of the survey at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Measles, mumps, and rubella	20	100		16	100	
Pentavalent	20	100		16	100	
Polio	20	100		16	100	
Influenza	20	15	8.0	16	93.8	6.1
Rotavirus	20	100		16	100	
Pneumococcal conjugate	20	95	4.9	16	100	
BCG	20	90	6.7	16	93.8	6.1
DPT alone	1	0		0		
HepB alone	1	0		0		
Hib alone	-			0		

*Hib alone not captured at baseline

Table B4.4.2 Vaccines observed on the day of the survey at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Measles, mumps, and rubella	6	0		8	0	
Pentavalent	6	0		8	0	
Polio	6	0		8	0	
Influenza	6	0		8	0	
Rotavirus	6	0		8	0	
Pneumococcal conjugate	6	0		8	0	
BCG	6	66.7	19.3	8	100	
DPT alone	6	0		8	0	
HepB alone	6	83.3	15.2	8	87.5	11.7
Hib alone	-			8	0	

*Hib alone not captured at baseline

Table B4.4.3 Vaccines observed on the day of the survey at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Measles, mumps, and rubella	3	33.3	27.2	6	50	20.4
Pentavalent	3	66.7	27.2	6	50	20.4
Polio	3	33.3	27.2	6	50	20.4
Influenza	3	66.7	27.2	6	66.7	19.3
Rotavirus	3	33.3	27.2	6	50	20.4
Pneumococcal conjugate	3	33.3	27.2	6	50	20.4
BCG	3	100		6	100	
DPT alone	1	0		3	0	
HepB alone	1	100		3	100	
Hib alone	-			3	0	

*Hib alone not captured at baseline or first follow-up

Table B4.5.1 Vaccine storage at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Storage						
Electric fridge	20	100		16	93.8	6.1
Kerosene fridge	20	0		16	0	
Gas fridge	20	0		16	0	
Solar fridge	20	0		16	6.3	6.1
Cold box	20	85	8.0	16	81.3	9.8
Any of the above	20	100		16	100	
Thermometers						
Digital thermometers	20	70	10.3	16	68.8	11.6
Alcohol thermometers	20	0		16	62.5	12.1
Other thermometers	20	60	10.9	15	40	12.6
Any of the above	20	100		16	100	

*Other thermometers was not a required response, so values and responses vary

Table B4.5.2 Vaccine storage at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Storage						
Electric fridge	6	100		8	100	
Kerosene fridge	6	0		8	0	
Gas fridge	6	0		8	0	
Solar fridge	6	0		8	0	
Cold box	6	50	20.4	8	62.5	17.1
Any of the above	6	100		8	100	
Thermometers						
Digital thermometers	6	100		8	50	17.7
Alcohol thermometers	6	0		8	75	15.3
Other thermometers	6	33.3	19.3	8	75	15.3
Any of the above	6	100		8	100	

*Other thermometers was not a required response, so values and responses vary

Table B4.5.3 Vaccine storage at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Storage						
Electric fridge	4	100		6	83.3	15.2
Kerosene fridge	4	0		6	0	
Gas fridge	4	0		6	0	
Solar fridge	4	0		6	0	
Cold box	4	75	21.6	6	100	
Any of the above	4	100		6	100	
Thermometers						
Digital thermometers	4	25	21.6	6	100	
Alcohol thermometers	4	0		6	50	20.4
Other thermometers	4	100		6	0	
Any of the above	4	100		6	100	

*Other thermometers was not a required response, so values and responses vary

Table B5.1.1 Family planning provision at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Offers FP services	20	100		16	100	
FP room						
Private room with visual and auditory privacy	19	88.9	7.4	16	93.8	6.1
Non-private room without auditory or visual privacy	19	0		16	0	
Visual privacy only	19	5.6	5.4	16	0	
No privacy	19	5.6	5.4	16	0	
Don't provide this service/decline to respond	19	0		16	0	
Other	19	0		16	6.3	6.1

*Family planning room data missing for one ambulatory facility at the baseline

Table B5.1.2 Family planning provision at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Offers FP services	7	100		8	100	
FP room						
Private room with visual and auditory privacy	7	71.4	17.1	8	75	15.3
Non-private room without auditory or visual privacy	7	28.6	17.1	8	0	
Visual privacy only	7	0		8	12.5	11.7
No privacy	7	0		8	0	
Don't provide this service/decline to respond	7	0		8	12.5	11.7
Other	7	0		8	0	

Table B5.1.3 Family planning provision at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Offers FP services	4	100		6	100	
FP room						
Private room with visual and auditory privacy	4	100		6	100	
Non-private room without auditory or visual privacy	4	0		6	0	
Visual privacy only	4	0		6	0	
No privacy	4	0		6	0	
Don't provide this service/decline to respond	4	0		6	0	
Other	4	0		6	0	

Table B5.1.4 Family planning storage at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
FP storage						
Yes, stores contraceptives	20	100		16	100	
No, delivered when services are being provided	20	0		16	0	

Table B5.1.5 Family planning storage at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
FP storage						
Yes, stores contraceptives	7	100		8	100	
No, delivered when services are being provided	7	0		8	0	

Table B5.1.6 Family planning storage at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
FP storage						
Yes, stores contraceptives	4	100		6	100	
No, delivered when services are being provided	4	0		6	0	

Table B5.2.1 Family planning methods observed at CESAR facilities

CESAR						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Observed FP methods						
Any pill	7	100		6	100	
Combined oral pill	7	100		6	100	
Progestin only pill	7	0		6	0	
Any injectable	7	85.7	13.2	6	83.3	15.2
Combined injectable (1 month)	7	0		6	0	
Progestin only injectable (3 months)	7	85.7	13.2	6	83.3	15.2
Male condom	7	100		6	100	
IUD	7	0		6	83.3	15.2
Reported services						
Offers pregnancy tests	7	100		6	66.7	19.3
Trained doctor or nurse to perform IUD insertion	7	28.6	17.07	6	83.3	15.2
Trained doctor or nurse to perform implant insertion	-			6	66.7	19.25

*Trained doctor or nurse to perform implant insertion was not captured at the baseline; baseline only measured if facility has trained doctor to perform IUD insertion

Table B5.2.2 Family planning methods observed at CESAMO facilities

CESAMO						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Observed FP methods						
Any pill	12	91.7	8.0	10	100	
Combined oral pill	12	83.3	10.8	10	100	
Progestin only pill	12	8.3	8.0	10	0	
Any injectable	12	100		10	100	
Combined injectable (1 month)	12	0		10	10	9.5
Progestin only injectable (3 months)	12	100		10	100	
Male condom	12	100		10	100	
IUD	12	100		10	90	9.5
Reported services						
Offers pregnancy tests	12	100		10	100	
Trained doctor or nurse to perform IUD insertion	12	100	0	10	100	
Trained doctor or nurse to perform implant insertion	-			10	90	9.49

*Trained doctor or nurse to perform implant insertion was not captured at the baseline; baseline only measured if facility has trained doctor to perform IUD insertion

Table B5.2.3 Family planning methods observed at CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Observed FP methods						
Any pill	7	57.1	18.7	7	28.6	17.1
Combined oral pill	7	57.1	18.7	7	28.6	17.1
Progestin only pill	7	0		7	0	
Any injectable	7	71.4	17.1	7	14.3	13.2
Combined injectable (1 month)	7	0		7	0	
Progestin only injectable (3 months)	7	71.4	17.1	7	14.3	13.2
Male condom	7	100		7	100	
IUD	7	57.1	18.7	7	100	
IUD insertion kit	7	57.1	18.7	7	100	
Reported services						
Offers pregnancy tests	7	71.4	17.1	7	85.7	13.2
Trained doctor to perform tubal ligation	7	0		7	14.3	13.2
Trained doctor to perform vasectomy	7	0	0	7	0	0

*Trained doctor or nurse to perform implant insertion was not captured at the baseline; baseline only measured if facility has trained doctor to perform IUD insertion

Table B5.2.4 Family planning methods observed at Hospitals

Hospital						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Observed FP methods						
Any pill	4	100		6	100	
Combined oral pill	4	100		6	100	
Progestin only pill	4	0		6	0	
Any injectable	4	100		6	100	
Combined injectable (1 month)	4	0		6	50	20.4
Progestin only injectable (3 months)	4	100		6	100	
Male condom	4	100		6	100	
IUD	4	100		6	100	
IUD insertion kit	4	100		6	100	
Reported services						
Offers pregnancy tests	4	100		6	100	
Trained doctor to perform tubal ligation	4	75	21.6	6	100	
Trained doctor to perform vasectomy	4	75	21.65	6	66.7	19.25

*Trained doctor or nurse to perform implant insertion was not captured at the baseline; baseline only measured if facility has trained doctor to perform IUD insertion

Table B5.3.1 Family planning counseling provided at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Individual fp counseling	20	100		16	100	
Group FP counseling	20	95	4.9	16	93.8	6.1

Table B5.3.2 Family planning counseling provided at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Individual fp counseling	7	100		8	87.5	11.7
Group FP counseling	7	100		8	87.5	11.7

Table B5.3.3 Family planning counseling provided at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Individual fp counseling	4	100		6	100	
Group FP counseling	4	100		6	100	

Table B5.4.1 Composite family planning indicator at CESAR facilities

CESAR						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Condoms	6	100		6	100	
Any pill	6	100		6	100	
Any injectable	6	83.3	15.2	6	83.3	15.2
Continuous availability of condoms, pills, and injectables in the previous three months	6	83.3	15.2	6	83.3	15.2

Table B5.4.2 Composite family planning indicator at CESAMO facilities

CESAMO						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Condoms	12	100		10	100	
Any pill	12	91.7	8.0	10	100	
Any injectable	12	100		10	100	
Intrauterine device	12	100		10	90	9.5
Continuous availability of condoms, pills, and injectables in the previous three months	12	83.3	10.8	10	40	15.5

Table B5.4.3 Composite family planning indicator at CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Condoms	7	100		7	100	
Any pill	7	57.1	18.7	7	85.7	13.2
Any injectable	7	71.4	17.1	7	71.4	17.1
Intrauterine device	7	57.1	18.7	7	100	
Continuous availability of condoms, pills, and injectables in the previous three months	7	42.9	18.7	7	71.4	17.1

*At the second follow-up CMI facilities met the indicator if either the CMI facility itself or a nearby CESAMO facility carried the methods; this data was not captured at the baseline

Table B5.4.4 Composite family planning indicator at hospitals

Hospital						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Condoms	4	100		6	100	
Any pill	4	100		6	100	
Any injectable	4	100		6	100	
Intrauterine device	4	100		6	100	
Continuous availability of condoms, pills, and injectables in the previous three months	4	100		6	66.7	19.2

Table B6.1.1 ANC service provision at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Offers ANC services	20	100		16	93.8	6.1
ANC room						
Private room with auditory and visual privacy	19	89.5	7.0	16	87.5	8.3
Non-private room without auditory or visual privacy	19	0		16	0	
Visual privacy only	19	10.5	7.0	16	0	
Other	19	0		16	6.3	6.1
No privacy	19	0		16	0	
Don't provide this service/decline to respond	19	0		16	6.3	6.1

*ANC room data missing for one ambulatory facility at the baseline

Table B6.1.2 ANC/DEL/PPM service provision at CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Offers ANC services	7	14.3	13.2	8	0	
Offers routine delivery services (non-urgent)	7	100		8	100	
Offers immediate PPC services	7	100		8	100	
ANC - PPC room						
Private room with auditory and visual privacy	7	100		8	75	15.3
Non-private room without auditory or visual privacy	7	0		8	0	
Visual privacy only	7	0		8	0	0
Other	7	0		8	0	0.0
No privacy	7	0		8	0	0
Don't provide this service/decline to respond	7	0		8	25	15.31
Delivery room						
Private room with auditory and visual privacy	7	100		8	100	0
Non-private room with neither auditory or visual privacy	7	0		8	0	0
Visual privacy only	7	0		8	0	0
No privacy	7	0		8	0	0
Other	7	0		8	0	0
Don't provide this service/decline to respond	7	0		8	0	0

Table B6.1.3 ANC/DEL/PPM service provision at hospitals

Hospital						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Offers ANC services	4	25	21.6	6	100	
Offers routine delivery services (non-urgent)	4	100		6	100	
Offers immediate PPC services	4	100		6	100	
ANC - PPC room						
Private room with auditory and visual privacy	4	100		6	100	
Non-private room without auditory or visual privacy	4	0		6	0	
Visual privacy only	4	0		6	0	
Other	4	0		6	0	
No privacy	4	0		6	0	
Don't provide this service/decline to respond	4	0		6	0	
Delivery room						
Private room with auditory and visual privacy	4	100		6	100	
Non-private room with neither auditory or visual privacy	4	0		6	0	
Visual privacy only	4	0		6	0	
No privacy	4	0		6	0	
Other	4	0		6	0	
Don't provide this service/decline to respond	4	0		6	0	

Table B6.2.1 ANC – PPM equipment at CESAR facilities

CESAR						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available:	7	71.4	17.1	6	33.3	19.2
Standing scale	7	85.7	13.2	6	83.3	15.2
Height rod	7	85.7	13.2	6	100	
Gynecological exam table/bed	7	85.7	13.2	6	33.3	19.2
Obstetrical tape/measuring tape	7	100		6	100	
Hand lamp/goosenck lamp	7	28.6	17.1	6	100	
Perinatal maternal medical history	7	100		6	100	
Perinatal maternal card	7	100		6	100	

*When including all examination tables, not solely gynecological exam beds (with stirrups), 100% of baseline and 83.3% of second follow-up facilities had a functional exam bed/table

Table B6.2.2 ANC – PPM equipment at CESAMO facilities

CESAMO						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available:	12	83.3	10.8	9	100	
Standing scale	13	84.6	10.0	9	100	
Height rod	13	84.6	10.0	9	100	
Gynecological exam table/bed	13	92.3	7.4	9	100	
Obstetrical tape/measuring tape	13	100		9	100	
Hand lamp/goosenck lamp	13	84.6	10.0	9	88.9	10.5
Perinatal maternal medical history	12	100		9	100	
Perinatal maternal card	12	100		9	100	

*Perinatal maternal medical history & perinatal maternal card were not captured at one facility at the baseline
**When including all examination tables, not solely gynecological exam beds (with stirrups), 100% of baseline facilities had a functional exam bed/table

Table B6.2.3 ANC – PPM equipment at CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available:	7	71.4	17.1	6	0	
Standing scale	7	85.7	13.2	6	83.3	15.2
Height rod	7	85.7	13.2	6	83.3	15.2
Gynecological exam table/bed	7	100		6	100	
Obstetrical tape/measuring tape	7	100		6	100	
Hand lamp/goosenck lamp	7	85.7	13.2	6	100	
Blood pressure apparatus	7	100		6	83.3	15.2
Stethoscope	7	100		6	83.3	15.2
IUD insertion kit	7	100		6	100	
Perinatal maternal medical history	7	85.7	13.2	6	83.3	15.2
Perinatal maternal card	7	100		6	0	

Table B6.2.4 ANC – PPM equipment at Hospitals

Hospital						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available:	4	0		6	100	
Standing scale	4	100		6	100	
Height rod	4	100		6	100	
Gynecological exam table/bed	4	100		6	100	
Obstetrical tape/measuring tape	4	75	21.7	6	100	
Hand lamp/goosenck lamp	4	100		6	100	
Blood pressure apparatus	4	50	25	6	100	
Stethoscope	4	50	25	6	100	
IUD insertion kit	4	100		6	100	
Perinatal maternal medical history	4	75	21.7	6	100	
Perinatal maternal card	4	75	21.7	6	100	

Figure B6.3.1 4 ANC visits with quality

	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
At least 4 ANC visits	58	84.5	4.8	79	82.3	4.3
At least 4 ANC visits according to the norm	58	84.5	4.8	79	77.2	4.7
All lab tests performed at least once during pregnancy:	58	48.3	6.6	79	68.4	5.2
Hb	58	82.8	5.0	79	68.4	5.2
Blood glucose	58	48.3	6.6	79	92.4	3.0
Rh factor	58	84.5	4.8	79	93.7	2.7
Urinalysis	58	87.9	4.3	79	91.1	3.2
Blood group	58	84.5	4.8	79	93.7	2.7
VDRL/RPR	58	89.7	4.0	79	91.1	3.2
HIV	58	87.9	4.3	79	93.7	2.7
4 ANC visits with appropriate checks and laboratory tests	58	43.1	6.5	79	58.2	5.5

*4 ANC visits according to the norm include: weight checked + blood pressure checked + fetal movement and fetal heart rate (if gestational age > 20 weeks) + fundal height checked (if gestational age >=22 weeks)
**RPR was not captured at baseline or the first follow-up as an alternative to VDRL. At the baseline, all checks were only captured at the first visit.

