SMI-El Salvador

Household Survey Data Quality Report

Second Follow-up Measurement

January 2019

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This report of the Salud Mesoamérica Initiative (SMI) El Salvador household survey 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.

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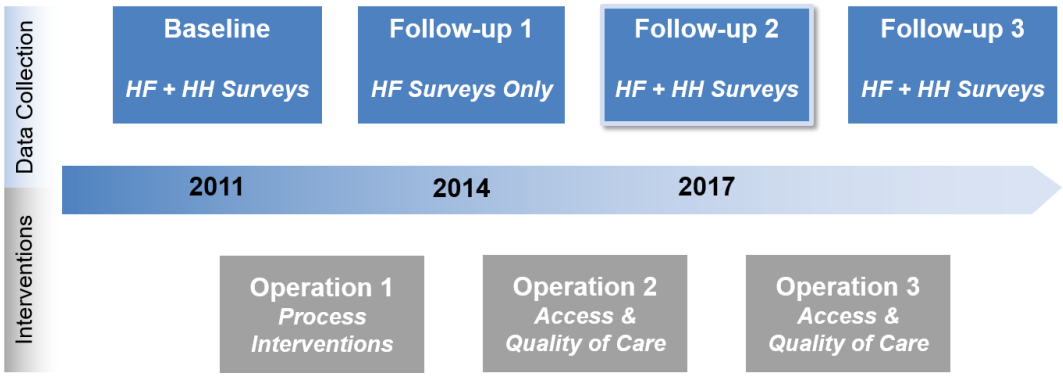
1 CHAPTER 1: INTRODUCTION

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% 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.

1.1 Objectives

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 El Salvador, baseline data were collected at households and health facilities (2011). The first follow-up data collection took place at health facilities only (2014), and this second follow-up measurement was performed at households and health facilities (2017). The use of health facility and household data collection methods permits the measurement of supply- and demand-side information on the Initiative. The pairing of the two types of surveys is a defining feature, designed to capture key indicators in a robust and multidimensional way. The timeline of data collection, evaluation, and interventions is shown in Figure 1.1.

Figure 1.1: SMI-El Salvador timeline



The objectives of the SMI-El Salvador second follow-up household survey are to capture household characteristics, reported maternal and child health data for women 15-49 years of age and for children 0-59 months of age, and anthropometric measurements including height, weight, and hemoglobin concentration for children. Community data collection permits the measurement of changes in health status, access to health care, and satisfaction with health care, as well as an array of data points which give context to these factors.

Chapter 1 provides a general overview of the design and implementation of the SMI-El Salvador second follow-up household census and SMI-El Salvador second follow-up household survey and discusses the design and coverage of the study, and the subsequent chapters present results of the SMI-El Salvador second follow-up household survey.

1.2 SMI household census and survey

The SMI household census is used to capture the age and sex distribution of all of the usual members of all households in selected segments. Basic information including relationship to the head of the household and marital status is also collected. Children aged 0-59 months who have one or more parent residing in the same household are linked to their mother and/or father by way of unique household member identification codes.

Data from the SMI household census are used to identify and select eligible households for the detailed interviews and the physical measurements module (Figure 1.2). The household survey is typically conducted within one month of the household census. The SMI household survey includes three components: the Household Characteristics Questionnaire, the Maternal and Child Health Questionnaire, and the Physical Measurements Module.

The household questionnaire collects information on the source of water, type of toilet facilities, exposure to secondhand smoke, ownership of various assets including durable goods, agricultural land, and livestock, and household expenses and sources of health care financing.

The Maternal and Child Health Questionnaire covers eligible women's background characteristics (including education, occupation, and exposure to media), access to health care, current health status, recent history of illness and associated medical expenses, fertility preferences, knowledge and use of family planning methods (including barriers to use), exposure to health system interventions, and satisfaction with community health workers. Women who have been pregnant in the last five years answer questions about birth history; antenatal, delivery, and postpartum care; birth spacing; breastfeeding; and infant feeding practices.

Caretakers of children aged 0-5 years are asked detailed questions for each child under age 5 on topics such as child's current health status, recent history of illness including diarrhea, fever, and acute upper respiratory infection and associated medical expenses, child's exposure to health system interventions, immunization, and supplementation history.

The Physical Measurements Module captures weight, height/length, and hemoglobin concentrations of children aged 0-59 months. Portable scales and height rods were used for the anthropometric measurements and hemoglobin concentrations were assessed in the field using a portable HemoCue™ machine. Medically trained personnel (i.e., anthropometrists or professional nurses) performed all assessments.

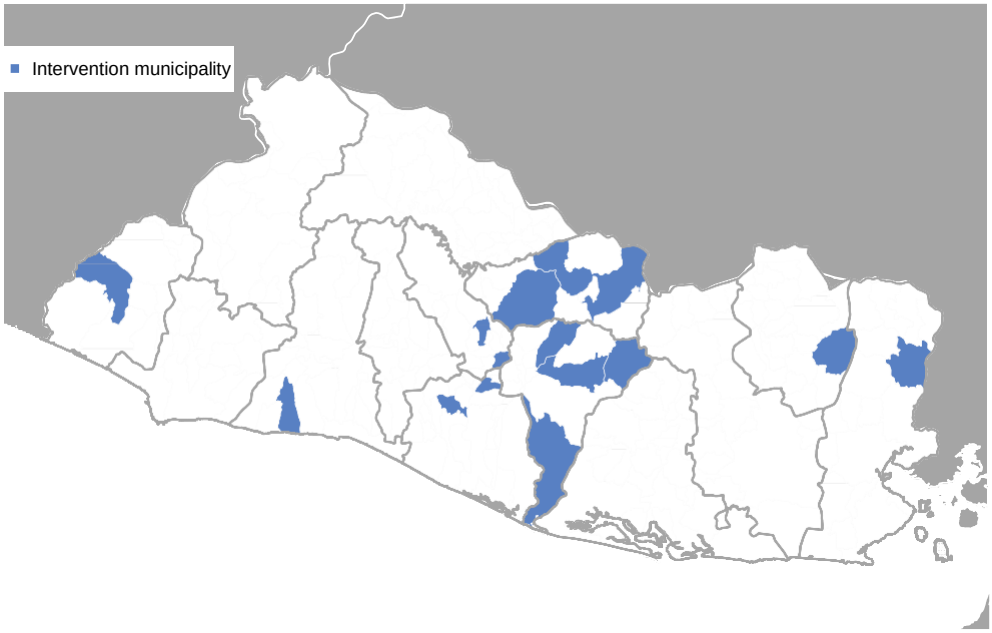
1.3 Methodology

The study design for the SMI-El Salvador second follow-up household survey provides representative estimates of the coverage of key health interventions and indicators for a geographic area that approximates the lowest wealth quintile of the population of El Salvador.

1.3.1 *Study area*

The primary administrative unit in El Salvador is the department. El Salvador has 14 departments, of which eight were purposefully selected for the SMI-El Salvador initiative. From those eight departments, IDB identified 15 intervention municipalities in which to conduct the baseline SMI household survey for the Initiative on the basis of their high concentration of residents in the country's lowest wealth quintile. From these 15 municipalities, a two-stage clustered random sample of eligible households was selected to reach the sample sizes shown in Table 1.1.

Figure 1.3: Map of Salud Mesoamérica Initiative study area



1.3.2 *First-stage sample selection: census segments*

The household survey uses a two-stage random sampling design in order to balance survey administration costs with the ability to make estimates representative of the population in the study area. For the SMI-El

Salvador household census, the primary sampling unit (PSU) is the *segmento censal (*census segment*)* from the 2007 El Salvador Population Census. A representative sample of these clusters ("segments") was randomly selected from a sampling frame of all segments in SMI municipalities with probability proportional to size, where size is measured by the number of occupied households. Samples for baseline and follow-up rounds were selected independently.

A set of alternate segments was selected using identical methodology, to be surveyed in the event that any of the selected segments could not be surveyed and needed to be replaced due to security concerns, community rejection of the study, or a high proportion of absent households. In El Salvador in the 2017 follow-up survey, two segments were replaced due to security concerns with an alternate segment from the same municipality (Ilobasco and Sensuntepeque). Counts by municipality of segments where data collection was completed successfully are shown in Figure 1.4.

Table 1.1: Number of segments per municipality in SMI area

Department	Municipality	No. Segments
Ahuachapán	NANA	1
Ahuachapán	Tacuba	4
Cabañas	Ilobasco	8
Cabañas	Sensuntepeque	5
Cuscatlán	Monte San Juan	1
Cuscatlán	San Cristobal	1
La Libertad	Chiltiupán	1
La Paz	San Antonio Masahuat	1
La Paz	Santa María Ostuma	1
La Unión	El Sauce	1
Morazán	Sociedad	2
San Vicente	Apastepeque	3
San Vicente	San Esteban Catarina	1
San Vicente	San Ildefonso	1
San Vicente	Tecoluca	4

1.3.3 *Second-stage sample selection: households*

The SMI-El Salvador second follow-up household census is conducted in each of the randomly selected segments prior to the SMI-El Salvador second follow-up household survey in order to identify all eligible women and children for second-stage sampling. Interviewers visit every household in the segment and create a household roster capturing the age and sex distribution of household members.

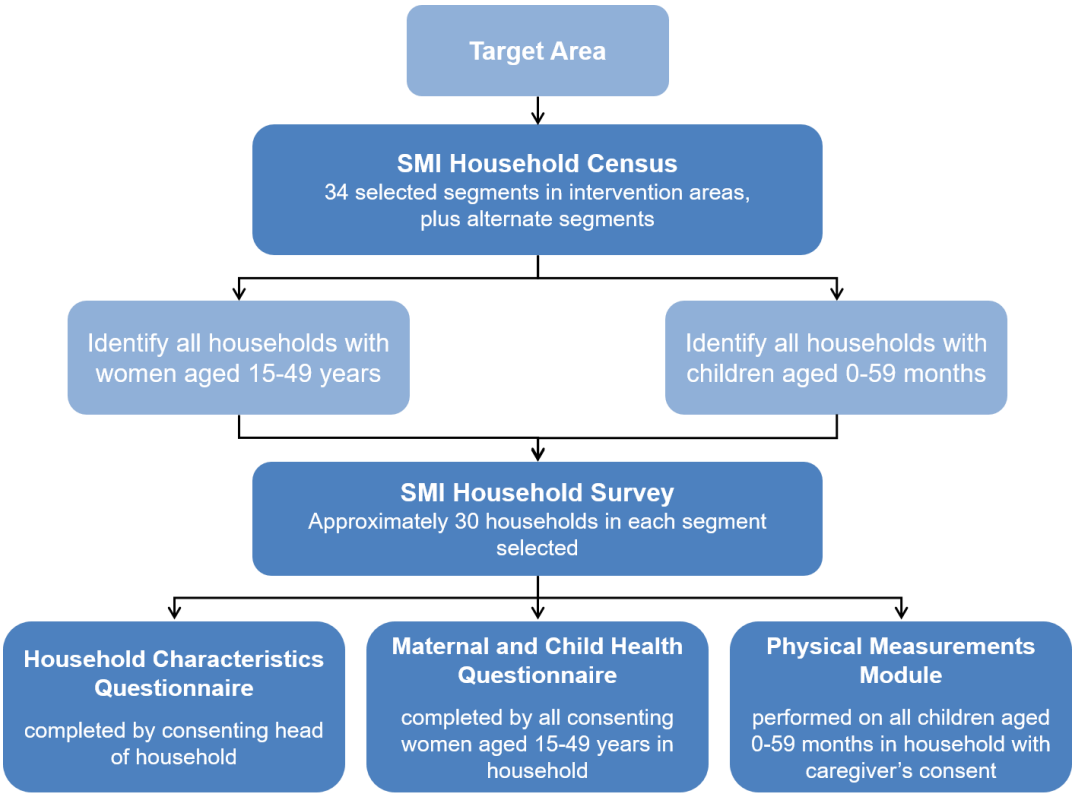
Eligible households are systematically selected from the complete census listing for participation in the SMI-El Salvador Household Survey. Thirty households are selected for participation, 25 households with at least one eligible child and five households with only eligible women. In order to ensure at least 30 complete interviews per segment, 10 backup households, eight with at least one eligible child and two with only eligible women, are selected at random in case of refusals or absent households.