Figure B6.4.1 Gestational age at first ANC visit

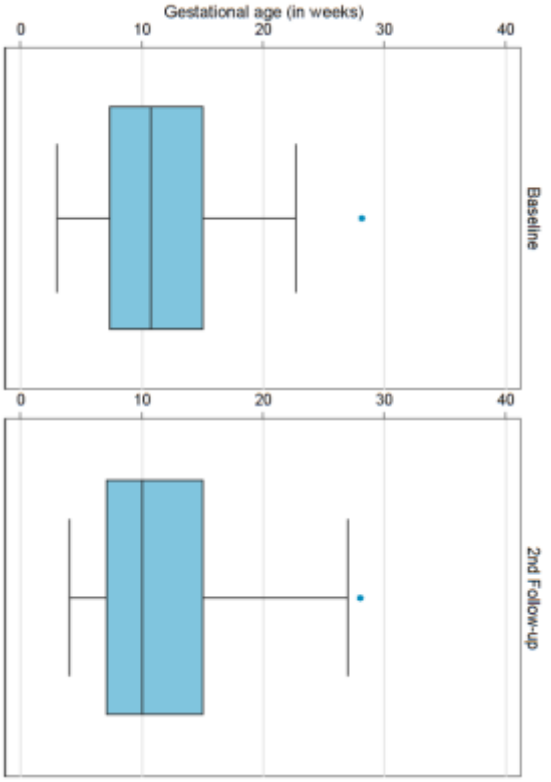


Figure B6.4.2 Gestational age at the first ANC visit of women who delivered in the last 2 years

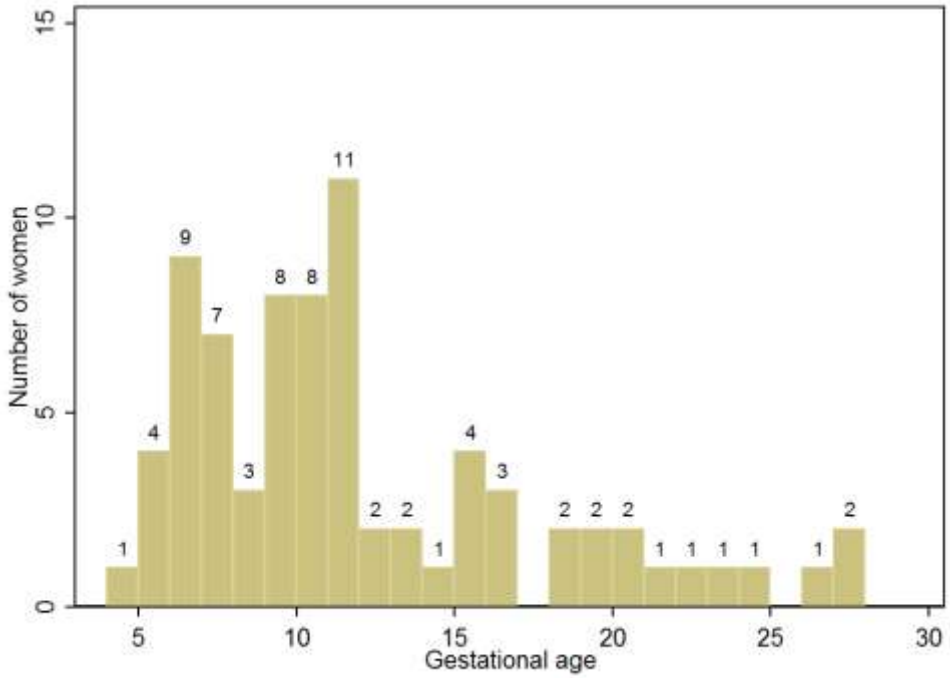


Figure B6.5.1 Partograph completion at the second follow-up evaluation

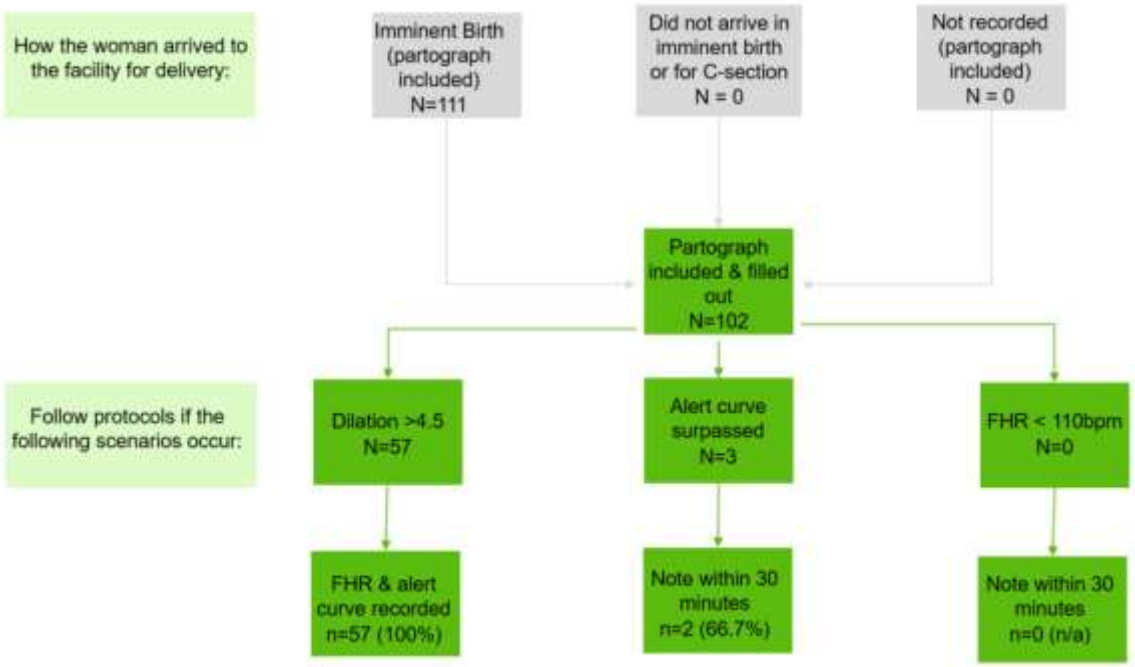


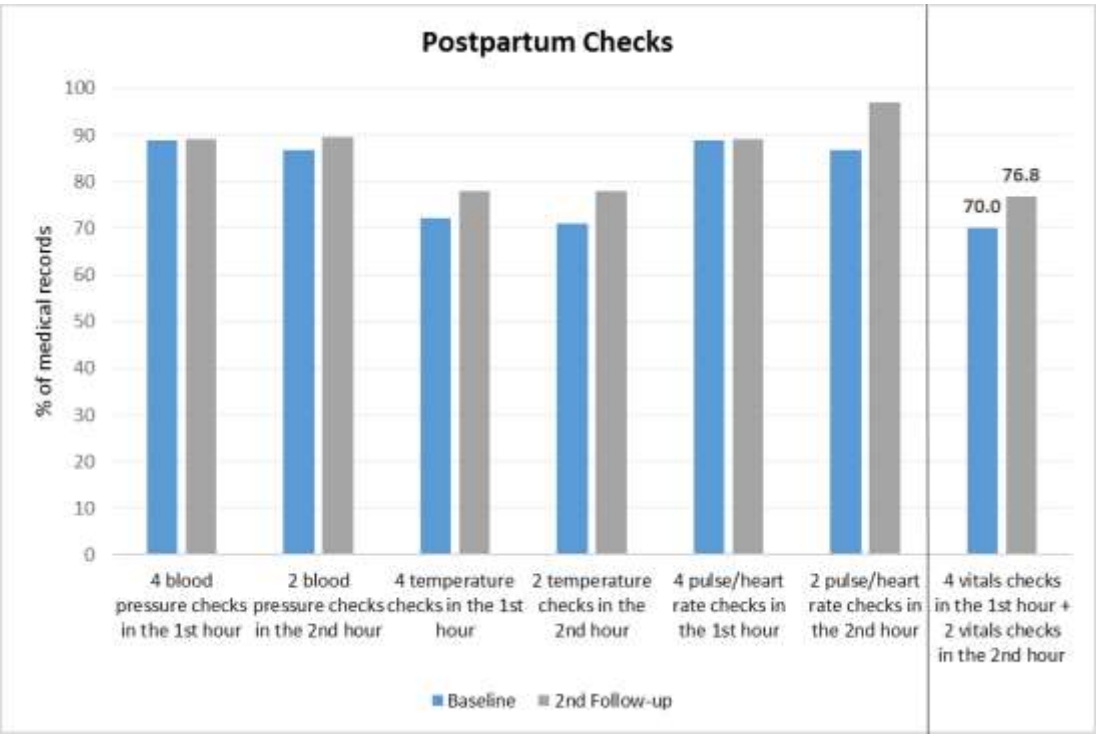
Figure B6.6.1 Oxytocin/other uterotonic administration in CMI medical records

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Oxytocin was administered after birth	96	100		104	99	1.0
Other uterotonic was administered after birth	96	0		104	0	
Oxytocin/other uterotonic was administered after delivery	96	100		104	99	1.0

Figure B6.6.2 Oxytocin/other uterotonic administration in Hospital medical records

Hospital						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Oxytocin was administered after birth	87	96.6	2.0	53	98.1	1.9
Other uterotonic was administered after birth	87	0		53	0	
Oxytocin/other uterotonic was administered after delivery	87	96.6	2.0	53	98.1	1.9

Figure B6.7.1 Postpartum checks from baseline to second follow-up



*Baseline did not capture if the woman was referred from another facility or delivery type; baseline & first follow-up did not capture heart rate as an alternative to pulse

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

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Emergency room:						
Private room with visual and auditory privacy	7	85.7	13.2	8	100	
Non-private room without visual or auditory privacy	7	0		8	0	
Visual privacy only	7	0		8	0	
No privacy	7	0		8	0	
Don't provide this service/decline to respond	7	14.3	13.2	8	0	

Table B7.1.2 Emergency obstetric and neonatal care service provision in complete facilities

Hospital						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Emergency room:						
Private room with visual and auditory privacy	4	100		6	100	
Non-private room without visual or auditory privacy	4	0		6	0	
Visual privacy only	4	0		6	0	
No privacy	4	0		6	0	
Don't provide this service/decline to respond	4	0		6	0	

Table B7.2.1 Emergency drug availability in CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Availability of all drugs on the day of the survey:	6	50	20.4	8	87.5	11.7
Ampicillin	6	50	20.4	8	87.5	11.7
Ergometrine/oxytocin/ergobasine	6	83.3	15.2	8	100	
Gentamicin	6	83.3	15.2	8	87.5	11.7
Magnesium sulfate	6	83.3	15.2	8	100	
Continuous availability of all drugs in the previous three months	-			8	62.5	17.1

*Availability of ampicillin, ergometrine/oxytocin/ergobasine, gentamicin, & magnesium sulfate was not captured for the previous three months at the baseline

Table B7.3.1 Emergency equipment availability in Hospitals

Hospitals						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All of the following functional equipment:	4	0		6	83.3	15.2
Blood pressure apparatus	4	50	25.0	6	100	
Stethoscope	4	25	21.7	6	100	
Pediatric/neonatal stethoscope	4	25	21.7	6	100	
Portable doppler/Pinard stethoscope	4	100		6	100	
Autoclave/heat sterilizer	4	75	21.7	6	83.3	15.2
Oxygen tank	4	100		6	100	
Adult resuscitation bag	4	75	21.7	6	100	
Neonatal resuscitation bag	4	75	21.7	6	100	
Laryngoscope	4	100		6	100	
MVA equipment	4	100		6	100	
Anesthesia equipment	4	75	21.7	6	100	

Table B7.3.2 Emergency drug availability in Hospitals

Hospitals						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Drug availability on the day of the survey:	4	0		6	66.7	19.2
Adrenaline	4	75	21.7	6	100	
Isotonic crystalloids (saline solution or Ringer's lactate)	4	100		6	100	
Sodium bicarbonate	4	75	21.7	6	83.3	15.2
Amoxicillin/Ampicillin/Amikacin sulfate/Crystalline penicillin G/Clindamycin/ Cephalexin/Dicloxacillin/Doxycycline/ Gentamicin/Metronidazole	4	100		6	100	
Furosemide	4	100		6	100	
Diazepam	4	100		6	100	
Magnesium sulfate	4	75	21.7	6	100	
Phenobarbital/Phenobarbital sodium	4	75	21.7	6	100	
Hydralazine/Hydralazine hydrochloride/Methyldopa/ Propanolol/Nifedipine	4	100		6	100	
Tetracycline opthalmic ointment	4	25	21.7	6	83.3	15.2
Naloxone hydrochloride	4	25	21.7	6	100	
Dextrose	4	25	21.7	6	100	
Normal saline solution for washing	4	75	21.7	6	100	
Dexamethasone/Betamethasone	4	75	21.7	6	100	
Ergometrine/Ergobasine maleate/Oxytocin	4	100		6	100	
Atropine/Atropine sulfate/Epinephrine	4	100		6	100	
Continous availability of all drugs for the previous 3 months	-			6	0	

*Stock out information not captured at the baseline; stock out information for atropine sulfate was not captured at the second follow-up

**Epinephrine, crystalline penicillin G, phenobarbital sodium not captured at baseline. Baseline instruments specified drug amounts while second follow-up did not.

Table B7.3.3 Composite emergency monitoring indicator for Hospitals

Hospitals						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available	4	0		6	83.3	15.2
Drug availability on the day of the survey	4	0		6	66.7	19.2
Continous availability of all drugs for the previous 3 months	-			6	0	
All available drugs and equipment for emergency care	4	0		6	0	

Table B7.4.1 Uterine balloon use at the second follow-up evaluation

	Basic			Complete		
	N	%	SE	N	%	SE
Facility uses a uterine tamponade balloon for obstetric hemorrhage:	8	37.5	17.1	6	83.3	15.2
Type of balloon used most often:						
Bakri	3	0	0	5	0	0
Rusch	3	0	0	5	0	0
Ebb (Belfort-Dildy)	3	0	0	5	0	0
Tube Sengstaken-Blakemore	3	0	0	5	0	0
Condom-based balloon	3	66.7	27.2	5	0	0
Foley catheter	3	33.3	27.2	5	100	0
Other	3	0	0	5	0	0
Facility has a dispsable tamponade kit:	3	33.3	27.2	5	0	0
Disposable kit is commercial	1	0	0	0		
Disposable kit is prepared with materials by facilty personnel	1	100	0	0		
Personnel was trained in the last year to use the balloon for hemorrhage	2	0	0	5	100	0
Personnel was trained in the last year to assemble a hydrostatic balloon	3	0	0	5	100	0

*One basic facility responded 'Don't know' when asked if personnel was trained in the last year to use the balloon; this facility was excluded

Table B7.5.1 Neonatal complications in basic facilities

Basic		
	Baseline	2nd Follow-up
Prematurity	5	5
Sepsis	3	5
Asphyxia	2	8
Total	10	18

Table B7.5.2 Neonatal complications in complete facilities

Complete		
	Baseline	2nd Follow-up
Prematurity	8	1
Sepsis	63	72
Asphyxia	6	8
Total	77	81

Table B7.5.3 Premature neonates in basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Gestational age calulated using the Capurro or Ballard test (if neonate was not referred from another facility)	5	60	21.9	5	100	
Classification based on gestational age (if neonate was not referred from another facility)	5	100		5	80	17.9
Vital signs checked:	5	0		5	0	
Weight	5	100		5	100	
Heart rate/pulse	5	100		5	100	
Respiratory rate	5	100		5	100	
Silverman-Anderson test	5	0		5	0	
Head circumference	5	100		5	100	
APGAR score (at 1 or 5 minutes)/skin color	5	100		5	100	
Heat application	5	60	21.9	5	100	
Neonate was fed glucose	5	80	17.9	5	60	21.9
Evaluated by a doctor	5	60	21.9	5	40	21.9
Referred to a complete facility (if <2000 gr or had pneumonia, diarrhea, neurological complications, convulsions, or hypoglycemia)	5	100		3	100.0	
Prematurity managed according to the norm	5	0		5	0	

Table B7.5.4 Premature neonates in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Gestational age calulated using the Capurro or Ballard test (if neonate was not referred from another facility)	8	100		0		
Classification based on gestational age (if neonate was not referred from another facility)	8	100		0		
Vital signs checked:	8	50	17.7	1	0	
Weight	8	100		1	0	
Heart rate/pulse	8	100		1	100	
Respiratory rate	8	100		1	100	
Silverman-Anderson test	8	50	17.7	1	0	
Head circumference	8	100		1	0	
APGAR score (at 1 or 5 minutes)/skin color	8	100		1	0	
Laboratory tests:	8	87.5	11.7	1	0	
Glucose test	8	100		1	0	
Oxygen saturation	8	87.5	11.7	1	100	
Heat application	8	100		1	100	
Neonate was fed glucose	8	100		1	100	
Evaluated by a specialist	8	87.5	11.7	1	100	
Appropriate treatment of the following:	3	66.7	27.2	0		
If pneumonia: antibiotics	0			0		
If diarrhea: IV solution + antibiotics	0			0		
If seizures: anticonvulsants	0			0		
If hypoglycemia: Glucose IV	3	66.7	27.2	0		
Prematurity managed according to the norm	8	37.5	17.1	1	0	

Table B7.5.5 Neonates with sepsis in basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	3	66.7	27.2	5	80	17.9
Heart rate/pulse	3	66.7	27.2	5	80	17.9
Respiratory rate	3	100		5	80	17.9
Temperature	3	100		5	80	17.9
Administered antibiotics	3	66.7	27.2	5	100	
Evaluated by a doctor	3	100		5	100	
Referred to a complete facility	3	100		5	100	
Sepsis managed according to the norm	3	33.3	27.2	5	80	17.9

Table B7.5.6 Neonates with sepsis in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	
Vital signs checked:	63	84.1	4.6	72	97.2	1.9
Heart rate/pulse	63	90.5	3.7	72	98.6	1.4
Respiratory rate	63	92.1	3.4	72	98.6	1.4
Temperature	63	87.3	4.2	72	97.2	1.9
Labortory tests:	63	1.6	1.6	72	1.4	1.4
Oxygen saturation	63	23.8	5.4	72	43.1	5.8
Complete blood count / (platelets + leukocytes + hemoglobin + hematocrit)	63	65.1	6.0	72	83.3	4.4
Blood culture	63	9.5	3.7	72	38.9	5.7
C-reactive protein	63	58.7	6.2	72	83.3	4.4
Neutrophil band ratio/Absolute ratio of neutrophils	63	3.2	2.2	72	5.6	2.7
Administered antibiotics	63	100		72	98.6	1.4
Evaluated by a specialist	63	96.8	2.2	72	76.4	5.0
Sepsis managed according to the norm	63	1.6	1.6	72	1.4	1.4

Table B7.5.7 Neonates with asphyxia in basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	2	100		8	100	
Heart rate/pulse	2	100		8	100	
Respiratory rate	2	100		8	100	
APGAR at 1 minute	2	100		8	100	
APGAR at 5 minutes	2	100		8	100	
Heat application	2	100		8	75	15.3
Oxygen administration (if severe asphyxia)	0			1	100	
Other procedures (one of the following if severe asphyxia):	0			1	100	
Ambu (positive pressure ventilation)/mechanical ventilation	0			1	100	
Cardiac massage	0			1	100	
Tracheal intubation	0			1	0	
Evaluated by a doctor	2	50	35.4	8	100	
Referred to a complete facility (if severe asphyxia & neonate did not die in the facility)	0			1	100	
Asphyxia managed according to the norm	2	50	35.4	8	75	15.3

Table B7.5.8 Neonates with asphyxia in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	6	100		8	87.5	11.7
Heart rate/pulse	6	100		8	100	
Respiratory rate	6	100		8	100	
APGAR at 1 minute	6	100		8	87.5	11.7
APGAR at 5 minutes	6	100		8	87.5	11.7
Labortory test: oxygen saturation	6	50	20.4	8	50	17.7
Heat application	6	66.7	19.2	8	100	
Oxygen administration (if severe asphyxia)	0			1	100	
Other procedures (one of the following if severe asphyxia):	0			1	100	
Ambu (positive pressure ventilation)/ mechanical ventilation	0			1	0	
Cardiac massage	0			1	0	
Tracheal intubation	0			1	100	
Evaluated by a specialist	6	100		8	100	
Asphyxia managed according to the norm	6	33.3	19.2	8	50	17.7

Table B7.6.1 Maternal complications in basic facilities

Basic		
	Baseline	2nd Follow-up
Sepsis	2	0
Hemorrhage	3	19
Pre-eclampsia	0	4
Eclampsia	0	1
Total	5	24

Table B7.6.2 Maternal complications in complete facilities

Complete		
	Baseline	2nd Follow-up
Sepsis	10	12
Hemorrhage	32	33
Pre-eclampsia	52	56
Eclampsia	6	7
Total	100	108