All women aged 15-49 years who are members of the selected household are eligible to be interviewed, and all children aged 0-59 months who are members of the selected household are eligible for the

physical measurement module. Any household head or other individual knowledgeable about household characteristics and expenditures is permitted to respond to the household characteristics module, while any primary caregiver of a child 0-59 months is eligible to inform for the child health interview module, regardless of sex or age.

A schematic diagram of the survey implementation is shown in Figure 1.5. Appendix A provides a detailed description of sampling methods.

Figure 1.5: Schematic diagram of SMI survey implementation



1.4 Survey implementation

1.4.1 *Data collection instruments*

Questionnaires were initially developed in English, and then translated to Spanish during the baseline measurement. To best reflect the issues most relevant to the region under study and the local language, the Spanish-language questionnaires were revised following input from key stakeholders and at the conclusion of the baseline and first follow-up pilot studies (described below). The revised Spanish-language surveys were then back-translated to English. Study areas included a substantial proportion of indigenous populations, many of them also Spanish speakers. In order to allow the participation of non-Spanish speakers in the survey, the data collection team includes interviewers proficient in Chortis, Nahuat, Lenca, and Ulua who interpret as needed as they administer the survey. During the Second Follow-up 0.2% (unweighted) of household interviews were conducted partly or completely in a language other than Spanish.

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.

1.4.2 *Training and supervision of data collectors*

Training sessions for the second follow-up survey were conducted in El Salvador in July 2017. For household and census data collection, 26 surveyors and six anthropometrists were trained. All surveyors underwent a weeklong training, which included three days of in-classroom instruction and practice of interview application. Teams were split into their respective groups and 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 two-day pilot data collection exercise in communities that were not selected to be part of the SMI sample, where they applied the census and household survey. IHME held debriefing and re-training sessions with surveyors post-pilot and provided continued training during the first week of data collection in sampled communities.

1.4.3 *Data collection, management, and analysis*

The SMI-El Salvador household census, which captures basic demographic characteristics of all usual household occupants, was carried out between July 26 and September 23, 2017, in in the second follow-up.

Data collection for the SMI-El Salvador household survey began August 11, 2017, and was completed on December 14, 2017. To assure completeness of the sample, field staff were instructed to return to selected households up to three times (on different days, and at least once on a weekend) in an attempt to complete the Household Characteristics Questionnaire, the Maternal and Child Health Questionnaire, and the Physical Measurements Module. Households that refused to participate or were absent at all three visits are substituted with randomly selected alternates.

Data collection teams, consisting of one supervisor and three to five interviewers were deployed to conduct the SMI household census and the SMI household survey. Supervisors were responsible for reviewing questionnaires for quality and consistency prior to departing each segment. There were six supervisors overseeing the SMI household census and SMI household survey.

Data were collected using computer netbooks equipped with CAPI software. Field team leaders monitored the implementation of the survey and report feedback. Data collection using CAPI allowed data to be transferred instantaneously once a survey was completed via a secure connection 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.

Data analysis was conducted at IHME using STATA version 14 and R version 3. Performance and monitoring indicators were calculated at IHME following indicator definitions provided by IDB.

The total number of completed interviews with heads of households in the census is shown in Table 1.2, and the total number of completed interviews with heads of households in the household survey is shown in Table 1.3. The total number women of reproductive age who participated in the household survey for

each department in El Salvador is shown in Table 1.4, and the total number of physical measurements of children aged 0-59 months performed, with corresponding response rates by department is shown in Table 1.5. Response rates were calculated using the following formula: ([# surveyed] ÷ [# selected participants]). High non-response may affect the reliability of the estimates.

According to the 2007 El Salvador Population Census, we expected a total of approximately 8,198 occupied households in the 35 selected segments in the second follow-up. The SMI household listing exercise found 5,033 occupied households in these segments. Of the 4,167 eligible households, 3,839 completed the SMI household census, yielding a response rate of 92.1% for this portion of the survey.

Based on information collected during the SMI household census, a subset of households were visited for individual interviews. A total of 1,051 households were visited for the individual interviews during the second follow-up. Of these, a total of 1,029 Household Characteristics Questionnaires were completed with heads of households, yielding a household response rate of 97.9%.

Using the household roster completed as part of the SMI household survey, 1,447 women of reproductive age (15-49 years) were identified from the sub-sample of interviewed households as eligible for the Maternal and Child Health Questionnaire. Of these women, 1,436 successfully completed the questionnaire. The household roster completed as part of the SMI household survey was also used to identify 880 children aged 0-59 months as eligible for the Physical Measurements Module among the interviewed households during the second follow-up. 870 of these children participated in either the interview or measurements module.

Among those households that were occupied but did not complete the SMI household census, the majority of the non-response for households and individuals was due to household members refusing the interview or being absent.

Table 1.2: Households participating in the SMI census and response rates by department

	No. segments	No. households	No. households eligible	No. households censused	Census response rate, %
Ahuachapán	4	567	472	428	90.7
Cabañas	13	1897	1508	1301	86.3
Cuscatlán	2	276	247	241	97.6
La Libertad	1	130	106	105	99.1
La Paz	2	354	286	271	94.8
La Unión	1	149	141	139	98.6
Morazán	2	241	207	202	97.6
San Vicente	9	1419	1200	1152	96.0
Intervention	34	5033	4167	3839	92.1

*Response rate calculated as the number of complete or partial interviews over total occupied households.
Overall response rate = household response rate*census response rate.

Table 1.3: Households participating in SMI household survey and response rates by department

	No. segments	No. households selected	No. households interviewed	Household response rate, %	Overall response rate, %
Ahuachapán	4	122	120	98.4	89.2
Cabañas	13	403	395	98.0	84.6
Cuscatlán	2	63	61	96.8	94.5
La Libertad	1	30	30	100.0	99.1
La Paz	2	62	60	96.8	91.7
La Unión	1	30	30	100.0	98.6
Morazán	2	62	60	96.8	94.4
San Vicente	9	279	273	97.8	93.9
Intervention	34	1051	1029	97.9	90.2

*Response rate calculated as the number of complete or partial interviews over total selected households

Table 1.4: Women participating in SMI women's health and/or pregnancy interview by department

	No. women eligible	No. women interviewed	Woman response rate, %	Overall response rate, %
Ahuachapán	167	166	99.4	88.7
Cabañas	571	564	98.8	83.5
Cuscatlán	93	93	100.0	94.5
La Libertad	53	52	98.1	97.2
La Paz	85	85	100.0	91.7
La Unión	38	38	100.0	98.6
Morazán	83	83	100.0	94.4
San Vicente	357	355	99.4	93.4
Intervention	1447	1436	99.2	89.5

*Response rate calculated as the number of complete or partial interviews over total eligible women. All women aged 15-49 years who reside in interviewed households, based on the household roster completed as part of the SMI census, are selected for the interview.

Table 1.5: Children participating in SMI child health interview and/or physical measurements by department

	No. children eligible	No. children participated	Child response rate, %	Overall response rate, %
Ahuachapán	89	89	100.0	89.2
Cabañas	326	320	98.2	83.0
Cuscatlán	63	62	98.4	93.0
La Libertad	28	28	100.0	99.1
La Paz	54	54	100.0	91.7
La Unión	30	30	100.0	98.6
Morazán	52	52	100.0	94.4
San Vicente	238	235	98.7	92.8
Intervention	880	870	98.9	89.2

*Response rate calculated as the number of complete or partial interviews over total eligible children.
All children aged 0-59 months who reside in interviewed households, based on the household roster completed as part of the SMI census, are selected for the caregiver interview and physical measurements.

1.5 Characteristics of Non-Participating Households

Data on selected households that were absent or declined to participate in the SMI Household Survey are drawn from the SMI Household Census. A total of 29 of the 1,051 households that were selected at the second follow-up did not complete the SMI Household Survey. This non-response varies by department, from a low of 0% in La Unión and La Libertad to a high of 3.2% in La Paz, Morazán, and Cuscatlán. Households that did not complete the SMI Household Survey are referred to as “replaced” households because they were substituted with alternate households selected from the same segment.

Replaced households consisted of one to 10 members (median four members). Seven percent of these households were headed by a man, 27.6% of households were headed by a woman, and 65.5% were identified as dual-headed.

Table 1.6: Household characteristics, nonparticipating households

	n	%	SE
Head of household			
Dual-headed household	19	65.5	9.2
Single head, female	8	27.6	6.4
Single head, male	2	6.9	4.7

Dual-headed households are those where (a) two individuals were identified as ”head” by the respondent or (b) both the person identified as ”head” and his or her spouse or partner are household members

	N	DK/DTR	Min	p25	Median	p75	Max
Number of usual household members	29	0	3	3	4	5	10

1.6 Report structure

The subsequent chapters present characteristics of the surveyed SMI-El Salvador sample at the second follow-up. Most tables take one of three forms. Tabulations of select-only-one question types are similar to Table 2.2(a). The categories are mutually exclusive, so the proportions sum to 100%. Counts are shown for non-response ("Don't know" or "Decline to respond" recorded), but these cases are always excluded from the denominator.

Tabulations of select-all-that-apply question types look like Table 2.4(a). As respondents can report more than one option, categories are not mutually exclusive, and thus proportions do not sum to 100%. The table shows affirmative cases (n) and non-missing cases (N). Non-response is the difference between non-missing cases (N) and the total sample eligible for that section of the questionnaire, indicated at the start of the chapter. Where statistics are reported for subpopulations, the size of the subpopulation is reported in the same table or the preceding table for straightforward comparison.

Tabulations of continuous variables, where respondents were requested to provide a numeric response, appear similar to Table 2.2(b) and present the range and quartiles (25th percentile, median, 75th percentile) in order to illustrate the distribution of responses across the sample. Counts of non-response are listed in the table and excluded from the count of non-missing cases (N).

2 CHAPTER 2: CHARACTERISTICS OF HOUSEHOLDS

This chapter provides a descriptive summary of the basic demographic, socioeconomic, and environmental characteristics of the households sampled for the SMI-El Salvador Second Follow-up Household Survey.

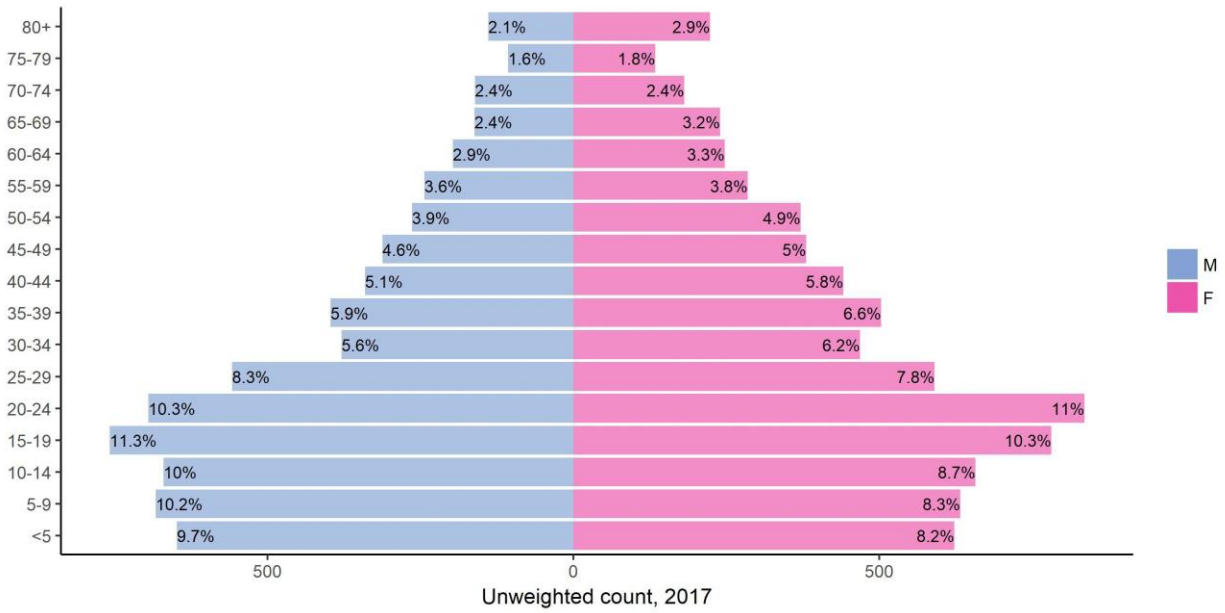
2.1 Characteristics of Participating Households

A total of 1,024 households in the El Salvador second follow-up completed the household characteristics questionnaire. The remainder of this chapter is dedicated to a summary of the basic demographic, socioeconomic, and environmental characteristics of the households completing the household characteristics questionnaire.

2.2 Age and Sex Composition, SMI Census

The unweighted distribution of the de facto household population in the surveyed households in the SMI-El Salvador household census by five-year age groups and by sex is shown for second follow-up (Figure 2.1). El Salvador has a larger proportion of its population in the younger age groups than in the older age groups. Figure 2.1 indicates that in the second follow-up, just under 27% of the population in the Second Follow-up is under age 15 years, more than half (63%) of the population is in the economically productive age range (15-64), and the remaining 9% is age 65 and above.

Figure 2.1: Age and sex of census sample, unweighted percent distribution of de facto household population by five-year age groups, follow-up survey



2.3 Household Characteristics, SMI Household Survey

The number of households, women, and children in the sample are displayed in Table 2.1; and the percent distribution of households by head of household, number of usual members, and marital status are shown in Table 2.2.

Sixty percent of households in El Salvador identify as dual-headed in the second follow-up. Males are the head of the household in 11.8% of surveyed households in El Salvador, with females as the head of household in the remaining 28.7%. The median household size in El Salvador is four members, with another 15% of households having five or more members.

Table 2.1: SMI household survey sample sizes: number of total households, women 15-49 years of age, and children 0-59 months

	Second Follow-Up 2017
Households	1024
Women	1432
Children	870

Table 2.2: Household characteristics, SMI household sample

	n	%	SE
Head of household			
Dual-headed household	637	59.5	2.1
Single head, female	267	28.7	2.4
Single head, male	120	11.8	1.7

Dual-headed households are those where (a) two individuals were identified as ”head” by the respondent or (b) both the person identified as ”head” and his or her spouse or partner are household members

	N	DK/DTR	Min	p25	Median	p75	Max
Number of usual household members	1024	0	1	3	4	5	15

2.4 Drinking Water Access and Treatment

2.4.1 *Sanitation facilities and waste disposal*

A household’s source of drinking water is an important determinant of the health status of household members. Contaminated drinking water can spread waterborne diseases, such as diarrhea or dysentery.

Piped water, protected wells, and protected springs are expected to be relatively free of these diseases; whereas other sources like unprotected wells, rainwater, or surface water are more likely to carry disease-causing agents.

The percent distribution of households by source of drinking water, location of water source, and information about sanitation facilities is shown in Table 2.3. Most surveyed households (47.5%) have water piped to dwelling, and 8 1% of households have to go outside their home or yard to a water source.

Many households (46.5%) use a pit latrine and 36.1% of households use a flush toilet. Two percent of households report having no toilet.

Table 2.3: Household water source and sanitation facilities

	n	%	SE
Household water source			
Piped to dwelling	472	47.5	4.0
Piped to yard/plot	339	32.2	3.7
Public tap/standpipe	90	9.0	2.5
Unprotected dug well	31	3.0	1.2
Rainwater collection	26	2.0	1.0
Protected spring	10	1.3	0.9
Tubewell/borehole	11	0.9	0.5
Protected dug well	6	0.7	0.4
Tanker truck	4	0.3	0.2
Cart with small tank/drum	1	0.3	0.3
Surface water	1	0.1	0.1
Unprotected spring	0	0.0	-
Bottled water	0	0.0	-
Water jug	0	0.0	-
Other	33	2.8	0.8
Don’t know	0	-	-
Decline to respond	0	-	-
Time to retrieve water			
Water on premises	912	91.5	2.4
Less than 30 minutes	91	7.4	2.1
30 minutes or longer	14	1.2	0.5
Don’t know	6	-	-
Decline to respond	1	-	-
Sanitation facilities			
Pit latrine	470	46.5	5.1
Flush toilet	378	36.1	6.0
Dry toilet	96	10.1	2.7
Pour flush toilet	61	5.3	1.1
No toilet	16	1.6	0.5
Other	3	0.4	0.2
Don’t know	0	-	-
Decline to respond	0	-	-

	n	N	%	SE
Shared toilet/facilities	121	1005	10.7	1.6

2.4.2 *Cooking fuel sources*

Cooking fuel source and the location for cooking food are included in Table 2.4. The percentage of households with a separate kitchen is also shown. The two most commonly reported cooking fuel sources used in households during the second follow-up are gas tank (73.3%) and wood (26.1%). Among those households with non-missing responses as to what cooking fuel sources they use, 65.3% report normally cooking food in the house, 19.3% normally cook food outdoors, and 15.4% normally cook food in a separate building. Fifty three percent of households have a separate kitchen.

Table 2.4: Cooking fuel source and cooking location

	n	%	SE
Gas tank	756	73.3	4.1
Wood	261	26.1	4.0
Electricity	5	0.5	0.3
Straw/twigs/grass	1	0.1	0.1
Coal	0	0.0	-
Agricultural crops	0	0.0	-
No food cooked at home	0	0.0	-
Other	1	0.1	0.1
Don't know	0	-	-
Decline to respond	0	-	-

	n	%	SE
Location for cooking food, if cooking fuel source reported			
Inside house	674	65.3	4.3
Outdoors	210	19.3	3.1
In a separate building	139	15.4	2.6
Other	0	0.0	-
Don't know	0	-	-
Decline to respond	0	-	-

	n	N	%	SE
Separate kitchen, if cooking fuel source reported and food cooked in the home	530	1023	52.6	2.8

2.4.3 *Household wealth*

The median number of bedrooms per household is two (Table 2.5). Twenty percent of households in the second follow-up own agricultural land and 0% of households rent agricultural land (Table 2.6).

The availability of durable consumer goods is a good indicator of a household's socioeconomic status. Table 2.6 shows the availability of selected consumer goods by household. The large majority of households (96.2%) have electricity, and the most commonly owned items are television (90.8%), mobile phone (90.5%), and radio (74.9%). Many households (34.2%) own a bicycle and 14.1% own a car.

Table 2.5: Number of bedrooms per household

	N	DK/DTR	Min	p25	Median	p75	Max
Number of bedrooms	1021	3	0	1	2	2	9

Table 2.6: Household assets

	n	N	%	SE
Household assets				
Electricity	981	1024	96.2	0.9
Television	919	1023	90.8	1.6
Mobile phone	923	1023	90.5	1.6
Radio	764	1022	74.9	2.0
Refrigerator	663	1023	65.0	4.5
Watch	377	1023	38.1	4.2
Computer	159	1023	16.6	3.2
Landline phone	111	1023	11.7	2.5
Bank account	67	991	7.0	1.7
Guitar	62	1023	6.5	1.4
Transportation assets				
Bicycle	346	1023	34.2	2.8
Car	150	1023	14.1	2.1
Motorcycle/scooter	111	1023	9.7	1.3
Truck	18	1023	1.7	0.5
Animal cart	4	1023	0.5	0.3
Agricultural assets: Livestock ownership				
Livestock	264	1019	26.2	3.1

	n	%	SE
Agricultural assets: Own or rent agricultural land			
No agricultural land	812	79.7	3.2
Owns agricultural land	206	20.3	3.2
Rents agricultural land	0	0.0	-
Shared/community-held land	0	0.0	-
Don't know	2	-	-
Decline to respond	4	-	-

2.5 Household expenditure

2.5.1 *Total expenditures by type*

Households are surveyed about the amount of money spent over the last month. After reporting total household expenditures, households are then asked how much was spent on specific categories (e.g., food, housing, education, and medical care) over the last four weeks. Table 2.7 shows the itemized monthly expenditure per person living in the household summarized by expenditure quintile. All data are presented in current United States Dollars (USD). Itemized expenditure information was sufficiently complete to report for 883 households at the second follow-up. The lowest quintile in the study area spent less than 24 USD per person over the last month in the second follow-up.

Table 2.8 shows the budget share, defined as the weighted average expenditure on each category across a quintile divided by the weighted average total itemized household expenditure in the same quintile. Table 2.8 shows that the poorest 20% of households in the study area spend 59.5% of their monthly expenditure on food, on average. In comparison, the wealthiest households spend 57.6% on food. The poorest households spent 2% of their expenditure on medical care, while the wealthiest spent 6.4%.