Table B7.6.3 Women with hemorrhage at basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	3	100		19	94.7	5.1
Pulse/heart rate	3	100		19	94.7	5.1
Blood pressure	3	100		19	94.7	5.1
Medications administered (at least one of the following):	3	100		19	100	
Ringer's Lactate/Hartmann's solution	3	100		19	100	
Saline Solution	3	33.3	27.2	19	36.8	11.1
Appropriate management of specific causes of hemorrhage	1	100		12	91.7	8.0
Hemorrhage managed according to the norm	3	100		19	89.5	7.0

Table B7.6.4 Women with hemorrhage at complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	32	93.8	4.3	33	100	
Pulse/heart rate	32	93.8	4.3	33	100	
Blood pressure	32	100		33	100	
Medications administered (at least one of the following):	32	68.8	8.2	33	93.9	4.2
Ringer's Lactate/Hartmann's solution	32	53.1	8.8	33	90.9	5.0
Saline Solution	32	34.4	8.4	33	54.5	8.7
Laboratory tests:	32	68.8	8.2	33	93.9	4.2
Hematocrit	32	78.1	7.3	33	93.9	4.2
Hemoglobin	32	78.1	7.3	33	97	3.0
Platelets	32	78.1	7.3	33	90.9	5.0
Appropriate management of specific causes of hemorrhage	26	80.8	7.7	25	64	9.6
Hemorrhage managed according to the norm	32	43.8	8.8	33	57.6	8.6

Table B7.6.5 Appropriate treatment for specific causes of hemorrhage in basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Appropriate management of the following causes of hemorrhage:	1	100		12	91.7	8.0
Abortion	0			1	100	
Uterine atony/Hypotonia	0			4	75	21.7
Uterine inversion	0			1	100	
Retained placenta	1	100		7	100	

Table B7.6.6 Appropriate treatment for specific causes of hemorrhage in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Appropriate management of the following causes of hemorrhage:	26	80.8	7.7	25	64	9.6
Placenta previa	0			1	0	
Placental abruption	1	100		1	100	
Uterine atony	3	100		4	50	25.0
Retained placenta	22	77.3	8.9	19	68.4	10.7

Table B7.6.7 Women with severe pre-eclampsia basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	0			4	100	
Blood pressure	0			4	100	
Laboratory tests:	0			4	100	
Urine protein	0			4	100	
Medications Administered:	0			4	75	21.7
Magnesium Sulfate	0			4	100	
Ringer's lactate/Hartmann's/Saline Solution	0			4	75	21.7
Transferred to a complete facility	0			4	100	
Pre-eclampsia managed according to the norm	0			4	75	21.7

Table B7.6.8 Women with severe pre-eclampsia complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	52	92.3	3.7	56	92.9	3.4
Pulse/heart rate	52	96.2	2.7	56	100	
Blood pressure	52	98.1	1.9	56	100	
Respiratory rate	52	98.1	1.9	56	98.2	1.8
Patellar reflex	52	94.2	3.2	56	94.6	3.
Laboratory tests:	52	1.9	1.9	56	28.6	6.
Platelet count	52	65.4	6.6	56	91.1	3.8
Urine protein	52	75	6.	56	78.6	5.5
Creatinine	52	55.8	6.9	56	94.6	3.
Uric acid	52	44.2	6.9	56	83.9	4.9
Aspartate aminotransferase/Glutamic Transaminase Oxalacetic (GOT)	52	38.5	6.7	56	85.7	4.7
Alanine transaminase/Glutamic transaminase pyruvic (GPT)	52	38.5	6.7	56	82.1	5.1
Lactate dehydrogenase	52	3.8	2.7	56	37.5	6.5
Medications Administered:	52	73.1	6.2	56	96.4	2.5
Magnesium Sulfate	52	76.9	5.8	56	100	
Hydralazine/Labelatol/Nifedipine (if diastolic blood pressure > 105)	18	55.6	11.7	18	88.9	7.4
Pre-eclampsia managed according to the norm	52	1.9	1.9	56	25	5.8

Table B7.6.9 Women with eclampsia in basic facilities.

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	0			1	100	
Blood pressure	0			1	100	
Laboratory tests:	0			1	0	
Urine protein	0			1	0	
Medications Administered:	0			1	100	
Magnesium Sulfate	0			1	100	
Ringer's lactate/Hartmann's/Saline Solution	0			1	100	
Transferred to a complete facility	0			1	0	
Eclampsia managed according to the norm	0			1	0	

Table B7.6.10 Women with eclampsia in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	6	33.3	19.2	7	100	
Pulse/heart rate	6	100		7	100	
Blood pressure	6	100		7	100	
Respiratory rate	6	100		7	100	
Patellar reflex	6	33.3	19.2	7	100	
Laboratory tests:	6	0		7	28.6	17.1
Platelet count	6	50	20.4	7	100	
Urine protein	6	33.3	19.2	7	85.7	13.2
Creatinine	6	33.3	19.2	7	100	
Uric acid	6	16.7	15.2	7	71.4	17.1
Aspartate aminotransferase/Glutamic Transaminase Oxalacetic (GOT)	6	16.7	15.2	7	100	
Alanine transaminase/Glutamic transaminase pyruvic (GPT)	6	16.7	15.2	7	100	
Lactate dehydrogenase	6	0		7	42.9	18.7
Medications Administered:	6	83.3	15.2	7	100	
Magnesium Sulfate	6	100		7	100	
Hydralazine/Labelatol/Nifedipine (if diastolic blood pressure > 105)	2	50	35.4	2	100	
Eclampsia managed according to the norm	6	0		7	28.6	17.1

Table B7.6.11 Women with sepsis in basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	2	100		0		
Pulse/heart rate	2	100		0		
Blood pressure	2	100		0		
Temperature	2	100		0		
Antibiotics administered	2	100		0		
Appropriate management of the following:	1	100		0		
Fever	1	100		0		
Sepsis managed according to the norm	2	100		0		

Table B7.6.12 Women with sepsis in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	10	100		12	100	
Pulse/heart rate	10	100		12	100	
Blood pressure	10	100		12	100	
Temperature	10	100		12	100	
Laboratory test: Hematic Biometry	10	70	14.5	12	75	12.5
Antibiotics administered	10	100		12	100	
Appropriate management of the following:	6	100		10	100	
Postpartum endometritis	5	100		7	100	
Fever	2	100		4	100	
Retained placenta	0			2	100	
Sepsis managed according to the norm	10	70	14.5	12	75	12.5

Table B8.1.1 Ambulatory facility infection control

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Incinerator at facility	20	75	9.7	16	56.3	12.4
Contract with other facility for biohazard disposal	20	10	6.7	16	6.3	6.1
Manual for decontamination	17	17.6	9.3	16	50	12.5

*3 ambulatory facilities at the baseline responded 'don't know/decline to respond' when asked about the manual; these facilities are excluded

Table B8.1.2 Basic facility infection control

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Incinerator at facility	7	42.9	18.7	8	25	15.3
Contract with other facility for biohazard disposal	5	0		8	0	
Manual for decontamination	4	50	25.0	7	71.4	17.1

*Two basic facilities at the baseline responded 'don't know/decline to respond' when asked about the contract; three basic facilities at the baseline responded 'don't know/decline to respond' when asked about the manual; these facilities are excluded
*One basic facility at the second follow-up responded 'don't know/decline to respond' when asked about the manual; this facility is excluded

Table B8.1.3 Complete facility infection control

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Incinerator at facility	4	0		6	16.7	15.2
Contract with other facility for biohazard disposal	4	0		6	33.3	19.3
Manual for decontamination	4	100		6	83.3	15.2

Table BA.1.1 Performance indicator matrix

	Baseline			2nd Follow-up		
Indicator	**N**	**%**	**CI**	**N**	**%**	**CI**
Children 0-59 months with diarrhea who were prescribed treatment according to the norm	N/A			101	68.3	(58.3- 77.2)
Children 0-59 months with pneumonia who attended a follow-up appointment <= two days after diagnosis	64	92.2	(82.7- 97.4)	72	83.3	(72.7- 91.1)
Women of a reproductive age who received the minimum required number of ANC care according to best practices for a birth in the last two years	58	43.1	(30.2- 56.8)	79	58.2	(46.6- 69.2)
Women of a reproductive age who received their first ANC care within the appropriate time	58	60.3	(46.6- 73.0)	76	69.7	(58.1- 79.8)
Partograph filled according to the norm for births in the last two years	N/A			111	99.1	(95.1- 100.0)
Institutional postpartum patients of a reproductive age who were evaluated appropriately during the first two hours after birth in the last two years	90	70	(59.4- 79.2)	164	76.8	(69.6- 83.1)
Neonates with complications managed according to the norm in the last two years	77	7.8	(2.9- 16.2)	80	6.3	(2.1- 14.0)
Women with obstetric complications managed according to the norm in the last two years	105	25.7	(17.7- 35.2)	132	48.5	(39.7- 57.3)

***Diarrhea:** Zinc administration not captured at baseline; indicator value is not comparable
***Pneumonia:** Severity of pneumonia was not captured at the baseline so records were not excluded based on this criteria
***Minimum ANC visits:** The baseline only captured fetal heart rate, fetal movement, and uterine height at the first visit if at the appropriate gestational age. RPR was not captured at baseline as an alternative to VDRL lab test.
***Institutional PPM:** Baseline did not capture if the woman was referred from another facility or delivery type; baseline did not capture heart rate as an alternative to pulse

Table BA.1.2 Monitoring indicator matrix

Indicator	Baseline			2nd Follow-up		
	N	%	CI	N	%	CI
Child health care equipment & drug availability	27	0	(0.0- 12.8)	23	4.3	(0.1- 21.9)
Chispitas/micronutrient continuous availability	N/A			16	25	(7.3- 52.4)
Family planning method continuous availability	29	75.9	(56.5- 89.7)	29	62.1	(42.3- 79.3)
Emergency drug availability in CMIs	6	50	(11.8- 88.2)	8	62.5	(24.5- 91.5)
Emergency equipment & drug availability in hospitals	4	0	(0.0- 60.2)	6	0	(0.0- 45.9)
Neonates with complications managed according to the norm in the last two years	86	9.3	(4.1- 17.5)	98	15.3	(8.8- 24.0)

*All drugs captured from baseline to second follow-up vary. At baseline many times a specific dosage of drug was requested, while at the second follow-up the drug was captured regardless of dosage. Kardex observation for drugs was not captured at the baseline– it is assumed that the data collectors were able to view the kardex unless noted otherwise.

***Child health care:** Reflex hammer & neonatal stethoscope not captured at CESAMO facilities at the baseline.

***Family planning methods:** Baseline did not captured family planning method availability at neighboring facilities for CMIs. At the second follow-up the data on kardex observation was not captured at the neighboring facility for CMIs.

***Emergency drugs in CMIs:** Drug stock out in the previous 3 months was not captured at baseline

***Emergency equipment & drugs in hospitals:** Drug stock out in the previous 3 months was not captured at baseline

***Neonates with complications**: Monitoring indicator includes records from both basic & complete facilities

Appendix C COMPAIRSON & INTERVENTION COMBINED TABLES & FIGURES

Table C2.1.1 Health facility classification

	Baseline	2nd Follow-up
CESAR	34	37
CESAMO	31	25
CMI	15	16
Hospital	10	12
Total	90	90

Figure C2.1.2 Map of health facilities at the second follow-up evaluation

*GPS data for three facilities are not displayed

Table C2.1.3 Geographical representation by department and municipality

		No. of facilities	
Department	Municipality	Baseline	2nd Follow-up
Choluteca	Choluteca	1	1
	Concepcion de Maria	8	8
	Duyure	1	0
	San Marcos de Colon	5	6
Comayagua	Comayagua	1	1
	La Jigua	2	0
	Nueva Arcadia	4	1
	San Jose de Comayagua	2	2
	San Nicolas	2	1
	Taulabe	2	3
Copan	Cabanas	1	2
	Copan Ruinas	1	5
	San Antonio, Copan	1	1
	San Jeronimo	2	1
	Santa Rita	3	5
	Santa Rosa de Copan	1	1
Cortes	San Pedro Sula	1	0
	Santa Cruz de Yojoa	2	5
El Paraiso	Danli	0	1
Intibuca	Concepcion	3	2
	Intibuca	1	1
	Magdalena	1	1
	San Antonio, Intibuca	3	1
	San Francisco de Opalaca	2	2
	San Miguelito	2	2
	Santa Lucia	2	2
La Paz	Aguanqueterique	0	2
	La Paz	1	1
	Santiago de Puringla	4	3
Lempira	Candelaria	2	1
	Cololaca	2	2
	Gracias	1	1
	Guarita	4	2
	La Virtud	1	1
	Piraera	2	1
	San Juan Guarita	1	1
	Tambla	0	2
	Tomala	1	1
	Valladolid	1	1
Ocotepeque	San Marcos	1	1
Olancho	Catacamas	1	1
	Dulce Nombre de Culmi	9	8
	Juticalpa	1	1
Santa Barbara	Santa Barbara	0	1
Valle	Langue	3	2
	San Lorenzo	1	1
Yoro	Progreso	0	1
Total		90	90

Table C2.2.1 Medical Record Review sample size

	All Facilities	
	Baseline	2nd Follow-up
Antenatal care	287	362
Diarrhea	257	359
Pneumonia	234	302
Uncomplicated delivery	418	331
Immediate postpartum care	247	329
Neonatal complications	519	298
Maternal complications	501	296
Total	2463	2277

Table C2.3.1 Facility referrals

	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
% of ambulatory facilities that receive referrals	65	40	6.1	62	30.6	5.9
% of basic facilities that receive referrals	15	100		16	93.8	6.1
% of basic facilities that receive referrals for routine deliveries	-			15	93.3	6.4
% of basic facilities that receive referrals for complicated deliveries	-			15	33.3	12.2
% of complete facilities that receive referrals	10	100		12	100	
% of complete facilities that receive referrals for routine deliveries	-			12	100	
% of complete facilities that receive referrals for complicated deliveries	-			12	100	

*Questions regarding referrals for routine and complicated deliveries were not asked at the baseline

Table C2.3.2 Documentation requested for routine deliveries at the second follow-up

	Basic			Complete		
	N	%	SE	N	%	SE
Transfer/referral form	14	100		11	100	
Patient medical record	14	14.3	9.4	11	18.2	11.6
Laboratory results	14	28.6	12.1	11	9.1	8.7
Proof of insurance	14	0		11	9.1	8.7
Other	14	71.4	12.1	11	36.4	14.5

*One complete facility responded “don’t know/refuse to respond” when asked about the type of documentation requested for routine delivery referrals

Table C2.3.3 Documentation requested for complicated deliveries at the second follow-up

	Basic			Complete		
	N	%	SE	N	%	SE
Transfer/referral form	5	100		12	91.7	8.0
Patient medical record	5	20	17.9	12	16.7	10.8
Laboratory results	5	20	17.9	12	0	
Proof of insurance	5	0		12	0	
Other	5	100		12	50	14.4

Table C2.4.1 Facility source of water and electricity in the second follow-up

2nd Follow-up									
	Ambulatory			Basic			Complete		
	N	%	SE	N	%	SE	N	%	SE
Functional electricity	62	93.5	3.1	16	93.8	6.1	12	100	
Source of electricity									
Central supply (Comisión Federal de Electricidad)	58	91.4	3.7	15	100		12	100	
Private supply	58	0		15	0		12	16.7	10.8
In-facility generator	58	1.7	1.7	15	6.7	6.4	12	8.3	8.0
Solar generator	58	10.3	4.0	15	13.3	8.8	12	0	
Other source	58	6.9	3.3	15	33.3	12.2	12	0	
Source of water:									
Piped into facility	62	82.3	4.9	16	75	10.8	12	91.7	8.0
Public well	62	21	5.2	16	18.8	9.8	12	16.7	10.8
Facility well	62	1.6	1.6	16	6.3	6.1	12	8.3	8.0
Unprotected well	62	0		16	0		12	0	
Hand pump	62	0		16	0		12	0	
Bottled water	62	0		16	0		12	0	
Tanker truck	62	1.6	1.6	16	12.5	8.3	12	8.3	8.0
Rain water	62	0		16	0		12	0	
Other	62	24.2	5.4	16	43.8	12.4	12	0	

*One basic facility at the baseline responded 'don't know/decline to respond' when asked about the source of electricity; this facility was excluded from the source of electricity

Table C2.4.2 Facility source of water and electricity in ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Functional electricity	65	89.2	3.8	62	93.5	3.1
Source of electricity						
Central supply (Comisión Federal de Electricidad)	58	94.8	2.9	58	91.4	3.7
Private supply	58	1.7	1.7	58	0	
In-facility generator	58	0		58	1.7	1.7
Solar generator	58	3.4	2.4	58	10.3	4.0
Other source	58	0		58	6.9	3.3
Source of water:						
Piped into facility	64	79.7	5.0	62	82.3	4.9
Public well	64	18.8	4.9	62	21	5.2
Facility well	64	3.1	2.2	62	1.6	1.6
Unprotected well	64	0		62	0	
Hand pump	64	0		62	0	
Bottled water	64	6.3	3.0	62	0	
Tanker truck	64	3.1	2.2	62	1.6	1.6
Rain water	64	1.6	1.6	62	0	
Other	64	9.4	3.6	62	24.2	5.4

*One ambulatory facility at the baseline did not know the source of water when asked, therefore, responses regarding source of water for only 64 facilities are displayed

Table C2.4.3 Facility source of water and electricity in basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Functional electricity	15	100		16	93.8	6.1
Source of electricity						
Central supply (Comisión Federal de Electricidad)	14	100		15	100	
Private supply	14	0		15	0	
In-facility generator	14	21.4	11.0	15	6.7	6.4
Solar generator	14	0		15	13.3	8.8
Other source	14	0		15	33.3	12.2
Source of water:						
Piped into facility	15	86.7	8.8	16	75	10.8
Public well	15	6.7	6.4	16	18.8	9.8
Facility well	15	6.7	6.4	16	6.3	6.1
Unprotected well	15	6.7	6.4	16	0	
Hand pump	15	0		16	0	
Bottled water	15	26.7	11.4	16	0	
Tanker truck	15	6.7	6.4	16	12.5	8.3
Rain water	15	0		16	0	
Other	15	6.7	6.4	16	43.8	12.4

*One basic facility at the baseline responded 'don't know/decline to respond' when asked about the source of electricity; therefore, responses regarding source of electricity for only 14 facilities are displayed