Table 2.7: Total itemized per-capita expenditure quintiles, United States Dollar

	N	DK/DTR	p20	p40	p60	p80
Per capita monthly household expenditure, current LCU	883	6	24	40	62	101

Table 2.8: Itemized household expenditure by total household budget share

	Bottom quintile	2nd quintile	3rd quintile	4th quintile	Top quintile
Food	59.5	69.5	66.5	64.5	57.6
Alcoholic beverages and tobacco	0.5	0.9	0.5	0.4	0.3
Education expenses	1.9	2.4	2.7	3.9	3.5
Furniture and domestic appliances	0.0	0.4	0.6	0.9	0.8
Recreation	0.1	0.0	0.1	0.3	3.0
Housing and utilities	27.1	17.9	18.0	15.4	16.7
Clothing and shoes	2.8	2.3	1.7	2.8	3.7
Transportation	4.1	2.3	4.5	4.1	4.3
Communication	1.6	1.7	3.1	3.9	2.9
Out-of-pocket medical expenses	2.0	1.6	2.1	3.1	6.4
Social security premiums	0.3	0.6	0.1	0.1	0.3
Private insurance premiums	0.0	0.2	0.2	0.1	0.2
Other costs to access health care	0.2	0.1	0.1	0.5	0.3

2.5.2 Health expenditures

Of the 883 households with expenditure data at the second follow-up, 183 reported having health expenditures in the last four weeks. Table 2.9 shows health expenditure by type among households reporting non-zero out-of-pocket health expenditure. Very few households had spending in each category.

Table 2.9: Out-of-pocket medical expenditures by type, last four weeks, United States Dollar

	N	DK/DTR	Min	p25	Median	p75	Max
Care or non-prescription medications from pharmacist	183	0	0	0	0	0	280
Medications prescribed by health personnel	183	0	0	0	10	30	210
Dentists	183	0	0	0	0	0	200
Health products (glasses, hearing aids, prosthetics, etc.)	183	0	0	0	0	0	160
Care that required overnight stay in hospital/clinic	183	0	0	0	0	0	150
Other health care products or services	183	0	0	0	0	0	150
Care by health professionals not requiring overnight stay	183	0	0	0	0	0	100
Diagnostic and laboratory tests, X-rays, blood tests	183	0	0	0	0	0	60
Care by traditional/alternative healers/birth attendants	183	0	0	0	0	0	40
Other costs associated with overnight stay in hospital/clinic	183	0	0	0	0	0	30

2.5.3 Source of health expenditure financing

Of the 883 households with expenditure data at the second follow-up, 55 reported that members of the household went to a hospital and stayed overnight at least once during the last 12 months and paid for expenses associated with the overnight stays. The maximum paid for a hospital stay was 150 USD.

Table 2.10 shows the source and amount of financing for medical expenditures for overnight hospital stays. The most common source of health care financing was current income from any household member (median amount 0.8).

Table 2.10: Health care financing by source, last 12 months, United States Dollar

	N	DK/DTR	Min	p25	Median	p75	Max
Remittances from family or friends abroad	52	3	0	0	0	0	3200
Any household member's current income	51	4	0	0	0.8	36.6	800
Savings	53	2	0	0	0	0	300
Loan from a source other than family or friends	51	4	0	0	0	0	300
Money from relatives or friends outside the household	53	2	0	0	0	0	150
Reducing other household spending	52	3	0	0	0	0	75
Conditional cash transfer programs	53	2	0	0	0	0	60
Other source	53	2	0	0	0	0	60
Items sold	53	2	0	0	0	0	25
Health insurance plan payment/reimbursement	53	2	0	0	0	0	0
Property sold	53	2	0	0	0	0	0
Political donations or grants	53	2	0	0	0	0	0

3 CHAPTER 3: GENERAL CHARACTERISTICS OF RESPONDENTS

This chapter summarizes the demographic characteristics, socioeconomic status, and health status of women of reproductive age (15-49 years) participating in the SMI-El Salvador second follow-up household survey.

3.1 Demographic Characteristics

3.1.1 *Age, marital status, relation to head of household*

The age distribution of the de facto population of women of reproductive age participating in the women's health or pregnancy interviews in El Salvador is shown in Figure 3.1 by five-year age groups. About 62% of all women participating in the second follow-up SMI-El Salvador household survey were younger than 30 years of age, 24% were between the ages of 30 and 39, and 15% were between the ages of 40 and 49. While 22% of women reported being married and 34% being partnered, 34% indicated they were never married. Eighteen percent of women were reported at the SMI-El Salvador census to be the head of household, 23.5% to be the spouse of the head of the household, and 32.5% to be the biological child of the head of the household.

Figure 3.1: Age of respondents, unweighted

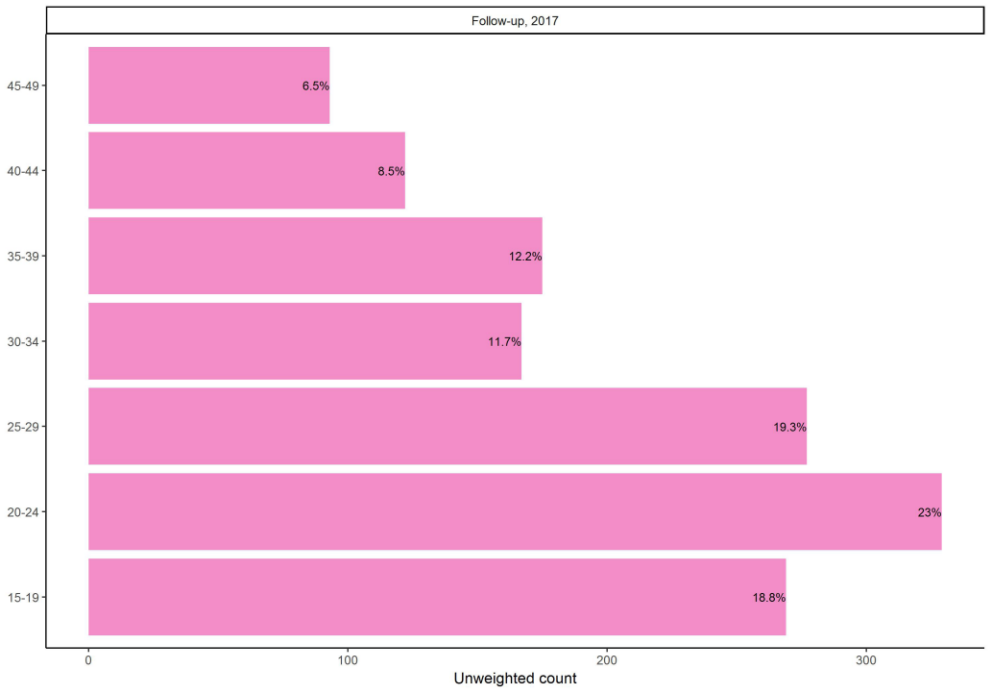


Table 3.1: Demographic characteristics of respondents

	n	%
Marital status		
Single	502	35.1
Married	302	21.1
Civil union/partnered	468	32.7
Divorced	6	0.4
Separated	78	5.4
Widowed	13	0.9
Other	63	4.4
Don't know	0	0.0
Decline to respond	0	0.0
Respondent's relationship to head of household		
Head of household	254	17.7
Spouse	337	23.5
Biological child	465	32.5
Adopted or stepchild	15	1.0
Grandchild	64	4.5
Niece/nephew	9	0.6
Parent	6	0.4
Sibling	27	1.9
Daughter-in-law/son-in-law	59	4.1
Sister-in-law/brother-in-law	7	0.5
Grandparent	0	0.0
Mother-in-law/father-in-law	0	0.0
Other relative	3	0.2
Unrelated person	8	0.6
Partner	171	11.9
NA	3	0.2
Other	4	0.3
Don't know	0	0.0
Decline to respond	0	0.0

* "NA" represents women who were missed in the census and added individually into the household survey, so relationship to the head of household was not registered.

3.2 Education Attainment and Literacy

92.5 percent of second follow-up survey participants had some formal education (Table 3.2). For 32.1% of these women, the highest level of education completed was primary schooling. Literacy was assessed by asking respondents to read from a card the following sentence: "La salud del niño es muy importante para su desarrollo en la vida." Eighty two percent of women surveyed were able to read the whole sentence. Seven percent of women could not read the sentence at all.

Table 3.2: Education attainment and literacy

	n	%	SE
Ever attended school			
Never attended school	87	7.3	1.2
Attended school	1340	92.5	1.2
Attended literacy course	4	0.2	0.1
Don't know	0	-	-
Decline to respond	0	-	-

	n	%	SE
Educational attainment and literacy			
Primary	442	32.1	2.7
Secondary or baccalaureate	776	58.7	2.3
University	118	9.2	1.8
Literacy course	1	0.0	-
Don't know	3	-	-
Decline to respond	0	-	-
Literacy			
Cannot read at all	79	7.3	1.5
Can read parts	141	10.2	1.9
Can read entire sentence	1199	82.4	2.6
Visually impaired	3	0.1	0.1
Don't know	5	-	-
Decline to respond	4	-	-

3.3 Employment

As summarized in Table 3.3, the majority of respondents in the second follow-up were homemakers (63.5%). Of the 282 women who reported being employed and working at the time of the interview, most (74.9%) identified "Employee" as their occupational role.

Table 3.3: Employment

	n	%	SE
Employment status			
Homemaker	946	63.5	3.6
Employed/paid for work	282	20.0	2.5
Student	172	15.5	1.6
Unable to work due to disability	10	0.7	0.3
Employed, but did not work in last week	7	0.4	0.2
Retired	0	0.0	-
Don't know	11	-	-
Decline to respond	3	-	-
Occupational role, among women employed and being paid for work			
Employee	212	74.9	2.9
Proprietor	39	13.1	2.2
Independent contractor	26	9.7	2.5
Employer	4	2.1	1.5
Apprentice/worker without pay	1	0.2	0.2
Don't know	0	-	-
Decline to respond	0	-	-

3.4 Exposure to Mass Media

Respondents were asked about their exposure to newspapers, radio, and television. As displayed in Table 3.4, among women who demonstrated full or partial literacy in the second follow-up, 23.4% had weekly exposure to newspapers. Fifty three percent of all women had weekly exposure to radio, and 85.2% had weekly exposure to television.

Table 3.4: Exposure to mass media

	n	%	SE
Newspapers, among literate women			
Never	668	49.6	2.0
Less than once a week	355	27.0	1.9
At least once a week	317	23.4	2.4
Don't know	0	-	-
Decline to respond	0	-	-
Not applicable	0	-	-
Radio			
At least once a week	726	52.7	2.9
Less than once a week	397	26.2	1.9
Never	306	21.1	2.1
Don't know	2	-	-
Decline to respond	0	-	-
Not applicable	0	-	-
Television			
At least once a week	1165	85.2	1.8
Less than once a week	164	8.5	1.3
Never	101	6.2	0.8
Don't know	1	-	-
Decline to respond	0	-	-
Not applicable	0	-	-

3.5 Access to Health Services

3.5.1 *Proximity to health care facilities*

Table 3.5 - Table 3.7 display the responses to several survey questions that were used to assess access to health care facilities. Respondents were asked to estimate proximity to health care facilities in terms of distance (kilometers) and travel time. Not surprisingly, respondents typically had more difficulty estimating distance to health care facilities. As shown in the tables below, "Don't know" responses to the distance questions were exceedingly common.

Excluding the 634 women who were unable to estimate the distance to the closest health facility in the second follow-up, 75% of women reported living 2.7 kilometers or less from a health facility (Table 3.5). Three-quarters of the sample indicated that it took less than 20 minutes to reach this facility by the usual means of transportation. One-quarter estimated the travel time from their household to the closest health facility to be 20 minutes or more.

Women were also asked for the travel distance and time to their usual health facility, if they had a usual health facility. Excluding the 539 women who did not know the distance to the facility in the second follow-up, three-quarters of the women reported traveling up to 4 kilometers, and three-quarters of the women could travel to the closest facility in less than 25 minutes (Table 3.6).

Of the 690 women who reported a recent health facility visit for themselves or for family members in the second follow-up, three-quarters traveled less than 6 kilometers for care. Twenty-five percent of women

traveled 6 to 120 kilometers for care. Half of women traveled for less than 15 minutes, and one-quarter spent 30 minutes or more traveling for care.

Table 3.5: Proximity to health care facilities: nearest health facility

	N	DK/DTR	Min	25th Percentile	Median	75th Percentile	Max
Distance, km	797	634	0.1	1	1	2.7	42
Travel time, min	1377	51	1	10	15	20	2700

Table 3.6: Proximity to health care facilities: usual health facility

	N	DK/DTR	Min	25th Percentile	Median	75th Percentile	Max
Distance, km	728	539	0	1	1.5	4	100
Travel time, min	1221	44	1	10	15	25	1800

Table 3.7: Proximity to health care facilities: health facility for recent illness

	N	DK/DTR	Min	25th Percentile	Median	75th Percentile	Max
Distance, km	423	263	0	1	2	6	120
Travel time, min	652	19	1	10	15	30	1800

3.6 Health Status

3.6.1 *Current health status*

Table 3.8 shows the self-rated current health status of all women participating in the survey. When asked to evaluate their current health status relative to the past year, 55.5% reported that their health was “about the same” in the second follow-up. While 39.2% reported that their health had improved, 5.3% reported worse health on the day of the interview, compared to last year. Eighty seven percent could “easily” perform their daily activities (e.g., work, housework, and childcare). About 13% of women reported at least some degree of difficulty performing these tasks that was related to their health status.

Table 3.8: Current health status

	n	%	SE
Current health relative to last year			
Better	589	39.2	2.8
Worse	82	5.3	1.0
About the same	760	55.5	2.8
Don't know	0	-	-
Decline to respond	0	-	-
Ability to perform daily activities			
Easily	1223	87.1	1.8
With some difficulty	185	11.6	1.7
With much difficulty	19	1.3	0.4
Unable to do	2	0.1	0.1
Don't know	2	-	-
Decline to respond	0	-	-

	n	%	SE
Days in the last month that physical health was not good			
No days	1101	78.7	2.3
1 to 3 days	116	8.4	1.2
4 to 7 days	206	12.9	1.8
7 to 29 days	0	0.0	-
All month	0	0.0	-
Don't know	6	-	-
Decline to respond	2	-	-
Days in the last month that mental health was not good			
No days	1181	84.1	2.6
1 to 3 days	86	5.8	0.8
4 to 7 days	151	10.1	2.2
7 to 29 days	0	0.0	-
All month	0	0.0	-
Don't know	12	-	-
Decline to respond	1	-	-

3.6.2 *Recent illness*

Women were asked a series of questions about any illnesses or health problems they had in the two weeks preceding the interview. Out of the women in the second follow-up, 11.8% reported being sick during that time (Table 3.9). Of the 164 women who reported a recent illness, cough (17.3%), headache (15.1%), abdominal pain (9.5%), and fever (5.9%) were the most commonly elicited specific complaints. Thirty nine percent of women specified a different health problem not listed in the questionnaire.

Table 3.9: Recent illness (in the last two weeks)

	n	N	%	SE
Respondent was sick during the past two weeks	164	1428	11.8	1.7

	n	%	SE
Type of illness, among those sick in the past two weeks			
Cough	29	17.3	4.2
Headache	24	15.1	4.3
Abdominal pain	11	9.5	3.5
Fever	14	5.9	2.0
Gynecologic problem	6	2.9	1.5
Hypertension	2	2.5	2.1
Bronchitis	2	2.4	2.1
Vomiting	3	1.8	1.1
Skin rash/infection	2	1.4	1.4
Eye/ear infection	1	1.0	1.0
Diarrhea without blood	1	0.3	0.3
Swelling in legs, ankles, or feet	1	0.3	0.3
Diabetes	1	0.2	0.2
Malaria	0	0.0	-
Cough/chest infection	0	0.0	-
Tuberculosis	0	0.0	-
Asthma	0	0.0	-
Pneumonia	0	0.0	-
Diarrhea with blood	0	0.0	-
Diarrhea with vomiting	0	0.0	-
Anemia	0	0.0	-
Measles	0	0.0	-
Jaundice	0	0.0	-
Toothache	0	0.0	-
Stroke	0	0.0	-
HIV/AIDS	0	0.0	-
Paralysis	0	0.0	-
Obstetric problem	0	0.0	-
Blood in urine	0	0.0	-
Poisoning	0	0.0	-
Chest infection	0	0.0	-
Other	66	39.4	5.1
Don't know	1	-	-
Decline to respond	0	-	-

3.6.3 *Utilization of health services*

Table 3.10 summarizes data regarding the utilization of health services among the 164 women who reported an illness in the two weeks preceding the second follow-up interview. One hundred one (60.2%) of these women sought care at a health care facility. Many of these women attended a public

health center (38.3%); another 15.6% attended a community health unit. Only ninety six women were hospitalized for their recent illness (6.7% of those who sought care).

Table 3.10: Utilization of health services for illness in the last two weeks

	n	N	%	SE
Sought care for recent illness	101	164	60.2	6.4
Admitted to hospital for care*	6	96	6.7	4.4

*Among women who sought care at a health facility

	n	%	SE
Type of facility where care was sought			
Public health center	46	38.3	8.2
Community health unit	19	15.6	5.8
Public hospital	8	10.4	6.2
Private health clinic	3	10.4	5.9
Private doctor's office	8	9.4	5.0
Other private health facility	3	2.8	2.5
Other public health facility	4	2.2	1.1
Private hospital	3	2.2	1.5
Pharmacy	1	0.7	0.7
Private mobile clinic	1	0.6	0.6
Public mobile clinic	0	0.0	-
Community health worker	0	0.0	-
Traditional healer	0	0.0	-
Other	5	7.4	4.0
Don't know	0	-	-
Decline to respond	0	-	-

3.6.4 *Insurance coverage*

About 10% of women reported being covered by any type of health insurance in the second follow-up (Table 3.11).

Table 3.11: Insurance coverage

	n	%	SE
No insurance	1277	89.9	1.8
ISSS	110	6.7	1.2
Bienestar Majisterial	24	1.9	0.8
Other	18	1.4	0.5
Don't know	1	-	-
Decline to respond	1	-	-

3.6.5 *Other barriers to health care access*

There are many other barriers to accessing health care. Women who reported that they sometimes or never sought care when they felt sick were asked what reasons prevented them from receiving health care when it was needed. Interviewers were instructed to ask in an open-ended manner for all applicable reasons, and to mark the appropriate response options in the questionnaire based on the woman's response. Table 3.12 summarizes the responses to this section. The most commonly cited factor influencing health care access in the second follow-up were the preference for treatment at home (49.2%). Thirty five percent of women did not believe they were ill enough to seek treatment. Access and quality of care were also important barriers: 21.2% of women said the health center did not have enough medicine available, 2.5% said care was too expensive, and 7.9% said the health center personnel were too difficult to deal with.

Table 3.12: Other barriers to health care utilization, women 15-49 years of age who were sick in the last two weeks but did not seek care

	n	N	%	SE
Treated self at home	21	57	49.2	10.3
Not sick enough to seek treatment	13	57	34.9	10.2
Health center does not have sufficient medicines	10	57	21.2	9.0
Too busy with work, children, or other commitments	8	57	11.2	5.5
It is difficult to deal with health center personnel	2	57	7.9	6.5
Care is too expensive	3	57	2.5	1.8
Could not find transportation	2	57	1.8	1.1
Was previously mistreated	2	57	1.6	1.1
Did not want to go alone	2	57	1.6	1.0
Health center infrastructure is poor	2	57	1.5	1.1
Could not afford transportation	1	57	0.8	0.9
Tried, but was refused care	1	57	0.8	0.7
Do not trust the personnel	1	57	0.7	0.7
Health center is not well-equipped	1	57	0.6	0.6
Health center is too far away	0	57	0.0	-
Did not know where to go	0	57	0.0	-
Health center personnel not knowledgeable	0	57	0.0	-
Could not get permission to go to the doctor	0	57	0.0	-
Religious or cultural beliefs	0	57	0.0	-
Tried, but no staff was at the center	0	57	0.0	-
Other	4	57	9.8	5.7

*categories not mutually exclusive (select all that apply)

4 CHAPTER 4: EXPOSURE TO HEALTH SYSTEM INTERVENTIONS

This chapter summarizes the exposure of women to four health system interventions: community health worker interventions, breastfeeding interventions, child nutrition interventions, and child health interventions.

4.1 Exposure to Community Health Workers

Respondents were asked about their exposure to community health workers. Twelve percent of women reported meeting with a community health worker in the month preceding the second follow-up interview (Table 4.1). Five percent met only once, and 6.9% met two or more times.

Table 4.1: Exposure to community health workers, women 15-49 years

	n	%	SE
Did not meet	1233	88.2	1.9
One time	76	4.9	1.1
Two times	47	2.5	0.7
Three times	37	2.2	0.7
Four or more times	27	2.2	0.7
Don't know	10	-	-
Decline to respond	1	-	-

Referral and advice services provided by community health workers are summarized in Table 4.2. Among women who met with a community health worker in the last month during the second follow-up, vaccination for children was the most common service provided (52.8%). Advice about child nutrition counseling (48.1%) and family planning methods or counseling (43.6%) was also frequently reported.

Table 4.2: Services provided by community health workers, women 15-49 years

	n	N	%	SE
Vaccination for children	131	189	52.8	6.2
Child nutrition counseling	110	189	48.1	5.5
Family planning methods or counseling	96	189	43.6	4.9
Information, education, and communication sessions (IEC)	58	188	32.9	7.4
Referral for voluntary HIV/syphilis counseling and testing*	45	189	19.9	4.7
Referral for antenatal care	46	189	19.4	3.8
Referral for in-facility delivery	30	188	13.7	4.1
Other	38	189	22.5	6.3

* For the prevention of HIV/syphilis transmission from mother to child

4.2 Satisfaction with Community Health Workers

Women who met with a community health worker in the month preceding the interview were asked to assess their satisfaction with the following: number of visits, information provided by community health workers, and respectfulness of community health workers. Results are displayed in Table 4.3.