Table C2.4.4 Facility source of water and electricity in complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Functional electricity	10	100		12	100	
Source of electricity						
Central supply (Comisión Federal de Electricidad)	10	100		12	100	
Private supply	10	0		12	16.7	10.8
In-facility generator	10	40	15.5	12	8.3	8.0
Solar generator	10	0		12	0	
Other source	10	0		12	0	
Source of water:						
Piped into facility	10	80	12.6	12	91.7	8.0
Public well	10	0		12	16.7	10.8
Facility well	10	50	15.8	12	8.3	8.0
Unprotected well	10	0		12	0	
Hand pump	10	0		12	0	
Bottled water	10	30	14.5	12	0	
Tanker truck	10	0		12	8.3	8.0
Rain water	10	0		12	0	
Other	10	0		12	0	

Table C2.5.1 Personnel employed at CESAR facilities

CESAR						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
General physician	34	0		36	52.8	8.3
Doctor in social services	-			37	18.9	6.4
Pharmacist	34	0		37	0	
Licensed nurse	34	0		37	5.4	3.7
Auxilary nurse	34	100		37	100	
Polivalent / multipurpose	-			37	8.1	4.5
Community agent/health worker	-			37	2.7	2.7
Midwife	33	48.5	8.7	37	0	
Health promoter	34	94.1	4.0	37	94.6	3.7

*Doctor in social services, polyvalent/multiuse, and community agent/health worker were not captured at the baseline
** One facility reported, “don’t know/decline to respond” to a general physician at the second follow-up and was excluded

Table C2.5.2 Personnel employed at CESMO facilities

CESAMO						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
General physician	31	100		25	96	3.9
Doctor in social services	-			25	40	9.8
Pediatrician	31	0		25	4	3.9
Pharmacist	31	3.2	3.2	25	0	
Licensed nurse	31	41.9	8.9	25	28	9.0
Auxilary nurse	31	100		25	100	
Polivalent / multipurpose	-			25	24	8.5
Community agent/health worker	-			25	0	
Midwife	30	53.3	9.1	25	0	
Lab technician	31	25.8	7.9	25	32	9.3
Health promoter	31	100		25	100	0

*Doctor in social services, polyvalent/multiuse, and community agent/health worker were not captured at the baseline
** One facility reported, “don’t know/decline to respond” to a midwife at the baseline and was excluded from the table

Table C2.5.3 Personnel employed at CMI facilities

	CMI					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
General physician	15	100		16	68.8	11.6
Doctor in social services	-			16	62.5	12.1
Pediatrician	15	0		16	0	
Nutritionist	15	0		16	0	
Pharmacist	15	0		16	0	
Licensed nurse	15	53.3	12.9	16	68.8	11.6
Auxilary nurse	15	100		16	100	
Polivalent / multipurpose	-			16	6.3	6.1
Community agent/health worker	-			16	0	
Midwife	15	20	10.3	16	0	
Social worker	15	0		15	0	
Lab technician	14	14.3	9.4	16	18.8	9.8
Health promoter	15	6.7	6.4	16	0	
Internist	15	0		16	0	
Gynecologist	15	0		16	6.3	6.1
Surgeon	15	0		16	0	
Anesthesiologist	15	0		16	0	
Emergency medical technician	15	0		16	0	
Radiology technician	15	6.7	6.4	16	0	
Ambulance driver	15	80	10.3	16	93.8	6.1

*Doctor in social services, polyvalent/multiuse, and community agent/health worker were not captured at the baseline
**One CMI at the baseline responded 'don't know/decline to respond' when asked about lab technician employment; this facility was excluded
**One CMI at the second follow-up responded 'don't know/decline to respond' when asked about social worker employment; this facility was excluded

Table C2.5.4 Personnel employed at Hospitals

Hospital						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
General physician	10	100		12	100	
Doctor in social services	-			12	100	
Pediatrician	10	100		12	100	
Nutritionist	10	0		12	16.7	10.8
Pharmacist	10	80	12.6	12	83.3	10.8
Licensed nurse	10	100		12	100	
Auxilary nurse	10	100		12	100	
Polivalent / multipurpose	-			12	0	
Community agent/health worker	-			12	8.3	8.0
Midwife	10	0		12	0	
Social worker	10	60	15.5	12	66.7	13.6
Lab technician	10	100		12	100	
Health promoter	10	0		12	0	
Internist	10	100		12	100	
Gynecologist	10	100		12	100	
Surgeon	10	100		12	100	
Anesthesiologist	10	60	15.5	12	66.7	13.6
Emergency medical technician	10	0		12	0	
Radiology technician	10	90	9.5	12	100	
Ambulance driver	10	100		12	100	

*Doctor in social services, polyvalent/multiuse, and community agent/health worker were not captured at the baseline

Table C2.6.1 Internet connection at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Facility has an internet connection	65	1.5	1.5	62	3.2	2.2

Table C2.6.2 Internet connection at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Facility has an internet connection	15	20	10.3	16	37.5	12.1

Table C2.6.3 Internet connection at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Facility has an internet connection	10	80	12.6	12	100	

Table C3.1.1 Child health care services provision in ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Unit offers child services	65	100		62	100	
Unit vaccinates children under 5	65	100		62	100	
Child care room:						
Private room with visual and auditory privacy	64	93.8	3.0	62	91.9	3.5
Non-private room	64	6.3	3.0	62	6.5	3.1
Other	64	0		62	1.6	1.6
Don't provide this service/decline to respond	64	0		62	0	

*Child care room data missing for one ambulatory facility at the baseline

Table C3.1.2 Child health care services provision in basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Unit offers child services	15	80	10.3	16	100	
Unit vaccinates children under 5	15	26.7	11.4	16	12.5	8.3
Child care room:						
Private room with visual and auditory privacy	15	93.3	6.4	16	93.8	6.1
Non-private room	15	6.7	6.4	16	6.3	6.1
Other	15	0		16	0	
Don't provide this service/decline to respond	15	0		16	0	

Table C3.1.3 Child health care services provision in complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Unit offers child services	10	100		12	100	
Unit vaccinates children under 5	10	80	12.6	12	50	14.4
Child care room:						
Private room with visual and auditory privacy	10	90	9.5	12	91.7	8.0
Non-private room	10	0		12	8.3	8.0
Other	10	0		12	0	
Don't provide this service/decline to respond	10	10	9.5	12	0	

Table C3.2.1 Child health care equipment in CESAR facilities

CESAR						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available:	34	17.6	6.5	37	56.8	8.1
Pediatric scale	34	67.6	8.0	37	73	7.3
Standing scale for children	34	85.3	6.1	37	94.6	3.7
Height rod	34	88.2	5.5	37	100	
Hand lamp/goosenck lamp	34	38.2	8.3	37	83.8	6.1
Measuring tape	34	97.1	2.9	37	100	
Exam table/bed	34	94.1	4.0	37	97.3	2.7
Nebulizer	34	82.4	6.5	37	97.3	2.7
Stethoscope	34	85.3	6.1	37	97.3	2.7

Table C3.2.2 Child health care equipment in CESAMO facilities

CESAMO						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available:	31	58.1	8.9	24	0	
Pediatric scale	31	83.9	6.6	24	83.3	7.6
Standing scale for children	31	90.3	5.3	24	100	
Height rod	31	87.1	6.0	24	100	
Hand lamp/goosenck lamp	31	90.3	5.3	24	95.8	4.1
Measuring tape	31	96.8	3.2	24	100	
Exam table/bed	31	100		24	100	
Nebulizer	31	93.5	4.4	24	100	
Reflex hammer	-			24	62.5	9.9
Stethoscope	31	93.5	4.4	24	91.7	5.6
Neonatal stethoscope	-			24	0	

*Reflex hammer and neonatal stethoscope were not captured at CESAMO facilities at baseline

Table C3.2.3 Child health care equipment in CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available:	15	0		16	0	
Pediatric scale	15	73.3	11.4	16	87.5	8.3
Standing scale for children	15	80	10.3	16	100	
Height rod	15	86.7	8.8	16	75	10.8
Hand lamp/goosenck lamp	15	86.7	8.8	16	100	
Measuring tape	15	86.7	8.8	16	100	
Exam table/bed	15	93.3	6.4	16	100	
Nebulizer	15	93.3	6.4	16	100	
Reflex hammer	15	40	12.6	16	50	12.5
Pediatric stethoscope	15	26.7	11.4	16	12.5	8.3
Neonatal stethoscope	15	6.7	6.4	16	0	
Pediatric sphygmomanometer	15	40	12.6	16	18.8	9.8
Oto-ophthalmoscope	15	73.3	11.4	16	75	10.8

Table C3.3.1 Child health care drugs in CESAR facilities

CESAR						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Drug availability on the day of the survey:	34	5.9	4.0	37	97.3	2.7
Packets/envelopes of oral rehydration s	34	94.1	4.0	37	100	
Zinc sulfate/gluconate	34	5.9	4.0	37	97.3	2.7
Albendazole/mebendazole	34	100		37	100	
Drug availability including no stock-out in the previous 3 months	34	5.9	4.0	37	81.1	6.4

Table C3.3.2 Child health care drugs in CESAMO facilities

CESAMO						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Drug availability on the day of the survey:	31	3.2	3.2	24	95.8	4.1
Packets/envelopes of oral rehydration salts	31	90.3	5.3	24	100	
Zinc sulfate/gluconate	31	3.2	3.2	24	95.8	4.1
Albendazole/mebendazole	31	100		24	100	
Amoxicillin/Erythromycin/Benzathine penicillin	31	100		24	100	
Drug availability including no stock-out in the previous 3 months	31	3.2	3.2	24	87.5	6.8

Table C3.3.3 Child health care drugs in CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Drug availability on the day of the survey:	15	0		16	81.3	9.8
Packets/envelopes of oral rehydration salts	15	80	10.3	16	100	
Zinc sulfate/gluconate	15	13.3	8.8	16	93.8	6.1
Albendazole/mebendazole	15	46.7	12.9	16	81.3	9.8
Amoxicillin/Erythromycin/Benzathine penicillin	15	93.3	6.4	16	100	
Saline/Hartmann's solution/Dextrose	15	93.3	6.4	16	100	
Drug availability including no stock-out in the previous 3 months	15	0		16	62.5	12.1

Table C3.4.1 Composite child health care indicator at CESAR facilities

CESAR						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All available equipment	34	17.6	6.5	37	56.8	8.1
Drug availability on the day of the survey	34	5.9	4.0	37	97.3	2.7
Drug availability including no stock-out in the previous 3 months	34	5.9	4.0	37	81.1	6.4
Facility has all required equipment and drugs	34	0		37	43.2	8.1

Table C3.4.2 Composite child health care indicator at CESAMO facilities

CESAMO						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All available equipment	31	58.1	8.9	24	0	
Drug availability on the day of the survey	31	3.2	3.2	24	95.8	4.1
Drug availability including no stock-out in the previous 3 months	31	3.2	3.2	24	87.5	6.8
Facility has all required equipment and drugs	31	0		24	0	

Table C3.4.3 Composite child health care indicator at CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All available equipment	15	0		16	0	
Drug availability on the day of the survey	15	0		16	81.3	9.8
Drug availability including no stock-out in the previous 3 months	15	0		16	62.5	12.1
Facility has all required equipment and drugs	15	0		16	0	

Table C3.5.1 Composite micronutrients indicator at CESAR facilities

CESAR			
	2nd Follow-up		
	N	%	SE
Availability of Chispitas on the day of the survey	37	75.7	7.1
Availability of other micronutrients on the day of the survey	37	37.8	8.0
Continuous availability of Chispitas or other micronutrients in the previous 3 months	37	67.6	7.7

*Indicator only measured at first and second follow-up

Table C3.5.2 Composite micronutrients indicator at CESAMO facilities

CESAMO			
	2nd Follow-up		
	N	%	SE
Availability of Chispitas on the day of the survey	25	64	9.6
Availability of other micronutrients on the day of the survey	25	44	9.9
Continuous availability of Chispitas or other micronutrients in the previous 3 months	25	64	9.6

*Indicator only measured at first and second follow-up

Table C3.6.1 Child health educational material in ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Printed materials on child growth and child development	64	43.8	6.2	62	85.5	4.5
Printed materials on danger signs and symptoms in children	64	45.3	6.2	62	79	5.2

*Missing data on child health education materials from one ambulatory facility at the baseline

Table C3.6.2 Child health educational material in basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Printed materials on child growth and child development	15	20	10.3	16	62.5	12.1
Printed materials on danger signs and symptoms in children	15	33.3	12.2	16	68.8	11.6

Table C3.6.3 Child health educational material in complete facilities

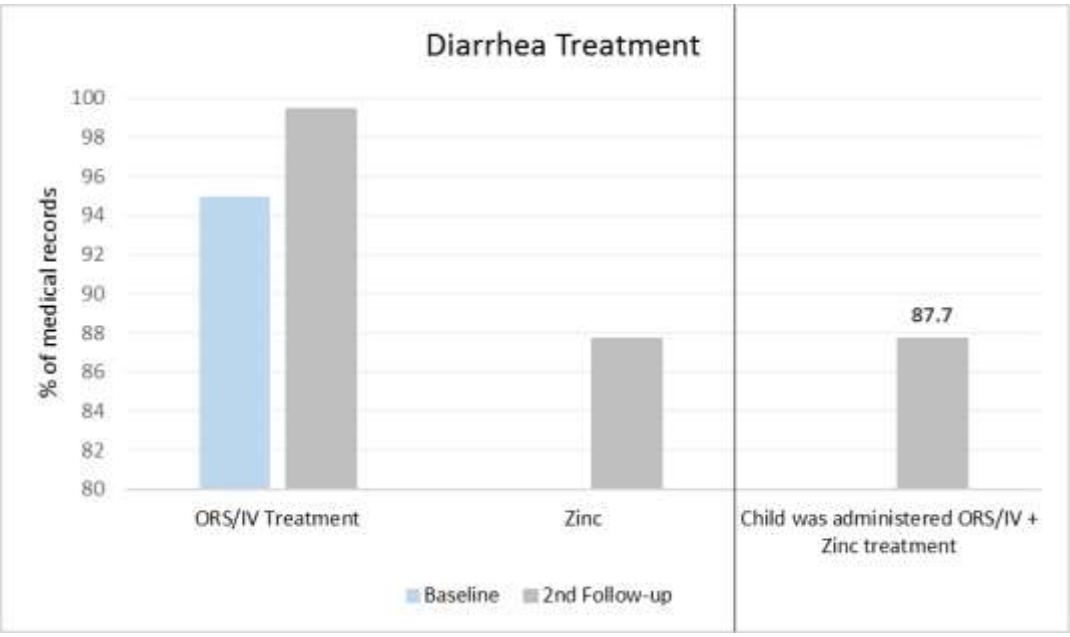
Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Printed materials on child growth and child development	9	33.3	15.7	12	100	
Printed materials on danger signs and symptoms in children	9	22.2	13.9	12	83.3	10.8

*One complete facility at the baseline was not asked about printed materials since the facility reported they do not regularly provide child care services

Table C3.7.1 ORS and zinc consumption by facility type at the second follow-up evaluation

	Cesar			Cesamo		
	N	%	SE	N	%	SE
ORS or IV treatment administered	214	100		145	98.6	1.0
Zinc administered	214	85.5	2.4	145	91	2.4
Meets all criteria listed above	214	85.5	2.4	145	91	2.4

Figure C3.7.2 Appropriate diarrhea treatment by evaluation round



*Data regarding zinc treatment were not collected during the baseline measurement

Figure C3.8.1 Pneumonia follow-up appointment timing at the second follow-up evaluation

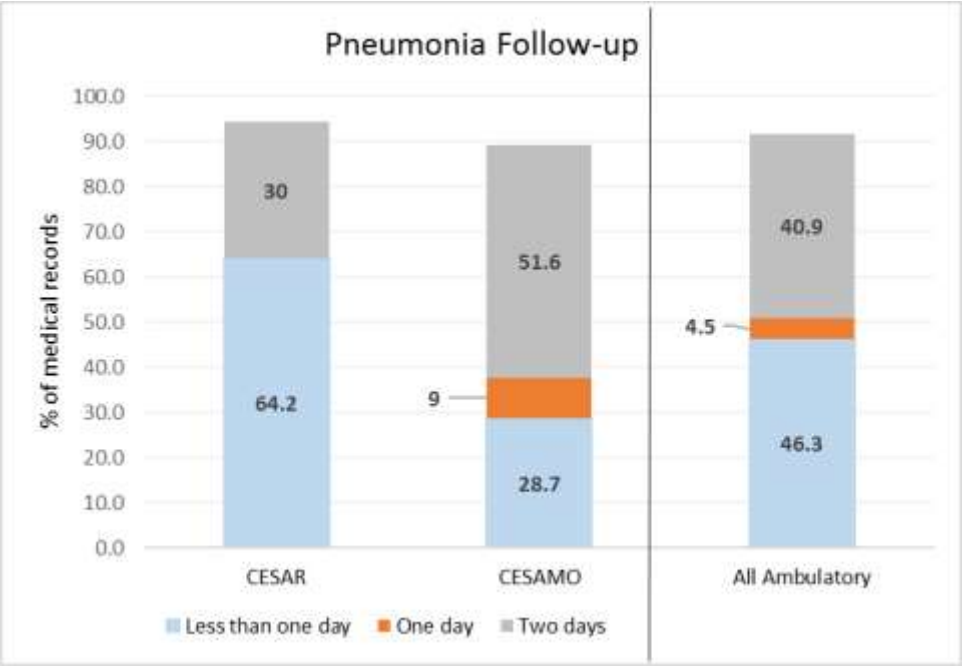
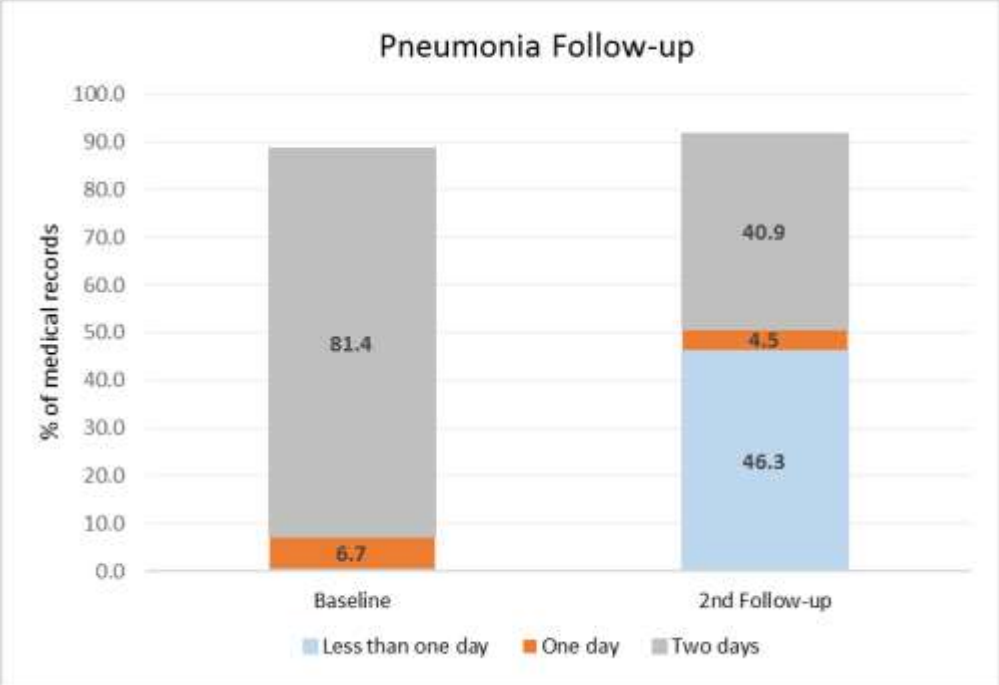