Table 4.3: Satisfaction with community health workers (CHW), women 15-49 years of age who met with CHW in the last month

	n	%	SE
Satisfaction with number of visits from CHW			
Very dissatisfied	7	6.4	3.2
Dissatisfied	6	1.9	0.8
Satisfied	137	69.0	6.1
Very satisfied	41	22.7	4.7
Don't know	2	-	-
Decline to respond	1	-	-
Satisfaction with knowledge and training of CHW			
Very dissatisfied	6	6.1	3.4
Dissatisfied	2	0.7	0.5
Satisfied	143	68.8	5.9
Very satisfied	39	24.4	4.7
Don't know	3	-	-
Decline to respond	1	-	-
Satisfaction with information provided by CHW			
Very dissatisfied	5	5.8	3.4
Dissatisfied	7	2.1	0.8
Satisfied	133	61.0	5.9
Very satisfied	46	31.0	4.8
Don't know	2	-	-
Decline to respond	1	-	-
Satisfaction with respectfulness shown by CHW			
Very dissatisfied	6	6.1	3.4
Dissatisfied	3	1.0	0.5
Satisfied	139	64.8	5.4
Very satisfied	42	28.0	4.4
Don't know	3	-	-
Decline to respond	1	-	-

4.3 Counseling provided in health facilities

Respondents who had visited a health facility in the last 12 months (865 women at the second follow-up) were asked whether they were given counseling about certain topics by health center personnel. Approximately 23.4% of women in the second follow-up reported receiving guidance or advice about breastfeeding in the 12 months preceding the interview (Table 4.4). Approximately 25.2% of women in the second follow-up reported receiving guidance or advice about child nutrition in the 12 months

preceding the interview (Table 4.4). Approximately 27% of women in the second follow-up reported receiving guidance or advice about danger signs for children's health in the 12 months preceding the interview (Table 4.4).

Table 4.4: Exposure to breastfeeding, child nutrition, and child health interventions, women 15-49 years

	n	N	%	SE
Breastfeeding	265	859	23.4	2.1
Child nutrition	280	858	25.2	2.5
Danger signs for children's health	289	854	27.0	2.5

4.4 Counseling provided in health facilities to women with children

In the follow-up survey, respondents who had visited a health facility in the last 12 months and who had children (692 women at the second follow-up) were asked whether they were given counseling about certain topics by health center personnel.

Table 4.5: Counseling provided in health facilities to women with children

	n	N	%	SE
Provided diarrhea treatment with ORS and zinc	241	687	30.1	3.3
Provided deworming treatment	224	689	28.2	3.7
Provided micronutrients	201	687	23.7	2.8

5 CHAPTER 5: FAMILY PLANNING

This chapter summarizes key indicators related to the knowledge of, access to, need for, and use of family planning methods among women of reproductive age (15-49 years) participating in the SMI-El Salvador second follow-up household survey.

Family planning questions were asked only to women of reproductive age who were married or partnered. At the second follow-up, 769 women qualified for the family planning questions.

5.1 Knowledge of the Fertile Period

The successful use of family planning methods depends on an understanding of when during the menstrual cycle a woman is most likely to conceive. This is especially true for traditional methods such as the rhythm method (i.e., periodic abstinence) and the withdrawal method. To assess knowledge of the fertile period, women were asked if there are certain days when a woman is more likely to become pregnant, and when during the menstrual cycle those days occur. Responses to these questions are summarized in Table 5.1. In the second follow-up, 87.5% of women indicated that there were certain days when a woman is more likely to become pregnant, and of these women, only 20.8% identified the correct timing of the fertile period (halfway between two periods).

Table 5.1: Knowledge of the fertile period, women 15-49 years of age who are married or partnered

	n	N	%	SE
Are there certain days when a woman is more likely to become pregnant?	537	623	87.5	2.1

	n	%	SE
Time of a woman's fertile period			
Just before period	85	14.8	2.2
During period	38	9.3	2.4
Just after period	263	54.8	4.1
Halfway between periods	99	20.8	3.3
Other	2	0.2	0.2
Don't know	50	-	-
Decline to respond	0	-	-

5.2 Use of Family Planning Methods

5.2.1 *Current use*

The coverage of contraceptive methods is one of the indicators most frequently used to assess the success of family planning program activities. It is also widely used as a determinant of fertility. Women who said they had heard of a family planning method were asked if they were currently using that method. Table 5.2 displays the percentage of all women using at least one family planning method, as well as the percentage of women reporting use of more than one family planning method at the time of the interview. Sixty five percent of all survey respondents in the second follow-up reported current use of at least one family planning method.

Women considered "in need" of family planning methods are those who are married or partnered, excluding those who report the following characteristics: does not have sexual relations, virgin, menopausal, infertile, pregnant, or wants to become pregnant. Even women not considered "in need" of contraception may use a method. Table 5.3 shows the uptake of modern family planning methods among all married and partnered women (64.6%), and among women considered "in need" of contraception (77.2%).

Table 5.2: Current use of family planning methods, women 15-49 years of age who are married or partnered

	n	N	%	SE
Currently in need of contraception	665	769	80.7	2.0
Current use of any method, among all women	553	769	64.6	2.3

Table 5.3: Current use of modern family planning methods, women 15-49 years of age who are married or partnered and in need of contraception

	n	N	%	SE
Current use of any method	538	665	77.2	2.5
Current use of modern method	523	665	75.4	2.5

	n	%	SE
Number of methods the respondent is currently using			
Not using any family planning methods	128	22.9	2.5
Using 1 family planning method	526	75.5	2.3
Using 2 family planning methods	9	1.4	0.7
Using 3 family planning methods	2	0.2	0.1

Table 5.4 displays the percentage of all women using specific family planning methods. The methods most commonly in use during the second follow-up are injectables (29.7%) and female sterilization (21.6%).

Table 5.4: Current use of family planning methods, by type of method, for women 15-49 years of age who are married or partnered

	n	N	%	SE
Injectable	270	763	29.7	2.5
Female sterilization	160	764	21.6	2.1
Intrauterine device (IUD)	54	764	6.7	1.3
Male condom	36	762	3.3	1.0
Oral contraceptive	22	763	3.1	1.0
Withdrawal	10	764	1.5	0.7
Rhythm	8	764	0.6	0.2
Male sterilization	1	764	0.1	0.1
Implant	1	763	0.1	0.1
Female condom	1	762	0.1	0.1
Emergency contraception (Plan B)	1	764	0.1	0.1
Other traditional method	1	764	0.1	0.1
Diaphragm	0	764	0.0	-
Sponge	0	764	0.0	-
Lactational amenorrhea	0	764	0.0	-
Other modern method	0	764	0.0	-

* categories not mutually exclusive (select all that apply)

5.3 Sources of Family Planning Methods

Information on where women obtain contraceptive methods is important for family planning program managers. The places where the currently-used family planning methods were acquired are summarized in Table 5.5.

The public sector is the source most commonly reported by users of most modern family planning methods. Community health workers and pharmacies are also an important source for some methods.

Table 5.5: Source of modern family planning methods, women 15-49 years of age who are married or partnered

	n	%	SE
Injectable			
Public health center	117	46.4	4.6
Community health unit	89	26.1	4.4
Community health worker	32	14.5	4.2
Pharmacy	17	6.0	2.3
Private health clinic	4	3.0	2.3
Private hospital	3	0.6	0.4
Public mobile clinic	1	0.4	0.4
Other public health facility	1	0.3	0.3
Public hospital	1	0.2	0.2
Other private health facility	1	0.2	0.2

(continued)

	n	%	SE
Friend/relative	1	0.2	0.2
Private doctor's office	0	0.0	-
Private mobile clinic	0	0.0	-
Traditional healer	0	0.0	-
Store	0	0.0	-
Market	0	0.0	-
Church	0	0.0	-
Other	2	2.1	1.9
Don't know	0	-	-
Decline to respond	1	-	-
Female condom			
Community health unit	1	100.0	0.0
Public hospital	0	0.0	-
Public health center	0	0.0	-
Public mobile clinic	0	0.0	-
Other public health facility	0	0.0	-
Private hospital	0	0.0	-
Private health clinic	0	0.0	-
Private doctor's office	0	0.0	-
Private mobile clinic	0	0.0	-
Other private health facility	0	0.0	-
Pharmacy	0	0.0	-
Community health worker	0	0.0	-
Traditional healer	0	0.0	-
Store	0	0.0	-
Market	0	0.0	-
Church	0	0.0	-
Friend/relative	0	0.0	-
Other	0	0.0	-
Don't know	0	-	-
Decline to respond	0	-	-
Oral contraceptive			
Community health unit	8	31.8	15.7
Public health center	5	24.0	14.2
Community health worker	4	24.0	15.0
Pharmacy	5	20.3	11.9
Public hospital	0	0.0	-
Public mobile clinic	0	0.0	-
Other public health facility	0	0.0	-
Private hospital	0	0.0	-
Private health clinic	0	0.0	-
Private doctor's office	0	0.0	-
Private mobile clinic	0	0.0	-
Other private health facility	0	0.0	-
Traditional healer	0	0.0	-
Store	0	0.0	-
Market	0	0.0	-
Church	0	0.0	-
Friend/relative	0	0.0	-
Other	0	0.0	-

(continued)

	n	%	SE
Don't know	0	-	-
Decline to respond	0	-	-
Intrauterine device (IUD)			
Public health center	22	43.3	12.1
Public hospital	18	31.5	11.2
Community health unit	13	24.5	10.2
Pharmacy	1	0.7	0.7
Public mobile clinic	0	0.0	-
Other public health facility	0	0.0	-
Private hospital	0	0.0	-
Private health clinic	0	0.0	-
Private doctor's office	0	0.0	-
Private mobile clinic	0	0.0	-
Other private health facility	0	0.0	-
Community health worker	0	0.0	-
Traditional healer	0	0.0	-
Store	0	0.0	-
Market	0	0.0	-
Church	0	0.0	-
Friend/relative	0	0.0	-
Other	0	0.0	-
Don't know	0	-	-
Decline to respond	0	-	-
Implant			
Other public health facility	1	100.0	0.0
Public hospital	0	0.0	-
Public health center	0	0.0	-
Community health unit	0	0.0	-
Public mobile clinic	0	0.0	-
Private hospital	0	0.0	-
Private health clinic	0	0.0	-
Private doctor's office	0	0.0	-
Private mobile clinic	0	0.0	-
Other private health facility	0	0.0	-
Pharmacy	0	0.0	-
Community health worker	0	0.0	-
Traditional healer	0	0.0	-
Store	0	0.0	-
Market	0	0.0	-
Church	0	0.0	-
Friend/relative	0	0.0	-
Other	0	0.0	-
Don't know	0	-	-
Decline to respond	0	-	-
Male condom			
Pharmacy	21	67.5	8.7
Public health center	6	15.2	5.8
Community health unit	5	12.6	5.0
Community health worker	2	4.7	3.6
Public hospital	0	0.0	-

(continued)

	n	%	SE
Public mobile clinic	0	0.0	-
Other public health facility	0	0.0	-
Private hospital	0	0.0	-
Private health clinic	0	0.0	-
Private doctor's office	0	0.0	-
Private mobile clinic	0	0.0	-
Other private health facility	0	0.0	-
Traditional healer	0	0.0	-
Store	0	0.0	-
Market	0	0.0	-
Church	0	0.0	-
Friend/relative	0	0.0	-
Other	0	0.0	-
Don't know	1	-	-
Decline to respond	1	-	-
Emergency contraception (Plan B)			
Pharmacy	1	100.0	0.0
Public hospital	0	0.0	-
Public health center	0	0.0	-
Community health unit	0	0.0	-
Public mobile clinic	0	0.0	-
Other public health facility	0	0.0	-
Private hospital	0	0.0	-
Private health clinic	0	0.0	-
Private doctor's office	0	0.0	-
Private mobile clinic	0	0.0	-
Other private health facility	0	0.0	-
Community health worker	0	0.0	-
Traditional healer	0	0.0	-
Store	0	0.0	-
Market	0	0.0	-
Church	0	0.0	-
Friend/relative	0	0.0	-
Other	0	0.0	-
Don't know	0	-	-
Decline to respond	0	-	-

* "Female sterilization", "Male sterilization", "Sponge", and "Diaphragm" were omitted from table because no women reported receiving them in baseline or follow-up.

5.4 Non-Use and Interruption of Use of Family Planning Methods

Non-use and interruption of use of family planning methods are major concerns for family planning program managers.

5.4.1 *Prevalence of interruption*

The prevalence of interruption and non-use of family planning methods is summarized in Table 5.6. Of women participating in the second follow-up survey, 80.7% are considered "in need" of contraception (i.e., they did not report any of the following: does not have sexual relations, virgin, menopausal, infertile, hysterectomy, pregnant, or wants to become pregnant). Among these women in need, 3.6% reported any interruption in the use of family planning methods in the previous year.

Table 5.6: Interruption and non-use of family planning methods, among women 15-49 years of age who are married or partnered and in need of contraception

	n	N	%	SE
Discontinuation rate*	32	687	3.6	1.2

* any interruption in use during the last year

	n	%	SE
Number of interruptions in use during the last year			
none	655	96.4	1.2
once	23	2.6	0.9
2-6 times per year	9	0.9	0.5
7-12 times per year	0	0.0	-
>12 times per year	0	0.0	-

5.4.2 *Reasons for non-use*

Women who indicated they were not using any method of family planning on the day of the interview were asked to specify all reasons why they did not use a method. The interviewer matched responses provided by the respondent to a list of reasons in the questionnaire (Table 5.7). The most commonly cited reasons for non-use at the time of the second follow-up interview were infertile (12.7%), respondent is using contraception affects health (11.3%), and not sexually active (10%).

Table 5.7: Reasons for non-use of family planning methods, women 15-49 years of age who are married or partnered and who are not currently using family planning methods

	n	N	%	SE
Infertile	11	216	12.7	3.8
Using contraception affects health	29	216	11.3	2.7
Not sexually active	26	216	10.0	2.7
Trying to become pregnant	18	216	9.9	2.9
Infrequently sexually active	13	216	8.4	3.2
Currently pregnant	17	216	8.1	2.6
Against religious beliefs	11	216	7.3	2.8
Do not like to use contraception	14	216	7.1	2.5
Spouse or partner opposed to use	11	216	6.6	2.9
Concerned about side effects	16	216	6.3	2.4
Unmarried	8	216	5.2	2.4
Married	18	216	4.8	2.1
Using contraception interferes with normal body processes	11	216	4.7	2.2
Opposed to use	12	216	4.3	1.8
Breastfeeding	11	216	3.5	1.5
Menopausal	6	216	3.1	1.7
Using contraception is uncomfortable	8	216	2.9	1.5
Knows no source for methods	4	216	0.8	0.4
Others opposed to use	1	216	0.4	0.4
Knows no method	2	216	0.4	0.3
No menstrual period since giving birth	1	216	0.3	0.3
Have undergone hysterectomy	1	216	0.2	0.2
The health facility is too far away	1	216	0.2	0.2
Virgin	0	216	0.0	-
The method is too expensive	0	216	0.0	-
Preferred method was not available	0	216	0.0	-
No method was available	0	216	0.0	-
Other	34	216	14.5	4.0

* categories not mutually exclusive (select all that apply)

5.5 Family Planning Intentions and Decision-Making

5.5.1 *Participation in family planning decision*

In this setting in the second follow-up, 70.8% of women report that decisions about family planning methods are jointly made by the respondent and her partner. In only 2.3% of cases, the decision to use family planning methods is up to the respondent's partner alone.

Table 5.8: Participation in family planning decision-making, women 15-49 years of age who are married or partnered and are currently using family planning methods

	n	%	SE
Joint decision	459	70.8	3.6
Mostly the respondent	166	26.2	3.1
Mostly respondent's spouse/partner	15	2.3	0.9
Not applicable - not partnered	2	0.7	0.6
Others	0	0.0	-
Don't know	5	-	-
Decline to respond	2	-	-

5.5.2 *Informed choice*

With respect to use of family planning methods, "informed choice" refers to whether or not health care workers described other options for family planning methods, possible side effects associated with the method of choice, and how to respond to side effects if they occur. This information can be used to help women select an appropriate contraceptive method, and to assist users in coping with side effects (thus decreasing discontinuation rates for non-permanent methods).

Table 5.9 shows the percent of women currently using family planning methods who were told about other options for contraception (69% of women in the second follow-up).

Table 5.9: Family planning decision-making, informed choice, women 15-49 years of age who are married or partnered and who are currently using family planning methods

	n	N	%	SE
Informed about other family planning options by a doctor, nurse, or community health worker	452	648	69	2.8

5.6 Exposure to Family Planning Information

5.6.1 *Family planning messages delivered by health care providers*

Respondents were asked about their exposure to family planning messages delivered by health care providers (Table 5.10). Fifty three percent of women in the second follow-up reported being advised about family planning at the health care facility they attend during the past 12 months. Twenty seven percent of all respondents indicated that they had been visited by a health promoter who provided information about family planning in the last 12 months. Just 11.7% of respondents who had not attended a health facility in the last 12 months were visited by a health promoter who provided information about family planning.

Table 5.10: Family planning messages delivered by health care providers in the last 12 months, women 15-49 years of age who are married or partnered

	n	N	%	SE
Discussion about family planning methods with staff member at a health facility	277	487	52.6	3.2
Discussion about family planning methods during health promoter visit	242	768	26.9	2.6
Visit by promotor, among women who had not visited a health facility	41	282	11.7	2.2

5.7 Age at First Birth

5.7.1 *Age at first birth*

Sixty percent of respondents in the second follow-up had ever given birth (Table 5.11). Of these women, the median age of the women when their first child was born was 19 years old. Only a quarter of women were 22 years old or older when their first child was born. Six percent of women reported a history of stillbirth, miscarriage, and/or abortion.

Table 5.11: Parity and age at first birth, women 15-49 years of age

	n	N	%	SE
Ever given birth	1029	1425	60.4	1.7
Ever had a stillbirth, miscarriage, or abortion	86	1429	6.4	1.0

	N	DK/DTR	Min	25th Percentile	Median	75th Percentile	Max
Age at first birth, among parous women	1022	0	10	17	19	22	38

6 CHAPTER 6: MATERNAL HEALTH CARE

This chapter summarizes key indicators pertaining to antenatal care, delivery care, and postpartum care for the most recent live birth in the last two years as reported by women of reproductive age (15-49 years) participating in the SMI-El Salvador second follow-up household survey. Participating women were interviewed about all live births in the last five years, but to reduce the impact of recall bias, results reported here are for each woman's most recent birth in the last two years. At the second follow-up, 404 women were interviewed about births in the last two years.

6.1 Antenatal Care

To reduce recall bias, data pertaining to antenatal care are summarized for a woman's most recent birth in the last two years.

6.1.1 *Antenatal care coverage*

Early and regular checkups by trained medical providers are important in assessing the physical status of women during pregnancy and provide an opportunity to intervene in a timely manner if any problems are detected. The Maternal and Child Health Questionnaire captured information from women on both overall coverage of antenatal care and the content of care received. To obtain information on source of antenatal care, interviewers recorded all persons a woman consulted for care. Timing of antenatal care was assessed by asking women how many weeks or months pregnant they were when they attended their first antenatal care visit. The same details were recorded for up to eight antenatal care visits.

The percentage of women with a birth in the last two years who attended at least one antenatal care visit for the most recent birth, and the percent distribution of timing of care among those who received any antenatal care are presented in Table 6.1. The type of facility where antenatal care was sought is detailed in Table 6.2.

Among women with a birth in the last two years in the second follow-up, 98.1% attended at least one antenatal care visit and 98.1% of women had at least one antenatal care visit with a doctor or professional nurse. At the second follow-up, 58.9% of women had an antenatal care visit during the first trimester (first 12 weeks) with a doctor or professional nurse. The median age of gestation at the first antenatal care visit was 2 months.

Table 6.1: Antenatal care coverage for the most recent birth in the last two years, women 15-49 years of age

	n	N	%	SE
Attended at least one antenatal care visit	397	404	98.1	0.6
Attended at least one antenatal care visit with doctor or professional nurse	397	404	98.1	0.6
Antenatal care visit with doctor or professional nurse in the first trimester (12 weeks)	237	393	58.9	3.1

	N	DK/DTR	Min	25th Percentile	Median	75th Percentile	Max
Month of gestation of first ANC visit	386	7	0.2	1.2	2	3	9

Regarding the type of facility where antenatal care was usually sought during the second follow-up (Table 6.2), most women who attended antenatal care for their most recent delivery in the last two years sought care in a community health unit (44.3%) or public health center (39.4%). Only 8% of women sought antenatal care in a public hospital.

Table 6.2: Usual antenatal care location, women 15-49 years of age who attended at least one antenatal care visit for most recent birth in the last two years

	n	%	SE
Community health unit	173	44.3	3.3
Public health center	156	39.4	2.9
Public hospital	31	8.0	1.8
Private hospital	10	2.2	0.8
Private health clinic	9	2.1	0.7
Private doctor's office	8	1.8	0.6
Other public health facility	4	1.0	0.5
Public mobile clinic	0	0.0	-
Private mobile clinic	0	0.0	-
Other private health facility	0	0.0	-
Pharmacy	0	0.0	-
Community health worker	0	0.0	-
Traditional healer	0	0.0	-
Other	6	1.2	0.8
Don't know	0	-	-
Decline to respond	0	-	-

6.1.2 *Frequency of antenatal care visits*

Antenatal care can be more effective in avoiding adverse pregnancy outcomes when it is sought early in the pregnancy and continues until delivery. According to the national norm in El Salvador, it is recommended

that women receive a minimum of four antenatal care visits. The frequency of antenatal care visits is summarized in Table 6.3. Table 6.4 shows the percentage of women with four or more visits with skilled providers and according to best practices.

In the second follow-up, 93.1% of women reported having four or more antenatal care visits during their most recent pregnancy in the last two years. Fifty nine percent of women reported having seven or more antenatal care visits during their most recent pregnancy.