Figure C3.8.2 Pneumonia follow-up appointment timing by evaluation round



*The severity of pneumonia was not captured at the baseline and records could not be excluded based on this criteria

Table C4.1.1 Vaccination services in ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Unit provides vaccination services	-			62	100	
Unit vaccinates children under 5	65	100		62	100	
Immunization room:						
Private room with visual and auditory privacy	63	81	4.9	62	83.9	4.7
Non-private room without auditory or visual privacy	63	14.3	4.4	62	9.7	3.8
Visual privacy only	63	3.2	2.2	62	0	
No privacy	63	1.6	1.6	62	6.5	3.1
Other	63	0		62	0	
Don't provide service/decline to respond	63	0		62	0	

*General vaccination services not captured at the baseline
**Immunization room data missing for two ambulatory facilities at the baseline

Table C4.1.2 Vaccination services in basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Unit provides vaccination services	-			16	81.3	9.8
Unit vaccinates children under 5	15	26.7	11.4	16	12.5	8.3
Immunization room:						
Private room with visual and auditory privacy	15	80	10.3	16	81.3	9.8
Non-private room without auditory or visual privacy	15	6.7	6.4	16	6.3	6.1
Visual privacy only	15	6.7	6.4	16	0	
No privacy	15	0		16	0	
Other	15	0		16	6.3	6.1
Don't provide service/decline to respond	15	6.7	6.4	16	6.3	6.1

*General vaccination services not captured at the baseline

Table C4.1.3 Vaccination services in complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Unit provides vaccination services	-			12	100	
Unit vaccinates children under 5	10	80	12.6	12	50	14.4
Immunization room:						
Private room with visual and auditory privacy	10	30	14.5	12	83.3	10.8
Non-private room without auditory or visual privacy	10	70	14.5	12	16.7	10.8
Visual privacy only	10	0		12	0	
No privacy	10	0		12	0	
Other	10	0		12	0	
Don't provide service/decline to respond	10	0		12	0	

*General vaccination services not captured at the baseline

Table C4.2.1 Vaccination storage at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Storage						
Stored in facility	65	95.4	2.6	62	100	
Picked up from another facility	65	3.1	2.1	62	0	
Delivered when services are being provided	65	1.5	1.5	62	0	
None of the above	65	0		62	0	

*At the baseline only facilities who reported providing child vaccinations were asked about vaccine storage; this was a single response option question
**At the second follow-up, facilities who reported providing vaccinations (regardless of age) were asked about vaccination storage; this was a multi-response option

Table C4.2.2 Vaccination storage at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Storage						
Stored in facility	4	75	21.6	13	100	
Picked up from another facility	4	0		13	0	
Delivered when services are being provided	4	25	21.6	13	0	
None of the above	4	0		13	0	

*At the baseline only facilities who reported providing child vaccinations were asked about vaccine storage; this was a single response option question
**At the second follow-up, facilities who reported providing vaccinations (regardless of age) were asked about vaccination storage; this was a multi-response option

Table C4.2.3 Vaccination storage at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Storage						
Stored in facility	8	100		12	100	
Picked up from another facility	8	0		12	0	
Delivered when services are being provided	8	0		12	0	
None of the above	8	0		12	0	

*At the baseline only facilities who reported providing child vaccinations were asked about vaccine storage; this was a single response option question
**At the second follow-up, facilities who reported providing vaccinations (regardless of age) were asked about vaccination storage; this was a multi-response option

Table C4.3.1 Vaccination supply logistics at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Ordering Strategy						
Determines own needs	62	98.4	1.6	62	100	
Need determined elsewhere	62	1.6	1.6	62	0	
Both(differ by vaccine)	62	0		62	0	
Time to receive supplies						
< 1 week	62	69.4	5.8	62	77.4	5.3
1-2 weeks	62	30.6	5.8	62	22.6	5.3
> 2 weeks	62	0		62	0	
Reception of quantity ordered						
Always	62	80.6	5.0	62	95.2	2.7
Almost always	62	19.4	5.0	62	4.8	2.7
Almost never	62	0		62	0	

*At the baseline only facilities who store vaccines and reported providing child vaccinations were asked about vaccine logistics
**At the second follow-up facilities who store vaccines and reported providing vaccinations (regardless of age) were asked about vaccination logistics

Table C4.3.2 Vaccination supply logistics at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Ordering Strategy						
Determines own needs	3	66.7	27.2	13	92.3	7.4
Need determined elsewhere	3	33.3	27.2	13	7.7	7.4
Both(differ by vaccine)	3	0		13	0	
Time to receive supplies						
< 1 week	3	100		13	100	
1-2 weeks	3	0		13	0	
> 2 weeks	3	0		13	0	
Reception of quantity ordered						
Always	3	100		13	92.3	7.4
Almost always	3	0		13	7.7	7.4
Almost never	3	0		13	0	

*At the baseline only facilities who store vaccines and reported providing child vaccinations were asked about vaccine logistics
**At the second follow-up facilities who store vaccines and reported providing vaccinations (regardless of age) were asked about vaccination logistics

Table C4.3.3 Vaccination supply logistics at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Ordering Strategy						
Determines own needs	8	100		12	100	
Need determined elsewhere	8	0		12	0	
Both(differ by vaccine)	8	0		12	0	
Time to receive supplies						
< 1 week	7	100		12	100	
1-2 weeks	7	0		12	0	
> 2 weeks	7	0		12	0	
Reception of quantity ordered						
Always	6	66.7	19.3	12	100	
Almost always	6	33.3	19.3	12	0	
Almost never	6	0		12	0	

*At the baseline only facilities who store vaccines and reported providing child vaccinations were asked about vaccine logistics
**At the second follow-up facilities who store vaccines and reported providing vaccinations (regardless of age) were asked about vaccination logistics
***One complete facility at the baseline responded 'don't know/decline to respond' when asked about the time to receive supplies; this facility was excluded
****Two complete facilities at the baseline responded 'don't know/decline to respond' when asked about the reception of quantity ordered; these facilities were excluded

Table C4.4.1 Vaccines observed on the day of the survey at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Measles, mumps, and rubella	62	98.4	1.6	57	100	
Pentavalent	62	98.4	1.6	57	100	
Polio	62	98.4	1.6	57	100	
Influenza	62	11.3	4.0	57	87.7	4.3
Rotavirus	62	95.2	2.7	57	100	
Pneumococcal conjugate	62	96.8	2.2	57	100	
BCG	62	88.7	4.0	57	91.2	3.8
DPT alone	2	0		0		
HepB alone	2	0		0		
Hib alone	-			0		

*Hib alone not captured at baseline

Table C4.4.2 Vaccines observed on the day of the survey at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Measles, mumps, and rubella	13	0		15	6.7	6.4
Pentavalent	13	0		15	0	
Polio	13	0		15	0	
Influenza	13	0		15	0	
Rotavirus	13	0		15	0	
Pneumococcal conjugate	13	0		15	0	
BCG	13	69.2	12.8	15	100	
DPT alone	13	0		14	0	
HepB alone	13	84.6	10.0	14	92.9	6.9
Hib alone	-			14	0	

*Hib alone not captured at baseline

Table C4.4.3 Vaccines observed on the day of the survey at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Measles, mumps, and rubella	9	44.4	16.6	12	50	14.4
Pentavalent	9	55.6	16.6	12	50	14.4
Polio	9	44.4	16.6	12	50	14.4
Influenza	9	44.4	16.6	12	66.7	13.6
Rotavirus	9	44.4	16.6	12	50	14.4
Pneumococcal conjugate	9	44.4	16.6	12	50	14.4
BCG	9	100		12	100	
DPT alone	4	0		6	0	
HepB alone	4	100		6	100	
Hib alone	-			6	0	

*Hib alone not captured at baseline or first follow-up

Table C4.5.1 Vaccine storage at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Storage						
Electric fridge	65	90.8	3.6	62	90.3	3.8
Kerosene fridge	65	0		62	0	
Gas fridge	65	1.5	1.5	62	0	
Solar fridge	65	0		62	9.7	3.8
Cold box	65	69.2	5.7	62	59.7	6.2
Any of the above	65	95.4	2.6	62	100	
Thermometers						
Digital thermometers	65	61.5	6.0	62	53.2	6.3
Alcohol thermometers	65	0		62	77.4	5.3
Other thermometers	65	64.6	5.9	49	34.7	6.8
Any of the above	65	95.4	2.6	62	100	

*Other thermometers was not a required response, so values and responses vary

Table C4.5.2 Vaccine storage at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Storage						
Electric fridge	14	92.9	6.9	16	100	
Kerosene fridge	14	0		16	0	
Gas fridge	14	0		16	0	
Solar fridge	14	0		16	0	
Cold box	14	50	13.4	16	68.8	11.6
Any of the above	14	92.9	6.9	16	100	
Thermometers						
Digital thermometers	14	71.4	12.1	16	37.5	12.1
Alcohol thermometers	14	0		16	68.8	11.6
Other thermometers	14	35.7	12.8	14	57.1	13.2
Any of the above	14	85.7	9.4	16	93.8	6.1

*Other thermometers was not a required response, so values and responses vary

Table C4.5.3 Vaccine storage at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Storage						
Electric fridge	10	100		12	91.7	8.0
Kerosene fridge	10	0		12	0	
Gas fridge	10	0		12	0	
Solar fridge	10	0		12	0	
Cold box	10	80	12.6	12	91.7	8.0
Any of the above	10	100		12	100	
Thermometers						
Digital thermometers	10	50	15.8	12	91.7	8.0
Alcohol thermometers	10	0		12	75	12.5
Other thermometers	10	70	14.5	10	0	
Any of the above	10	100		12	100	

*Other thermometers was not a required response, so values and responses vary

Table C5.1.1 Family planning provision at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Offers FP services	65	100		62	100	
FP room						
Private room with visual and auditory privacy	64	93.7	3.1	62	90.3	3.8
Non-private room without auditory or visual privacy	64	1.6	1.6	62	0	
Visual privacy only	64	1.6	1.6	62	4.8	2.7
No privacy	64	3.2	2.2	62	1.6	1.6
Don't provide service/decline to respond	64	0		62	0	
Other	64	0		62	3.2	2.2

*Family planning room data missing for one ambulatory facility at the baseline

Table C5.1.2 Family planning provision at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Offers FP services	15	100		16	100	
FP room						
Private room with visual and auditory privacy	15	66.7	12.2	16	81.3	9.8
Non-private room without auditory or visual privacy	15	26.7	11.4	16	0	
Visual privacy only	15	0		16	6.3	6.1
No privacy	15	0		16	6.3	6.1
Don't provide service/decline to respond	15	0		16	6.3	6.1
Other	15	6.7	6.4	16	0	

Table C5.1.3 Family planning provision at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Offers FP services	10	100		12	100	
FP room						
Private room with visual and auditory privacy	10	100		12	100	
Non-private room without auditory or visual privacy	10	0		12	0	
Visual privacy only	10	0		12	0	
No privacy	10	0		12	0	
Don't provide service/decline to respond	10	0		12	0	
Other	10	0		12	0	

Table C5.1.4 Family planning storage at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
FP storage						
Yes, stores contraceptives	65	96.9	2.1	62	100	
No, delivered when services are being provided	65	3.1	2.1	62	0	

Table C5.1.5 Family planning storage at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
FP storage						
Yes, stores contraceptives	15	93.3	6.4	16	100	
No, delivered when services are being provided	15	6.7	6.4	16	0	

Table C5.1.6 Family planning storage at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
FP storage						
Yes, stores contraceptives	10	100		12	100	
No, delivered when services are being provided	10	0		12	0	

Table C5.2.1 Family planning methods observed at CESAR facilities

CESAR						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Observed FP methods						
Any pill	34	100		37	100	
Combined oral pill	34	97.1	2.9	37	100	
Progestin only pill	34	2.9	2.9	37	0	
Any injectable	34	97.1	2.9	37	97.3	2.7
Combined injectable (1 month)	34	0		37	0	
Progestin only injectable (3 months)	34	97.1	2.9	37	97.3	2.7
Male condom	34	97.1	2.9	37	100	
IUD	34	41.2	8.4	37	91.9	4.5
Reported services						
Offers pregnancy tests	34	91.2	4.9	37	94.6	3.7
Trained doctor or nurse to perform IUD insertion	33	45.5	8.67	37	91.9	4.5
Trained doctor or nurse to perform implant insertion	-			37	86.5	5.62

*Trained doctor or nurse to perform implant insertion was not captured at the baseline; baseline only measured if facility has trained doctor to perform IUD insertion

**One facility at the baseline responded 'don't know/decline to respond' when asked if there was a doctor to perform IUD insertion; this facility was excluded

Table C5.2.2 Family planning methods observed at CESAMO facilities

CESAMO						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Observed FP methods						
Any pill	30	96.7	3.3	25	100	
Combined oral pill	30	83.3	6.8	25	100	
Progestin only pill	30	13.3	6.2	25	0	
Any injectable	30	96.7	3.3	25	100	
Combined injectable (1 month)	30	0		25	4	3.9
Progestin only injectable (3 months)	30	96.7	3.3	25	100	
Male condom	30	96.7	3.3	25	100	
IUD	30	93.3	4.6	25	96	3.9
Reported services						
Offers pregnancy tests	30	96.7	3.3	25	100	
Trained doctor or nurse to perform IUD insertion	30	93.3	4.55	25	100	
Trained doctor or nurse to perform implant insertion	-			25	96	3.92

*Trained doctor or nurse to perform implant insertion was not captured at the baseline; baseline only measured if facility has trained doctor to perform IUD insertion

Table C5.2.3 Family planning methods observed at CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Observed FP methods						
Any pill	15	73.3	11.4	15	40	12.6
Combined oral pill	15	66.7	12.2	15	40	12.6
Progestin only pill	15	13.3	8.8	15	0	
Any injectable	15	80	10.3	15	40	12.6
Combined injectable (1 month)	15	13.3	8.8	15	0	
Progestin only injectable (3 months)	15	73.3	11.4	15	40	12.6
Male condom	15	93.3	6.4	15	100	
IUD	15	73.3	11.4	15	100	
IUD insertion kit	15	73.3	11.4	15	100	
Reported services						
Offers pregnancy tests	15	66.7	12.2	15	93.3	6.4
Trained doctor to perform tubal ligation	15	0		15	6.7	6.4
Trained doctor to perform vasectomy	15	0	0	15	0	0

*Trained doctor or nurse to perform implant insertion was not captured at the baseline; baseline only measured if facility has trained doctor to perform IUD insertion

Table C5.2.4 Family planning methods observed at Hospitals

Hospital						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Observed FP methods						
Any pill	10	100		12	100	
Combined oral pill	10	100		12	100	
Progestin only pill	10	10	9.5	12	0	
Any injectable	10	100		12	100	
Combined injectable (1 month)	10	0		12	33.3	13.6
Progestin only injectable (3 months)	10	100		12	100	
Male condom	10	100		12	100	
IUD	10	100		12	100	
IUD insertion kit	10	100		12	100	
Reported services						
Offers pregnancy tests	9	100		12	100	
Trained doctor to perform tubal ligation	10	90	9.5	12	100	
Trained doctor to perform vasectomy	10	80	12.65	12	75	12.5

*Trained doctor or nurse to perform implant insertion was not captured at the baseline; baseline only measured if facility has trained doctor to perform IUD insertion

**One facility at the baseline responded 'don't know/decline to respond' when asked if they offered pregnancy tests; this facility was excluded

Table C5.3.1 Family planning counseling provided at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Individual fp counseling	65	100		62	100	
Group FP counseling	65	98.5	1.5	62	98.4	1.6

Table C5.3.2 Family planning counseling provided at basic facilities

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Individual fp counseling	15	100		16	93.8	6.1
Group FP counseling	15	93.3	6.4	16	93.8	6.1

Table C5.3.3 Family planning counseling provided at complete facilities

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Individual fp counseling	10	100		12	100	
Group FP counseling	10	100		12	100	

Table C5.4.1 Composite family planning indicator at CESAR facilities

CESAR						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Condoms	33	97	3.0	37	100	
Any pill	33	100		37	100	
Any injectable	33	97	3.0	37	97.3	2.7
Continuous availability of condoms, pills, and injectables in the previous three months	33	87.9	5.7	37	75.7	7.1

Table C5.4.2 Composite family planning indicator at CESAMO facilities

CESAMO						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Condoms	30	96.7	3.3	25	100	
Any pill	30	96.7	3.3	25	100	
Any injectable	30	96.7	3.3	25	100	
Intrauterine device	30	93.3	4.6	25	96	3.9
Continuous availability of condoms, pills, and injectables in the previous three months	30	86.7	6.2	25	68	9.3

Table C5.4.3 Composite family planning indicator at CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Condoms	15	93.3	6.4	15	100	
Any pill	15	73.3	11.4	15	86.7	8.8
Any injectable	15	80	10.3	15	86.7	8.8
Intrauterine device	15	73.3	11.4	15	100	
Continuous availability of condoms, pills, and injectables in the previous three months	15	60	12.6	15	80	10.3

*At the second follow-up CMI facilities met the indicator if either the CMI facility itself or a nearby CESAMO facility carried the methods; this data was not captured at the baseline

Table C5.4.4 Composite family planning indicator at hospitals

Hospital						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Condoms	10	100		12	100	
Any pill	10	100		12	100	
Any injectable	10	100		12	100	
Intrauterine device	10	100		12	100	
Continuous availability of condoms, pills, and injectables in the previous three months	10	100		12	75	12.5

Table C6.1.1 ANC service provision at ambulatory facilities

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Offers ANC services	65	98.5	1.5	62	98.4	1.6
ANC room						
Private room with auditory and visual privacy	63	96.8	2.2	62	88.7	4.0
Non-private room without auditory or visual privacy	63	0		62	0	
Visual privacy only	63	3.2	2.2	62	4.8	2.7
Other	63	0		62	3.2	2.2
No privacy	63	0	0	62	0	0
Don't provide service/decline to respond	63	0	0	62	3.2	2.2

*ANC room data missing for two ambulatory facilities at the baseline

Table C6.1.2 ANC/DEL/PPM service provision at CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Offers ANC services	15	13.3	8.8	16	0	
Offers routine delivery services (non-urgent)	15	100		16	100	
Offers immediate PPC services	15	100		16	100	
ANC - PPC room						
Private room with auditory and visual privacy	14	85.7	9.4	16	75	10.8
Non-private room without auditory or visual privacy	14	0		16	0	
Visual privacy only	14	0	0	16	0	0
Other	14	0	0	16	0	0.0
No privacy	14	0	0	16	0	0
Don't provide service/decline to respond	14	14.3	9.35	16	25	10.83
Delivery room						
Private room with auditory and visual privacy	15	93.3	6.44	16	93.8	6.05
Non-private room with neither auditory or visual privacy	15	6.7	6.44	16	0	0
Visual privacy only	15	0	0	16	0	0
No privacy	15	0	0	16	0	0
Other	15	0	0	16	6.3	6.05
Don't provide service/decline to respond	15	0	0	16	0	0

*ANC room data missing for one basic facility at the baseline

Table C6.1.3 ANC/DEL/PPM service provision at hospitals

Hospital						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Offers ANC services	10	50	15.8	11	100	
Offers routine delivery services (non-urgent)	10	100		12	100	
Offers immediate PPC services	10	100		12	100	
ANC - PPC room						
Private room with auditory and visual privacy	10	100		12	100	
Non-private room without auditory or visual privacy	10	0		12	0	
Visual privacy only	10	0	0	12	0	0
Other	10	0	0	12	0	0.0
No privacy	10	0	0	12	0	0
Don't provide service/decline to respond	10	0	0	12	0	0
Delivery room						
Private room with auditory and visual privacy	10	90	9.49	12	100	0
Non-private room with neither auditory or visual privacy	10	10	9.49	12	0	0
Visual privacy only	10	0	0	12	0	0
No privacy	10	0	0	12	0	0
Other	10	0	0	12	0	0
Don't provide service/decline to respond	10	0	0	12	0	0

*One hospital reported 'don't know/decline to respond' when asked if they offer ANC services at the second follow-up; this facility was excluded

Table C6.2.1 ANC – PPM equipment at CESAR facilities

CESAR						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available:	34	67.6	8	37	59.5	8.1
Standing scale	34	82.4	6.5	37	94.6	3.7
Height rod	34	88.2	5.5	37	100	
Gynecological exam table/bed	34	82.4	6.5	37	59.5	8.1
Obstetrical tape/measuring tape	34	97.1	2.9	37	100	
Hand lamp/goosenck lamp	34	38.2	8.3	37	83.8	6.1
Perinatal maternal medical history	34	97.1	2.9	37	100	
Perinatal maternal card	34	97.1	2.9	37	100	

*When including all examination tables, not solely gynecological exam beds (with stirrups), 94.1% of baseline and 97.3% of second follow-up facilities had a functional exam bed/table

Table C6.2.2 ANC – PPM equipment at CESAMO facilities

CESAMO						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available:	28	89.3	5.8	23	100	
Standing scale	30	90	5.5	23	100	
Height rod	30	90	5.5	23	100	
Gynecological exam table/bed	30	96.7	3.3	23	100	
Obstetrical tape/measuring tape	30	100		23	100	
Hand lamp/goosenck lamp	30	90	5.5	23	95.7	4.3
Perinatal maternal medical history	28	100		23	100	
Perinatal maternal card	28	100		23	100	

*Perinatal maternal medical history & perinatal maternal card were not captured at one facility at the baseline
**When including all examination tables, not solely gynecological exam beds (with stirrups), 100% of baseline facilities had a functional exam bed/table

Table C6.2.3 ANC – PPM equipment at CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available:	12	66.7	13.6	12	8.3	8.0
Standing scale	12	83.3	10.8	12	91.7	8.0
Height rod	12	91.7	8.0	12	91.7	8.0
Gynecological exam table/bed	12	100		12	100	
Obstetrical tape/measuring tape	12	91.7	8.0	12	100	
Hand lamp/goosenck lamp	12	91.7	8.0	12	100	
Blood pressure apparatus	12	100		12	91.7	8.0
Stethoscope	12	100		12	91.7	8.0
IUD insertion kit	12	100		12	100	
Perinatal maternal medical history	12	83.3	10.8	12	91.7	8.0
Perinatal maternal card	12	91.7	8.0	12	8.3	8.0

Table C6.2.4 ANC – PPM equipment at Hospitals

Hospital						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available:	10	20	12.6	12	91.7	8.0
Standing scale	10	90	9.5	12	100	
Height rod	10	100		12	100	
Gynecological exam table/bed	10	100		12	100	
Obstetrical tape/measuring tape	10	80	12.6	12	100	
Hand lamp/goosenck lamp	10	100		12	100	
Blood pressure apparatus	10	80	12.6	12	100	
Stethoscope	10	80	12.6	12	100	
IUD insertion kit	10	100		12	100	
Perinatal maternal medical history	10	80	12.6	12	100	
Perinatal maternal card	10	80	12.6	12	91.7	8.0

Figure C6.3.1 4 ANC visits with quality

	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
At least 4 ANC visits	183	85.8	2.6	351	92.6	1.4
At least 4 ANC visits according to the norm*	183	85.2	2.6	351	90.6	1.6
All lab tests performed at least once during pregnancy:	183	33.9	3.5	351	91.5	1.5
Hb	183	83.1	2.8	351	91.7	1.5
Blood glucose	183	36.1	3.5	351	97.2	0.9
Rh factor	183	85.2	2.6	351	97.4	0.8
Urinalysis	183	83.6	2.7	351	97.2	0.9
Blood group	183	85.2	2.6	351	97.4	0.8
VDRL/RPR	183	85.8	2.6	351	97.2	0.9
HIV	183	92.3	2.0	351	98	0.7
4 ANC visits with appropriate checks and laboratory tests	183	29.5	3.4	351	86	1.8

*4 ANC visits according to the norm include: weight checked + blood pressure checked + fetal movement and fetal heart rate (if gestational age > 20 weeks) + fundal height checked (if gestational age >=22 weeks)
**RPR was not captured at baseline or the first follow-up as an alternative to VDRL. At the baseline, all checks were only captured at the first visit.

Figure C6.4.1 Gestational age at first ANC visit

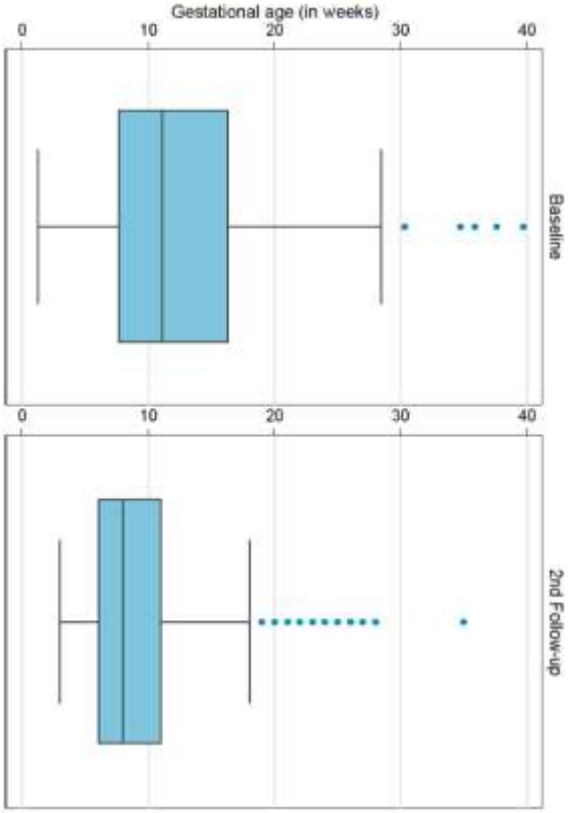


Figure C6.4.2 Gestational age at the first ANC visit of women who delivered in the last 2 years

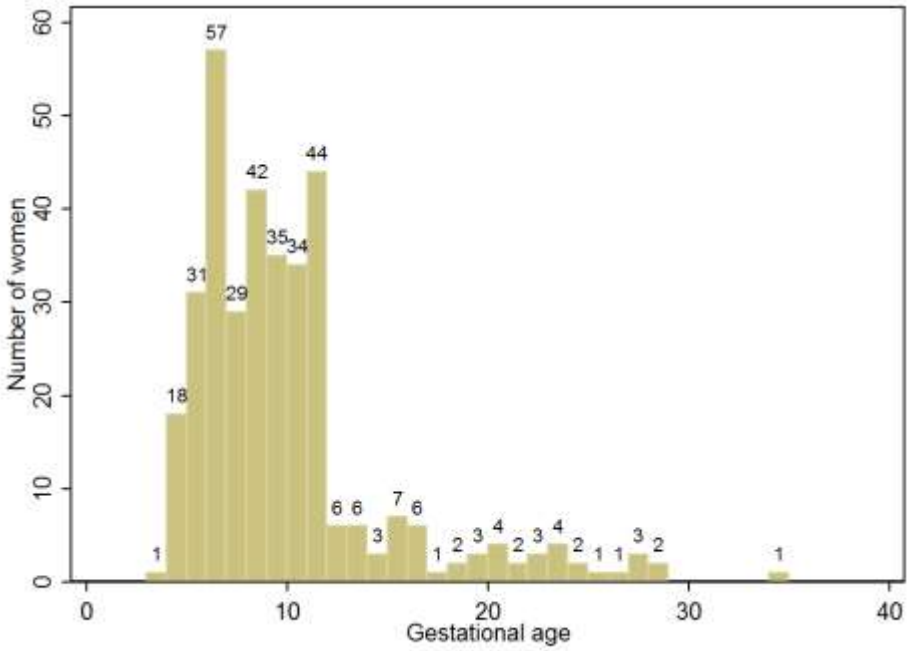


Figure C6.5.1 Partograph completion at the second follow-up evaluation

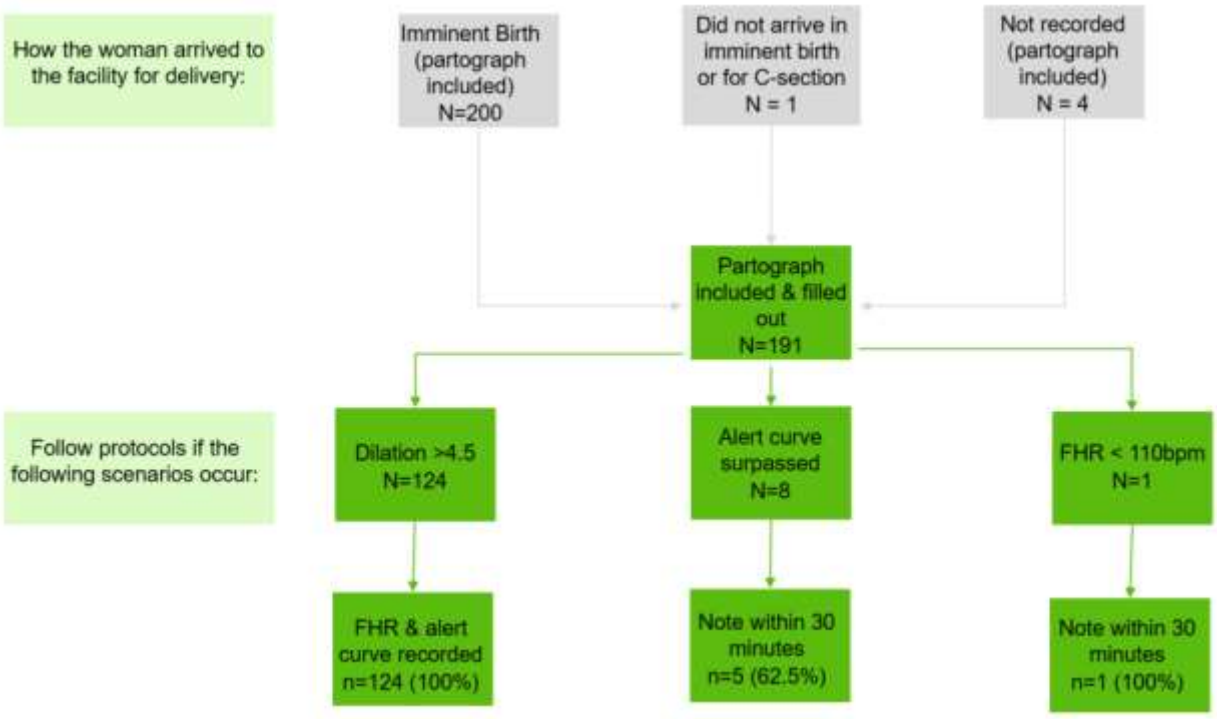


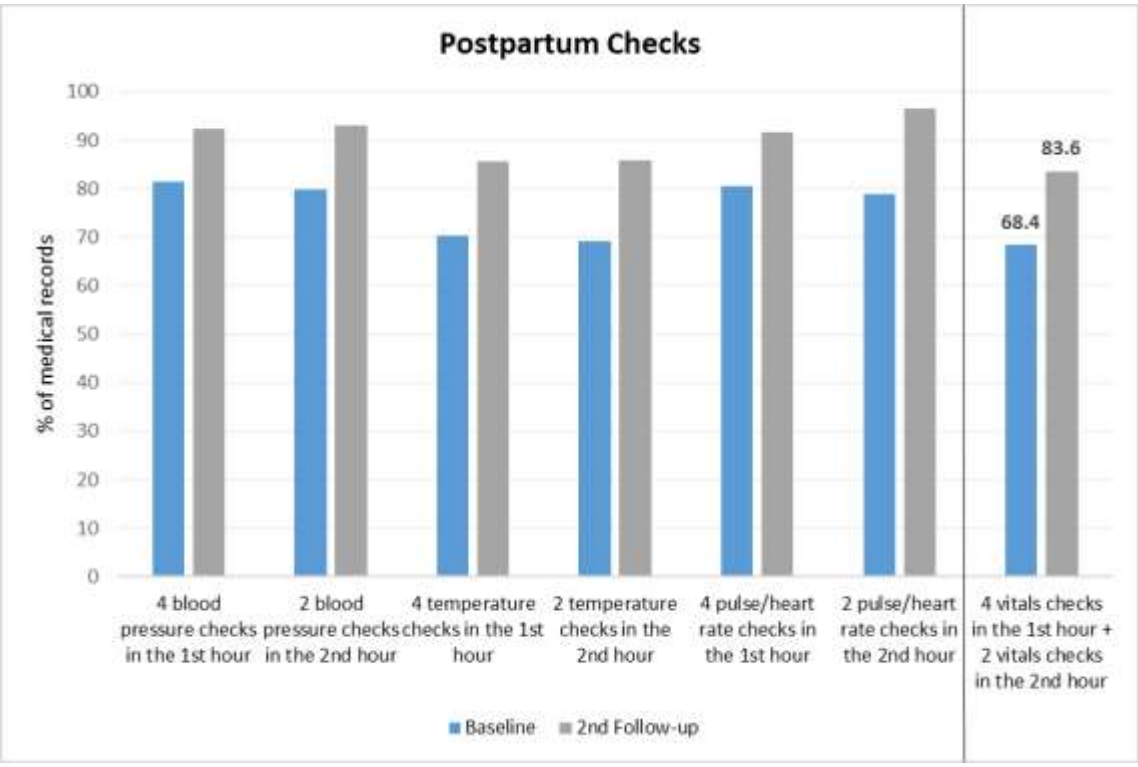
Figure C6.6.1 Oxytocin/other uterotonic administration in CMI medical records

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Oxytocin was administered after birth	216	98.6	0.8	171	98.8	0.8
Other uterotonic was administered after birth	216	0	0	171	0.6	0.6
Oxytocin/other uterotonic was administered after delivery	216	98.6	0.8	171	98.8	0.8

Figure C6.6.2 Oxytocin/other uterotonic administration in Hospital medical records

Hospital						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Oxytocin was administered after birth	201	94.5	1.6	108	99.1	0.9
Other uterotonic was administered after birth	201	0.5	0.5	108	0.9	0.9
Oxytocin/other uterotonic was administered after delivery	201	94.5	1.6	108	99.1	0.9

Figure C6.7.1 Postpartum checks from baseline to second follow-up



*Baseline did not capture if the woman was referred from another facility or delivery type; baseline & first follow-up did not capture heart rate as an alternative to pulse

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

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Emergency room:						
Private room with visual and auditory privacy	15	86.7	8.8	16	100	
Non-private room without visual or auditory privacy	15	6.7	6.4	16	0	
Visual privacy only	15	0		16	0	
No privacy	15	0		16	0	
Don't provide service/decline to respond	15	6.7	6.4	16	0	

Table C7.1.2 Emergency obstetric and neonatal care service provision in complete facilities

Hospital						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Emergency room:						
Private room with visual and auditory privacy	10	90	9.5	12	100	
Non-private room without visual or auditory privacy	10	10	9.5	12	0	
Visual privacy only	10	0		12	0	
No privacy	10	0		12	0	
Don't provide service/decline to respond	10	0		12	0	

Table C7.2.1 Emergency drug availability in CMI facilities

CMI						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Availability of all drugs on the day of the survey:	14	64.3	12.8	16	93.8	6.1
Ampicillin	14	71.4	12.1	16	93.8	6.1
Ergometrine/oxytocin/ergobasine	14	92.9	6.9	16	100	
Gentamicin	14	85.7	9.4	16	93.8	6.1
Magnesium sulfate	14	92.9	6.9	16	100	
Continuous availability of all drugs in the previous three months	-			16	75	10.8

*Availability of ampicillin, ergometrine/oxytocin/ergobasine, gentamicin, & magnesium sulfate was not captured for the previous three months at the baseline

Table C7.3.1 Emergency equipment availability in Hospitals

Hospitals						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All of the following functional equipment:	10	0		12	83.3	10.8
Blood pressure apparatus	10	70	14.5	12	100	
Stethoscope	10	50	15.8	12	91.7	8.0
Pediatric/neonatal stethoscope	10	10	9.5	12	91.7	8.0
Portable doppler/Pinard stethoscope	10	100		12	100	
Autoclave/heat sterilizer	10	90	9.5	12	91.7	8.0
Oxygen tank	10	90	9.5	12	100	
Adult resuscitation bag	10	80	12.6	12	100	
Neonatal resuscitation bag	10	90	9.5	12	100	
Laryngoscope	10	100		12	100	
MVA equipment	10	80	12.6	12	100	
Anesthesia equipment	10	70	14.5	12	100	

Table C7.3.2 Emergency drug availability in Hospitals

Hospitals						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Drug availability on the day of the survey:	10	0		12	83.3	10.8
Adrenaline	10	90	9.5	12	100	
Isotonic crystalloids (saline solution or Ringer's lactate)	10	90	9.5	12	100	
Sodium bicarbonate	10	90	9.5	12	91.7	8.0
Amoxicillin/Ampicillin/Amikacin sulfate/Crystalline penicillin G/Clindamycin/ Cephalexin/Dicloxacillin/Doxycycline/ Gentamicin/Metronidazole	10	100		12	100	
Furosemide	10	100		12	100	
Diazepam	10	100		12	100	
Magnesium sulfate	10	90	9.5	12	100	
Phenobarbital/Phenobarbital sodium	10	90	9.5	12	100	
Hydralazine/Hydralazine hydrochloride/Methyldopa/ Propanolol/Nifedipine	10	100		12	100	
Tetracycline opthalmic ointment	10	20	12.6	12	91.7	8.0
Naloxone hydrochloride	10	60	15.5	12	100	
Dextrose	10	50	15.8	12	100	
Normal saline solution for washing	10	70	14.5	12	100	
Dexamethasone/Betamethasone	10	80	12.6	12	100	
Ergometrine/Ergobasine maleate/Oxytocin	10	100		12	100	
Atropine/Atropine sulfate/Epinephrine	10	100		12	100	
Continous availability of all drugs for the previous 3 months	-			12	16.7	10.8

*Stock out information not captured at the baseline; stock out information for atropine sulfate was not captured at the second follow-up

**Epinephrine, crystalline penicillin G, phenobarbital sodium not captured at baseline. Baseline instruments specified drug amounts while second follow-up did not.

Table C7.3.3 Composite emergency monitoring indicator for Hospitals

Hospitals						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
All equipment available	10	0		12	83.3	10.8
Drug availability on the day of the survey	10	0		12	83.3	10.8
Continous availability of all drugs for the previous 3 months	-			12	16.7	10.8
All available drugs and equipment for emergency care	10	0		12	16.7	10.8

Table C7.4.1 Uterine balloon use at the second follow-up evaluation

	Basic			Complete		
	N	%	SE	N	%	SE
Facility uses a uterine tamponade balloon for obstetric hemorrhage:	16	43.8	12.4	12	91.7	8
Type of balloon used most often:						
Bakri	6	33.3	19.2	11	36.4	14.5
Rusch	6	0		11	0	
Ebb (Belfort-Dildy)	6	0		11	0	
Tube Sengstaken-Blakemore	6	0		11	0	
Condom-based balloon	6	50	20.4	11	9.1	8.7
Foley catheter	6	16.7	15.2	11	54.5	15
Other	6	0		11	0	
Facility has a dispsable tamponade kit:	7	57.1	18.7	11	27.3	13.4
Disposable kit is commercial	4	25	21.7	3	100	
Disposable kit is prepared with materials by facilty personnel	4	75	21.7	3	0	
Personnel was trained in the last year to use the balloon for hemorrhage	6	50	20.4	11	100	
Personnel was trained in the last year to assemble a hydrostatic balloon	6	16.7	15.2	11	100	

*One basic facility responded 'Don't know' when asked if personnel was trained in the last year to use the balloon; this facility was excluded

Table C7.5.1 Neonatal complications in basic facilities

Basic		
	Baseline	2nd Follow-up
Prematurity	6	18
Sepsis	13	38
Asphyxia	10	21
Total	34	88

Table C7.5.2 Neonatal complications in complete facilities

Complete		
	Baseline	2nd Follow-up
Prematurity	18	12
Sepsis	110	132
Asphyxia	19	23
Total	149	168

Table C7.5.3 Premature neonates in basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Gestational age calulated using the Capurro or Ballard test (if neonate was not referred from another facility)	6	66.7	19.2	17	94.1	5.7
Classification based on gestational age (if neonate was not referred from another facility)	6	100		17	82.4	9.2
Vital signs checked:	6	0		17	0	
Weight	6	100		17	100	
Heart rate/pulse	6	83.3	15.2	17	88.2	7.8
Respiratory rate	6	100		17	94.1	5.7
Silverman-Anderson test	6	0		17	0	
Head circumference	6	100		17	88.2	7.8
APGAR score (at 1 or 5 minutes)/skin color	6	100		17	100	
Heat application	6	66.7	19.2	17	82.4	9.2
Neonate was fed glucose	6	83.3	15.2	17	52.9	12.1
Evaluated by a doctor	6	66.7	19.2	17	76.5	10.3
Referred to a complete facility (if <2000 gr or had pneumonia, diarrhea, neurological complications, convulsions, or hypoglycemia)	5	100		15	66.7	12.2
Prematurity managed according to the norm	6	0		17	0	

Table C7.5.4 Premature neonates in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Gestational age calulated using the Capurro or Ballard test (if neonate was not referred from another facility)	18	100		11	100	
Classification based on gestational age (if neonate was not referred from another facility)	18	100		11	90.9	8.7
Vital signs checked:	18	61.1	11.5	12	75	12.5
Weight	18	100		12	91.7	8.0
Heart rate/pulse	18	94.4	5.4	12	100	
Respiratory rate	18	100		12	100	
Silverman-Anderson test	18	66.7	11.1	12	75	12.5
Head circumference	18	100		12	91.7	8.0
APGAR score (at 1 or 5 minutes)/skin color	18	100		12	91.7	8.0
Laboratory tests:	18	50	11.8	12	83.3	10.8
Glucose test	18	72.2	10.6	12	83.3	10.8
Oxygen saturation	18	66.7	11.1	12	100	
Heat application	18	100		12	100	
Neonate was fed glucose	18	100		12	100	
Evaluated by a specialist	18	94.4	5.4	12	100	
Appropriate treatment of the following:	4	50	25.0	3	100	
If pneumonia: antibiotics	1	0		3	100	
If diarrhea: IV solution + antibiotics	0			0		
If seizures: anticonvulsants	0			0		
If hypoglycemia: Glucose IV	3	66.7	27.2	0		
Prematurity managed according to the norm	18	27.8	10.6	12	66.7	13.6

Table C7.5.5 Neonates with sepsis in basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	13	69.2	12.8	38	89.5	5.0
Heart rate/pulse	13	76.9	11.7	38	92.1	4.4
Respiratory rate	13	84.6	10.0	38	94.7	3.6
Temperature	13	100		38	97.4	2.6
Administered antibiotics	13	76.9	11.7	38	92.1	4.4
Evaluated by a doctor	13	53.8	13.8	38	81.6	6.3
Referred to a complete facility	13	76.9	11.7	38	68.4	7.5
Sepsis managed according to the norm	13	23.1	11.7	38	55.3	8.1

Table C7.5.6 Neonates with sepsis in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	
Vital signs checked:	110	90	2.9	132	98.5	1.1
Heart rate/pulse	110	94.5	2.2	132	99.2	0.8
Respiratory rate	110	94.5	2.2	132	99.2	0.8
Temperature	110	91.8	2.6	132	98.5	1.1
Labortory tests:	110	1.8	1.3	132	14.4	3.1
Oxygen saturation	110	20.9	3.9	132	50.8	4.4
Complete blood count / (platelets + leukocytes + hemoglobin + hematocrit)	110	70	4.4	132	84.8	3.1
Blood culture	110	7.3	2.5	132	42.4	4.3
C-reactive protein	110	66.4	4.5	132	87.1	2.9
Neutrophil band ratio/Absolute ratio of neutrophils	110	2.7	1.6	132	22	3.6
Administered antibiotics	110	99.1	0.9	132	99.2	0.8
Evaluated by a specialist	110	93.6	2.3	132	84.8	3.1
Sepsis managed according to the norm	110	1.8	1.3	132	13.6	3.0

Table C7.5.7 Neonates with asphyxia in basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	10	80	12.6	21	95.2	4.6
Heart rate/pulse	10	80	12.6	21	95.2	4.6
Respiratory rate	10	100		21	100	
APGAR at 1 minute	10	100		21	100	
APGAR at 5 minutes	10	100		21	100	
Heat application	10	90	9.5	21	85.7	7.6
Oxygen administration (if severe asphyxia)	3	100		3	66.7	27.2
Other procedures (one of the following if severe asphyxia):	3	100		3	100	
Ambu (positive pressure ventilation)/mechanical ventilation	3	100		3	100	
Cardiac massage	3	66.7	27.2	3	66.7	27.2
Tracheal intubation	3	0		3	0	
Evaluated by a doctor	10	70	14.5	21	100	
Referred to a complete facility (if severe asphyxia & neonate did not die in the facility)	3	100		3	100	
Asphyxia managed according to the norm	10	50	15.8	21	76.2	9.3

Table C7.5.8 Neonates with asphyxia in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	19	94.7	5.1	23	91.3	5.9
Heart rate/pulse	19	94.7	5.1	23	100	
Respiratory rate	19	100		23	100	
APGAR at 1 minute	19	100		23	91.3	5.9
APGAR at 5 minutes	19	100		23	91.3	5.9
Labortory test: oxygen saturation	19	36.8	11.1	23	73.9	9.2
Heat application	19	89.5	7.0	23	100	
Oxygen administration (if severe asphyxia)	0			4	100	
Other procedures (one of the following if severe asphyxia):	0			4	100	
Ambu (positive pressure ventilation)/ mechanical ventilation	0			4	50	25.0
Cardiac massage	0			4	75	21.7
Tracheal intubation	0			4	75	21.7
Evaluated by a specialist	19	100		23	100	
Asphyxia managed according to the norm	19	31.6	10.7	23	69.6	9.6

Table C7.6.1 Maternal complications in basic facilities

Basic		
	Baseline	2nd Follow-up
Sepsis	2	9
Hemorrhage	10	44
Pre-eclampsia	3	20
Eclampsia	0	9
Total	15	82

Table C7.6.2 Maternal complications in complete facilities

Complete		
	Baseline	2nd Follow-up
Sepsis	28	32
Hemorrhage	62	60
Pre-eclampsia	98	107
Eclampsia	12	14
Total	200	213

Table C7.6.3 Women with hemorrhage at basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	10	100		44	97.7	2.2
Pulse/heart rate	10	100		44	97.7	2.2
Blood pressure	10	100		44	97.7	2.2
Medications administered (at least one of the following):	10	100		44	100	
Ringer's Lactate/Hartmann's solution	10	60	15.5	44	95	3.1
Saline Solution	10	60.	15.5	44	56.8	7.5
Appropriate management of specific causes of hemorrhage	5	80	17.9	33	90.9	5.0
Hemorrhage managed according to the norm	10	90	9.5	44	90.9	4.3

Table C7.6.4 Women with hemorrhage at complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	62	96.8	2.2	60	100	
Pulse/heart rate	62	96.8	2.2	60	100	
Blood pressure	62	100		60	100	
Medications administered (at least one of the following):	62	79	5.2	60	95	2.8
Ringer's Lactate/Hartmann's solution	62	67.7	5.9	60	90	3.9
Saline Solution	62	40.3	6.2	60	55	6.4
Laboratory tests:	62	79	5.2	60	95	2.8
Hematocrit	62	79	5.2	60	96.7	2.3
Hemoglobin	62	79	5.2	60	98.3	1.7
Platelets	62	74.2	5.6	60	95	2.8
Appropriate management of specific causes of hemorrhage	45	80	6.	45	75.6	6.4
Hemorrhage managed according to the norm	62	50	6.4	60	71.7	5.8

Table C7.6.5 Appropriate treatment for specific causes of hemorrhage in basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Appropriate management of the following causes of hemorrhage:	5	80	17.9	33	90.9	5.0
Abortion	0			2	100	
Uterine atony/Hypotonia	1	100		14	79	11.0
Uterine inversion	0			1	100	
Retained placenta	4	75	21.7	18	100	

Table C7.6.6 Appropriate treatment for specific causes of hemorrhage in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Appropriate management of the following causes of hemorrhage:	45	80.0	6.	45	76	6.4
Placenta previa	0			1	0	
Placental abruption	1	100		1	100	
Uterine rupture	0			1	100	
Uterine atony	9	78	13.9	15	80	10.3
Uterine inversion	0			1	0	
Retained placenta	35	80.0	6.8	29	79.3	7.5

Table C7.6.7 Women with severe pre-eclampsia basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	3	100		20	100	
Blood pressure	3	100		20	100	
Laboratory tests:	3	33.3	27.2	20	95	4.9
Urine protein	3	33.3	27.2	20	95	4.9
Medications Administered:	3	66.7	27.2	20	85	8.0
Magnesium Sulfate	3	66.7	27.2	20	95	4.9
Ringer's lactate/Hartmann's/Saline Solution	3	66.7	27.2	20	85	8.0
Transferred to a complete facility	3	100		20	50	11.2
Pre-eclampsia managed according to the norm	3	33.3	27	20	45	11.1

Table C7.6.8 Women with severe pre-eclampsia complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	98	88.8	3.2	107	89.7	2.9
Pulse/heart rate	98	98	1.4	107	100	
Blood pressure	98	98	1.4	107	100	
Respiratory rate	98	98	1.4	107	99.1	0.9
Patellar reflex	98	91.8	2.8	107	90.7	2.8
Laboratory tests:	98	10.2	3.1	107	35.5	4.6
Platelet count	98	77.6	4.2	107	92.5	2.5
Urine protein	98	78.6	4.1	107	84.1	3.5
Creatinine	98	69.4	4.7	107	91.6	2.7
Uric acid	98	58.2	5.0	107	83.2	3.6
Aspartate aminotransferase/Glutamic Transaminase Oxalacetic (GOT)	98	55.1	5.0	107	86	3.4
Alanine transaminase/Glutamic transaminase pyruvic (GPT)	98	55.1	5.0	107	84.1	3.5
Lactate dehydrogenase	98	13.3	3.4	107	42.1	4.8
Medications Administered:	98	81.6	3.9	107	95.3	2.0
Magnesium Sulfate	98	83.7	3.7	107	100	
Hydralazine/Labelatol/Nifedipine (if diastolic blood pressure > 105)	36	77.8	6.9	33	84.8	6.2
Pre-eclampsia managed according to the norm	98	9.2	2.9	107	30.8	4.5

Table C7.6.9 Women with eclampsia in basic facilities.

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	0			9	100	
Blood pressure	0			9	100	
Laboratory tests:	0			9	66.7	15.7
Urine protein	0			9	66.7	15.7
Medications Administered:	0			9	77.8	13.9
Magnesium Sulfate	0			9	88.9	10.5
Ringer's lactate/Hartmann's/Saline Solution	0			9	88.9	10.5
Transferred to a complete facility	0			9	33.3	15.7
Eclampsia managed according to the norm	0			9	11.1	10.5

Table C7.6.10 Women with eclampsia in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	12	66.7	13.6	14	86	9.4
Pulse/heart rate	12	100		14	100	
Blood pressure	12	100		14	100	
Respiratory rate	12	100		14	92.9	6.9
Patellar reflex	12	66.7	13.6	14	92.9	6.9
Laboratory tests:	12	16.7	10.8	14	57.1	13.2
Platelet count	12	66.7	13.6	14	100	.
Urine protein	12	66.7	13.6	14	92.9	6.9
Creatinine	12	33.3	13.6	14	100	.
Uric acid	12	33.3	13.6	14	85.7	9.4
Aspartate aminotransferase/Glutamic Transaminase Oxalacetic (GOT)	12	33.3	13.6	14	92.9	6.9
Alanine transaminase/Glutamic transaminase pyruvic (GPT)	12	33.3	13.6	14	92.9	6.9
Lactate dehydrogenase	12	16.7	10.8	14	64.3	12.8
Medications Administered:	12	83.3	10.8	14	100	
Magnesium Sulfate	12	100		14	100	
Hydralazine/Labelatol/Nifedipine (if diastolic blood pressure > 105)	4	50	25.0	3	100	
Eclampsia managed according to the norm	12	16.7	10.8	14	50	13.4

Table C7.6.11 Women with sepsis in basic facilities

	Basic					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	2	100		9	100	
Pulse/heart rate	2	100		9	100	
Blood pressure	2	100		9	100	
Temperature	2	100		9	100	
Antibiotics administered	2	100		9	88.9	10.5
Appropriate management of the following:	1	100		7	85.7	13.2
Postpartum endometritis	0			2	100	
Fever	1	100		6	83.3	15.2
Sepsis managed according to the norm	2	100		9	88.9	10.5

Table C7.6.12 Women with sepsis in complete facilities

	Complete					
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Vital signs checked:	28	92.9	4.9	32	96.9	3.1
Pulse/heart rate	28	96.4	3.5	32	100	
Blood pressure	28	96.4	3.5	32	100	
Temperature	28	92.9	4.9	32	96.9	3.1
Laboratory test: Hematic Biometry	28	60.7	9.2	32	87.5	5.8
Antibiotics administered	28	96.4	3.5	32	100	
Appropriate management of the following:	21	95.2	4.6	29	93.1	4.7
Postpartum endometritis	17	94.1	5.7	23	100	
Fever	6	100		11	100	
Retained placenta	0			7	71.4	17.1
Sepsis managed according to the norm	28	57.1	9.4	32	81.3	6.9

Table C8.1.1 Ambulatory facility infection control

Ambulatory						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Incinerator at facility	65	84.6	4.5	62	67.7	5.9
Contract with other facility for biohazard disposal	64	6.3	3.0	62	4.8	2.7
Manual for decontamination	59	16.9	4.9	62	56.5	6.3

*One ambulatory facility at the baseline responded 'don't know/decline to respond' when asked about the contract; this facility is excluded; 6 ambulatory facilities at the baseline responded 'don't know/decline to respond' when asked about the manual; these facilities are excluded

Table C8.1.2 Basic facility infection control

Basic						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Incinerator at facility	15	66.7	12.2	16	62.5	12.1
Contract with other facility for biohazard disposal	13	7.7	7.4	16	0	
Manual for decontamination	12	66.7	13.6	15	73.3	11.4

*Two basic facilities at the baseline responded 'don't know/decline to respond' when asked about the contract; three basic facilities at the baseline responded 'don't know/decline to respond' when asked about the manual; these facilities are excluded
*One basic facility at the second follow-up responded 'don't know/decline to respond' when asked about the manual; this facility is excluded

Table C8.1.3 Complete facility infection control

Complete						
	Baseline			2nd Follow-up		
	N	%	SE	N	%	SE
Incinerator at facility	10	10	9.5	12	16.7	10.8
Contract with other facility for biohazard disposal	9	22.2	13.9	12	50	14.4
Manual for decontamination	10	100		12	91.7	8.0

Table CA.1.1 Performance indicator matrix

	Baseline			2nd Follow-up		
Indicator	**N**	**%**	**CI**	**N**	**%**	**CI**
Children 0-59 months with diarrhea who were prescribed treatment according to the norm	N/A			359	87.7	(83.9- 91.0)
Children 0-59 months with pneumonia who attended a follow-up appointment <= two days after diagnosis	210	88.6	(83.5- 92.5)	242	91.7	(87.5- 94.9)
Women of a reproductive age who received the minimum required number of ANC care according to best practices for a birth in the last two years	183	29.5	(23.0- 36.7)	351	86	(82.0- 89.5)
Women of a reproductive age who received their first ANC care within the appropriate time	183	59.6	(52.1- 66.7)	348	85.3	(81.2- 88.9)
Partograph filled according to the norm for births in the last two years	N/A			205	98.5	(95.8- 99.7)
Institutional postpartum patients of a reproductive age who were evaluated appropriately during the first two hours after birth in the last two years	247	68.4	(62.2- 74.2)	311	83.6	(79.0- 87.5)
Neonates with complications managed according to the norm in the last two years	147	8.8	(4.8- 14.6)	164	25	(18.6- 32.3)
Women with obstetric complications managed according to the norm in the last two years	215	32.6	(26.3- 39.3)	295	56.6	(50.7- 62.3)

***Diarrhea:** Zinc administration not captured at baseline; indicator value is not comparable
***Pneumonia:** Severity of pneumonia was not captured at the baseline so records were not excluded based on this criteria
***Minimum ANC visits:** The baseline only captured fetal heart rate, fetal movement, and uterine height at the first visit if at the appropriate gestational age. RPR was not captured at baseline as an alternative to VDRL lab test.
***Institutional PPM:** Baseline did not capture if the woman was referred from another facility or delivery type; baseline did not capture heart rate as an alternative to pulse

Table CA.1.2 Monitoring indicator matrix

Indicator	Baseline			2nd Follow-up		
	N	%	CI	N	%	CI
Child health care equipment & drug availability	80	0	(0.0- 4.5)	77	20.8	(12.4- 31.5)
Chispitas/micronutrient continuous availability	N/A			62	66.1	(53.0- 77.7)
Family planning method continuous availability	88	84.1	(74.8- 91.0)	89	74.2	(63.8- 82.9)
Emergency drug availability in CMIs	14	64.3	(35.1- 87.2)	16	75	(47.6- 92.7)
Emergency equipment & drug availability in hospitals	10	0	(0.0- 30.8)	12	16.7	(2.1- 48.4)
Neonates with complications managed according to the norm in the last two years	175	12	(7.6- 17.8)	238	32.4	(26.5- 38.7)

*All drugs captured from baseline to second follow-up vary. At baseline many times a specific dosage of drug was requested, while at the second follow-up the drug was captured regardless of dosage. Kardex observation for drugs was not captured at the baseline– it is assumed that the data collectors were able to view the kardex unless noted otherwise.

***Child health care:** Reflex hammer & neonatal stethoscope not captured at CESAMO facilities at the baseline.

***Family planning methods:** Baseline did not captured family planning method availability at neighboring facilities for CMIs. At the second follow-up the data on kardex observation was not captured at the neighboring facility for CMIs.

***Emergency drugs in CMIs:** Drug stock out in the previous 3 months was not captured at baseline

***Emergency equipment & drugs in hospitals:** Drug stock out in the previous 3 months was not captured at baseline

***Neonates with complications**: Monitoring indicator includes records from both basic & complete facilities

Appendix D INDICATOR DEFINITIONS

1. Children (0-59 months) with pneumonia who had a follow-up appointment <=2 days after diagnosis in the last two years

Denominator:

Total number of pneumonia records for children 0-59 months at ambulatory facilities, excluding cases of severe pneumonia.

Formula:

Ambulatory: Observe the following in the record: Follow-up appointment was <= 2 days after the date of diagnosis. If the date of diagnosis was on a Friday, the record pass is if the follow-up appointment was <=3 days.

2. Children (0-59 months) with diarrhea who were administered ORS and zinc treatment in the last two years

Denominator:

Total number of diarrhea records for children 0-59 months at ambulatory facilities.

Formula:

Ambulatory: Observe the following in the record: Zinc administration/prescription + ORS/IV administration/prescription

3. Women of reproductive age who received four prenatal care visits according to the best practices in the last two years

Denominator:

Total number of antenatal care records from ambulatory facilities.

Formula:

Ambulatory: Observe the following in the record: woman had at least 4 ANC visits + physical checkups performed at each visit (weight + blood pressure + fundal height (if gestational age >=22 weeks) + fetal heart rate (if gestational age >20 weeks) + fetal movement (if gestational age >20 weeks)). Lab tests performed at least once: blood glucose level + HIV test + Hb level + urinalysis + Rh factor + blood group + VDRL/RPR.

4. Women of reproductive age who attended their first antenatal care (ANC) visit before 12 weeks' gestation in the last two years

Denominator:

Total number of antenatal care records in the sample at ambulatory facilities.

Formula:

Ambulatory: Observe the following in the record: woman had the first ANC at <=12 weeks gestation

5. Partograph completion for uncomplicated deliveries within the last two years (4065)

Denominator:

Total number of delivery records at basic facilities.

Formula:

Basic: Observe the following in the record: Partograph included and filled out (if woman did not arrive in imminent birth or for an elective C-section) + Alert curve and fetal heart rate recorded (if dilation >4.5cm) + Note exists within 30 minutes if alert curve surpassed + note exists within 30 minutes if fetal heart rate < 110 bpm

6. Institutional postpartum patients who were evaluated and registered in clinical records within two hours after birth in the last two years (4050)

Denominator:

Total number of postpartum records at basic and complete facilities, excluding women who were transferred to the facility and women who delivered by caesarean section.

Formula:

Complete: Observe the following in the record: Woman had four checks of blood pressure + temperature + heart rate/pulse in the first hour after delivery. Woman had two checks of blood pressure + temperature + heart rate/pulse in the second hour after delivery

7. Neonatal complications (prematurity, birth asphyxia and sepsis) managed according to the norm in hospitals in the last two years (4070)

Denominator:

Total number of records of neonates with birth complications (prematurity, birth asphyxia, or sepsis) in the sample at complete facilities.

Formula:

Prematurity: excluding neonates with a gestational age of >=37 weeks

Complete:

Observe the following in the record: gestational age calculation using Capurro or Ballard (if neonate was not referred from another facility) + classification based on gestational age recorded (if neonate was not referred from another facility) + pulse/heart rate + respiratory rate + weight + Silverman-Anderson score + Head circumference + Apgar score (at 1 or 5 minutes)/skin evaluation + oxygen saturation level + glycemia test + heat application + neonate was fed glucose (breastfed/oral serum/IV) + evaluated by a specialist + appropriate care (below):

- if neonate has pneumonia: antibiotics
- if neonate has diarrhea: antibiotics + IV treatment
- if neonate has seizures: anticonvulsants (tazobactam/phenobarbital/levetiracetam/lidocaine/pentothal/thiobarbital)
- if neonate has hypoglycemia: IV glucose serum

Asphyxia: excluding referred cases to the facility

Complete:

Observe the following in the record: pulse/heart rate + respiratory rate + Apgar score at 1 minute + Apgar score at 5 minutes + oxygen saturation level + heat application + oxygen application (if severe asphyxia) + (AMBU/positive pressure ventilation/cardiac massage/endotracheal intubation (if severe asphyxia)) + evaluated by a specialist

*severe asphyxia is defined as Apgar score at 5 minutes <=3

Sepsis:

Complete:

Observe the following in the record: heart rate/pulse + respiratory rate + temperature + oxygen saturation level + blood biometry (platelet count + leukocyte count + hemoglobin + hematocrit) + hemoculture + c-reactive protein + neutrophil band ratio/neutrophil absolute ratio + antibiotics + evaluated by a specialist

8. Women with obstetric complications (sepsis, hemorrhage, severe pre-eclampsia and eclampsia) managed according to the norm in the last two years (4080)

Denominator:

Total number of records of women with maternal complications (hemorrhage, severe pre-eclampsia, eclampsia, or sepsis) in the sample at basic and complete facilities.

Formula:

Hemorrhage:

Basic:

Observe the following in the record: pulse/heart rate + blood pressure + Ringer's lactate/Hartmann's solution/saline solution + appropriate care (below):

- If incomplete complicated abortion with hemorrhage or hemorrhage after abortion: AMEU/refer to complete facility
- If ectopic pregnancy/broken ectopic pregnancy: refer to complete facility

- If placenta previa with hemorrhage: refer to complete facility
- If placental abruption: refer to complete facility
- If uterine rupture: refer to complete facility
- If uterine atony/hypotonia: uterotonic (oxytocin/misoprostol/methylergonovine) + refer to complete facility
- If uterine inversion: uterotonic (oxytocin/misoprostol/methylergonovine) + (reposition/restoration of the uterus under sedation or anesthesia with surgical or non-surgical technique / refer to complete facility)
- If total or partial placental retention/placental remnants/accretion: uterotonic (oxytocin/misoprostol/methylergonovine) + refer to complete facility

Complete:

Observe the following in the record: pulse/heart rate + blood pressure + hematocrit + hemoglobin + platelet count + Ringer's lactate/Hartmann's solution/saline solution + appropriate care (below):

- If incomplete complicated abortion with hemorrhage or hemorrhage after abortion: AMEU/curettage
- If ectopic pregnancy/broken ectopic pregnancy: laparotomy/salpingectomy/surgical repair
- If placenta previa with hemorrhage: caesarean section
- If placental abruption: vaginal birth or caesarean section
- If uterine rupture: laparotomy/hysterectomy/surgical repair
- If uterine atony: uterotonic (oxytocin/misoprostol/methylergonovine) + uterine massage/bimanual compression/aortic compression/uterine plug/hydrostatic balloon/compressive sutures/hysterectomy
- If uterine inversion: uterotonic (oxytocin/misoprostol/methylergonovine) + reposition/restoration of the uterus under sedation or anesthesia with surgical or non-surgical techniques
- If total or partial placental retention/placental remnants/accretion: uterotonic (oxytocin/misoprostol/methylergonovine) + manual extraction/curettage/hysterectomy

Severe pre-eclampsia:

Basic:

Observe the following in the record: Blood pressure + urine protein + magnesium sulfate + Ringer's lactate/Hartmann's solution/saline solution + refer to complete facility

Complete:

Observe the following in the record: blood pressure + pulse/heart rate + respiratory rate + patellar reflex + urine protein + platelet count + creatinine + uric acid + aspartate aminotransferase/glutamic-oxaloacetic transaminase (TGO or GOT) + alanine aminotransferase/glutamic-pyruvic transaminase (TGP or GPT) + lactate dehydrogenase + magnesium sulfate + hydralazine/labetalol/nifedipine (if diastolic blood pressure is > 105 at first measurement)

Eclampsia:

Basic:

Observe the following in the record: Blood pressure + urine protein + magnesium sulfate + Ringer's

lactate/Hartmann's solution/saline solution + refer to complete facility

Complete:

Observe the following in the record: blood pressure + pulse/heart rate + respiratory rate + patellar reflex + urine protein + platelet count + creatinine + uric acid + aspartate aminotransferase/glutamic-oxaloacetic transaminase (TGO or GOT) + alanine aminotransferase/glutamic-pyruvic transaminase (TGP or GPT) + lactate dehydrogenase + magnesium sulfate + hydralazine/labetalol/nifedipine (if diastolic blood pressure is > 105 at first measurement)

Sepsis:

Basic:

Observe the following in the record: pulse/heart rate + blood pressure + temperature + antibiotics + appropriate care (below):

- If postpartum or post-cesarean endometritis: antibiotics + refer to complete facility
- If fever: antibiotics + refer to complete facility
- If pelvic abscess: antibiotics + refer to complete facility

Complete:

Observe the following in the record: pulse/heart rate + blood pressure + temperature + blood biometry (hemoglobin + hematocrit + platelet count + leukocyte count) + antibiotics + appropriate care (below):

- If postpartum or post-cesarean endometritis: antibiotics
- If fever: antibiotics
- If pelvic abscess: antibiotics + drainage/laparotomy/hysterectomy/surgical repair
- If retention of placental remains: antibiotics + curettage/MVA/laparotomy/hysterectomy

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

Denominator:

Total number of ambulatory and basic health facilities that offer child services and in the sample.

Formula:

CESAR: Observed on the day of the survey: pediatric balance/scale + standing scale for children + height rod/stadiometer + stethoscope + lamp + exam table/bed + measuring tape + nebulizer. No break in supply of the following inputs in the last three months (including the day of the survey): packets/envelopes of oral rehydration salts + zinc sulfate/gluconate + albendazole/mebendazole

CESAMO: Observed on the day of the survey: pediatric balance/scale + standing scale for children + height rod/stadiometer + stethoscope + neonatal stethoscope + reflex hammer + lamp + exam table/bed + measuring tape + nebulizer. No break in supply of the following inputs in the last three months (including the day of the survey): packets/envelopes of oral rehydration salts + zinc sulfate/gluconate + albendazole/mebendazole + amoxicillin/erythromycin/benzathine penicillin

CMI: Observed on the day of the survey: pediatric balance/scale + standing scale for children + height

rod/stadiometer + pediatric stethoscope + neonatal stethoscope + pediatric sphygmomanometer + oto-ophthalmoscope + reflex hammer + lamp + exam table/bed + measuring tape + nebulizer. No break in supply of the following inputs in the last three months (including the day of the survey): packets/envelopes of oral rehydration salts + zinc sulfate/gluconate + albendazole/mebendazole + amoxicillin/erythromycin/benzathine penicillin + saline/Hartmann's solution/dextrose

10. Health facilities with continuous availability of Chispitas/micronutrients

Denominator:

Total number of ambulatory health facilities in the sample

Formula:

CESAR: No break in supply of the following inputs in the last three months (including the day of the survey): Chispitas/other micronutrients

CESAMO: No break in supply of the following inputs in the last three months (including the day of the survey): Chispitas/other micronutrients

11. Health facilities that have continuous availability of modern family planning methods

Denominator:

Total number of health facilities that store family planning methods in the sample.

Formula:

CESAR: No break in supply of the following inputs in the last three months (including the day of the survey): male condom + any oral pill + any injectable

CESAMO: Observed on the day of the survey: Intrauterine device. No break in supply of the following inputs in the last three months (including the day of the survey): male condom + any oral pill + any injectable

CMI: Observed on the day of the survey: Intrauterine device. No break in supply of the following inputs in the last three months (including the day of the survey): male condom + any oral pill + any injectable. If there is a neighboring facility to the CMI that carries family planning methods this can be used to count toward the CMI family planning stock.

Hospitals: Observed on the day of the survey: Intrauterine device. No break in supply of the following inputs in the last three months (including the day of the survey): male condom + any oral pill + any injectable

12. CMI facilities with continuous availability of supplies needed for emergency obstetric and neonatal care:

Denominator:

Total number of CMI facilities that provide emergency care in the sample.

Formula:

CMI: No break in supply of the following inputs in the last three months (including the day of the survey): ampicillin + ergometrine/oxytocin/ergobasin + gentamicin + magnesium sulfate

13. Hospitals with continuous availability of supplies and equipment needed for emergency obstetric and neonatal care:

Denominator:

Total number of hospitals that provide emergency care in the sample.

Formula:

Hospital: Observed on the day of the survey: blood pressure apparatus + stethoscope + pediatric/neonatal stethoscope + portable dopper/pinard stethoscope + autoclave/heat sterilizer + oxygen tank + adult resuscitation bag neonatal resuscitation bag + laryngoscope + MVA equipment + anesthesia equipment. No break in supply of the following inputs in the last three months (including the day of the survey): adrenaline + isotonic crystalloids (saline solution or Ringer's lactate) + sodium bicarbonate + amoxicillin/ampicillin/amikacin sulfate/crystalline penicillin G/clindamycin/cephalexin/dicloxacillin/doxycycline/gentamicin/metronidazole + furosemide + diazepam + magnesium sulfate + phenobarbital/phenobarbital sodium + hydralazine/hydralazine hydrochloride/methyldopa/propranolol/nifedipine + tetracycline ophthalmic ointment + naloxone hydrochloride + dextrose + normal saline solution for washing + dexamethasone/betamethasone + ergometrine ergobasine maleate/oxytocin + atropine/atropine sulfate/epinephrine

14. Neonatal complications (prematurity, birth asphyxia, and sepsis) managed according to the norm in basic & complete facilities in the last two years (4070)

Denominator:

Total number of records of neonates with birth complications (prematurity, birth asphyxia, or sepsis) in the sample at basic & complete facilities.

Formula:

Prematurity: excluding neonates with a gestational age of >=37 weeks

Basic:

Observe the following in the record: gestational age calculation using Capurro or Ballard (if neonate was not referred from another facility) + classification based on gestational age recorded (if neonate was not referred from another facility) + pulse/heart rate + respiratory rate + weight + Silverman-Anderson score + head circumference + Apgar score (at 1 or 5 minutes)/skin evaluation + heat application + neonate was fed glucose (breastfed/oral serum/IV) + evaluated by a doctor + referred to a complete facility (if neonate weight < 2000 grams or had pneumonia, diarrhea, seizures, or hypoglycemia)

Complete:

Observe the following in the record: gestational age calculation using Capurro or Ballard (if neonate was not referred from another facility) + classification based on gestational age recorded (if neonate was not referred from another facility) + pulse/heart rate + respiratory rate + weight + Silverman-Anderson score + head circumference + Apgar score (at 1 or 5 minutes)/skin evaluation + oxygen saturation level + glycemia test + heat application + neonate was fed glucose (breastfed/oral serum/IV) + evaluated by a specialist + appropriate care (below):

- if neonate has pneumonia: antibiotics
- if neonate has diarrhea: antibiotics + IV treatment
- if neonate has seizures: anticonvulsants

(tazobactam/phenobarbital/levetiracetam/lidocaine/pentothal/thiobarbital)

- if neonate has hypoglycemia: IV glucose serum

Asphyxia: excluding referred cases to the facility

Basic:

Observe the following in the record: pulse/heart rate + respiratory rate + Apgar score at 1 minute + Apgar score at 5 minutes + heat application + oxygen application (if severe asphyxia) + (AMBU/positive pressure ventilation/cardiac massage/endotracheal intubation (if severe asphyxia)) + evaluated by a doctor + referred to a complete facility (if severe asphyxia)

Complete:

Observe the following in the record: pulse/heart rate + respiratory rate + Apgar score at 1 minute + Apgar score at 5 minutes + oxygen saturation level + heat application + oxygen application (if severe asphyxia) + (AMBU/positive pressure ventilation/cardiac massage/endotracheal intubation (if severe asphyxia)) + evaluated by a specialist

*severe asphyxia is defined as Apgar score at 5 minutes <=3

Sepsis:

Basic:

Observe the following in the record: heart rate/pulse + respiratory rate + temperature + antibiotics + evaluated by a doctor + referred to a complete facility

Complete:

Observe the following in the record: heart rate/pulse + respiratory rate + temperature + oxygen saturation level + blood biometry (platelet count + leukocyte count + hemoglobin + hematocrit) + hemoculture + c-reactive protein + neutrophil band ratio/neutrophil absolute ratio + antibiotics + evaluated by a specialist