The content of antenatal care is as crucial as the frequency of visits. As shown in Table 6.4, numeric(0)% of all women had four or more antenatal care visits with a doctor or professional nurse, and with each of six defined best practices performed at least once during pregnancy (measurement of maternal blood pressure, measurement of maternal weight, measurement of fundal height, measurement of fetal heartbeat, blood sample taken, and urine sample taken).

Table 6.3: Frequency of antenatal care visits for the most recent birth in the last two years, women 15-49 years of age

	n	%	SE
None	7	2.0	0.6
1-3 visits	21	5.0	1.2
4-6 visits	131	34.0	2.5
7-9 visits	224	57.1	3.0
10+ visits	8	2.0	1.0
Don't know	13	-	-
Decline to respond	0	-	-

Table 6.4: Frequency of antenatal care visits with skilled provider for the most recent birth in the last two years, women 15-49 years of age

	n	N	%	SE
At least four ANC visits with doctor or professional nurse	361	391	92.4	1.5
At least four ANC visits with doctor or professional nurse according to best practices*	310	391	79.7	2.9

*measuring blood pressure, weight, fundal height, fetal heartbeat, and taking blood and urine samples

6.1.3 *Content of antenatal care*

The content of antenatal care is an important indicator of quality of care. The coverage of key procedures was assessed among women who received any antenatal care for a birth in the last two years (Table 6.5 and Table 6.6). It is important to remember that the validity of these data hinge on the respondent's understanding of the question and her ability to recall events that may have occurred several years prior to the interview.

There was variation in performance of the "best practice" procedures during the second follow-up: measured maternal blood pressure (100%), measured maternal weight (100%), collected urine specimen (99.8%), collected blood specimen (99.7%), measured fetal heartbeat (99%), tested for anemia (97.5%), performed an ultrasound (97%), tested for proteinuria (96.4%), tested for HIV (94.1%), and offered an HIV test (93.8%).

Table 6.5: Content of antenatal care visits among women 15-49 years who attended at least one antenatal care visit for most recent birth in the last two years

	n	N	%	SE
Measured maternal blood pressure	397	397	100.0	-
Measured maternal weight	397	397	100.0	-
Collected urine specimen	396	397	99.8	0.2
Collected blood specimen	394	395	99.7	0.3
Measured fetal heartbeat	391	395	99.0	0.6
Tested for anemia	383	393	97.5	0.9
Performed an ultrasound	384	396	97.0	1.0
Tested for proteinuria	359	372	96.4	1.2
Tested for HIV	368	390	94.1	1.4
Offered an HIV test	368	392	93.8	1.2
Measured blood glucose	353	383	92.5	1.5
Measured blood type	347	380	91.1	2.0
Measured fundal height	349	388	90.0	2.4
Tested for syphilis	325	367	88.6	2.7
Tested for diabetes	305	350	87.2	2.3

6.1.4 *Coverage of tetanus toxoid vaccinations during pregnancy*

Tetanus toxoid injections are given during pregnancy for the prevention of neonatal tetanus. To prevent transmission of this potentially fatal infection, all women should be vaccinated with tetanus toxoid when they become pregnant. A baby is considered protected if the mother receives two doses of tetanus toxoid during pregnancy, with the second at least two weeks before delivery. However, if a woman was vaccinated previously, she only requires one dose during the current pregnancy. Five doses are considered adequate to confer lifetime immunity. To assess the coverage of tetanus toxoid vaccination, women who reported receiving any antenatal care during their most recent pregnancy were asked if they received tetanus toxoid injections.

As shown in Table 6.7, the coverage of sufficient tetanus toxoid vaccination during pregnancy was 74.2% among women who received antenatal care during the second follow-up. Fifty two percent of women received one vaccination during the pregnancy and 44.5% received two or more. Among women with antenatal care, 23.7% had never been vaccinated before and 31.8% had received a vaccine in the last 10 years. Among women who were not vaccinated during prenatal care visits, 1.5% had never been vaccinated.

Table 6.7: Coverage of tetanus toxoid vaccinations during pregnancy, among women 15-49 years who attended at least one antenatal care visit for most recent birth in the last two years

	n	%	SE
Two or more injections during pregnancy	113	44.5	5.5
One injection during pregnancy, one <10 years before	69	29.7	5.8
One injection during pregnancy, none <10 years before	50	22.2	5.6
No injections during pregnancy, one or more <10 years before	4	2.1	1.1
No injections during pregnancy nor during the 10 years prior	4	1.5	0.8
Don't know	157	-	-
Decline to respond	0	-	-

6.1.5 *Exposure to safe pregnancy messages*

Women who received antenatal care were asked about a series of topics for which they might have received counseling or advice during their pregnancy. Table 6.8 shows the percentage of women in the second follow-up who were exposed to the following messages: counseled about pregnancy (96.4%); counseled about danger signs during pregnancy (96.2%); counseled about nutrition during pregnancy (94.4%); given information about in-facility delivery (92.3%); counseled about breastfeeding (90.9%); counseled about childcare (88.3%); advised to deliver in a facility (86.8%).

In the second follow-up, 85.9% of women were counseled about contraception after delivery. 59.5% of women were advised to have a Cesarean section, and 59.3% of women were counseled about making a transportation plan for delivery.

Table 6.8: Exposure to safe pregnancy practices, women 15-49 years of age who attended at least one antenatal care visit for most recent birth in the last two years

	n	N	%	SE
Counseled about pregnancy	383	397	96.4	1.2
Counseled about danger signs during pregnancy	382	396	96.2	0.9
Counseled about nutrition during pregnancy	373	394	94.4	1.4
Given information about in-facility delivery	361	394	92.3	1.4
Counseled about breastfeeding	357	396	90.9	1.8
Counseled about childcare	345	395	88.3	2.1
Advised to deliver in a facility	343	396	86.8	1.8
Counseled about contraception after delivery	336	395	85.9	2.5
Advised to have a Cesarean section	236	396	59.5	3.8
Counseled about making a transportation plan for delivery	230	396	59.3	3.5

6.2 Delivery Care

Proper medical attention and hygienic conditions during delivery can reduce the risk of complications, infections, and even death for the mother and newborn baby. Characteristics of the delivery, including

place of delivery and assistance at delivery were captured for all births in the five years preceding the survey. To reduce recall bias, only data from the most recent delivery within the last two years are summarized.

6.2.1 *Place of delivery*

The location of the most recent birth and the means of transportation used to get to the facility are shown in Table 6.9. The majority of births occurred in public hospitals (90.9%). Deliveries in private-sector facilities were rare (5%). Among women who delivered in a facility, 66.6% indicated that they used a private vehicle for transport (Table 6.10).

Table 6.9: Place of delivery for most recent birth in the last two years, women 15-49 years of age

	n	%	SE
Public hospital	364	90.9	1.6
Private hospital	23	5.0	1.3
Other public health facility	9	2.1	0.9
Own home	4	1.0	0.5
Public health center/clinic	2	0.5	0.4
Private medical ward	1	0.2	0.2
Other house	0	0.0	-
Public health ward	0	0.0	-
Private health center/clinic	0	0.0	-
Other private health facility	0	0.0	-
Other	1	0.2	0.2
Don't know	0	-	-
Decline to respond	0	-	-

Table 6.10: Transportation to place of delivery for most recent birth in the last two years, among women 15-49 years of age who delivered in a facility

	n	N	%	SE
Private vehicle	264	398	66.6	3.7
Other public transit	76	398	19.3	3.0
Ambulance	49	398	12.3	2.9
On foot	16	398	3.4	1.2

*categories not mutually exclusive (select all that apply)

Women were asked about the proximity to the health facility used to deliver. Of the 399 women from the second follow-up who delivered in a facility, 149 were able to estimate the distance to the facility (Table 6.11). Half of women reported travelling less than 15.3 km. Fifty percent of women traveled more than 45 minutes to the facility to deliver.

Table 6.11: Proximity to health care facilities: health facility for delivery

	N	DK/DTR	Min	25th Percentile	Median	75th Percentile	Max
Distance, km	149	250	0.5	4	15.3	35	100
Travel time, min	344	55	1	30	45	60	1200

6.2.2 *Assistance at delivery*

The assistance a woman receives during childbirth has important health consequences for both mother and child. For women who did not deliver alone in the last two years (99.5% of all births in the second follow-up), the percentage by type of delivery attendant is detailed in Table 6.12. Among women who did not report being alone for delivery, several categories of personnel may have been in attendance. As can be seen in Table 6.12, most in-facility deliveries during the second follow-up were accompanied by a medical doctor (97.8%) and/or a professional nurse (91.5%). For 54.2% of the deliveries an auxiliary nurse was in attendance.

Table 6.12: Types of attendants: assistance at delivery for most recent birth in the last two years, women 15-49 years of age

	n	N	%	SE
Medical doctor	395	404	97.8	0.9
Professional nurse	361	394	91.5	1.8
Auxiliary nurse	201	382	54.2	3.2
Laboratory technician	9	388	2.2	1.0
Midwife/comadrona	2	402	0.6	0.4
Pharmacist	1	399	0.3	0.3
Relative	1	401	0.3	0.3
Community health worker	1	401	0.2	0.2
Traditional healer	0	401	0.0	-
Other	18	400	4.4	1.5

Four percent of women in the second follow-up delivered with one attendant, 48.3% with two attendants, and 41.9% with three attendants (Table 6.13). For women's most recent live birth in the past two years, 98.5% of deliveries had a skilled attendant present and 98.2% delivered with a skilled attendant in a health facility (Table 6.14).

Table 6.13: Number of attendants: assistance at delivery for most recent birth in the last two years, women 15-49 years of age

	n	%	SE
None	2	0.5	0.4
One	19	4.5	1.1
Two	199	48.3	3.2
Three	165	41.9	3.2
Four or more	19	4.6	1.8
Don't know	0	-	-
Decline to respond	0	-	-

Table 6.14: In-facility delivery with skilled birth attendant: assistance at delivery for most recent birth in the last two years, women 15-49 years of age

	n	N	%	SE
Delivery with a skilled birth attendant	398	404	98.5	0.7
Delivery with a skilled birth attendant in any health facility	397	404	98.2	0.8

6.2.3 *Complications*

Pregnancy complications are an important source of maternal and child morbidity and mortality. The type of delivery (vaginal or Caesarian section) among women with births in the last two years is detailed in Table 6.15 along with the percentage of planned in-facility deliveries. Table 6.16 displays the percentage of women with specific complications.

As previously described, the vast majority of births occurred in institutional settings. In 52% of these cases during the second follow-up, women indicated that they attended the facility for emergency care. Few women reported seizures prior to delivery (0.7%). Approximately 15.3% of infants were transferred to an intensive care unit after delivery, and 21% of women reported excessive bleeding after delivery (more than 1 cup over a two-day period of time).

Table 6.15: Mode of delivery for most recent birth in the last two years, women 15-49 years of age

	n	%	SE
Mode of delivery			
Vaginal	300	74.4	2.1
Planned c-section	54	13.6	1.6
Emergency c-section	50	12.0	1.8
Don't know	0	-	-
Decline to respond	0	-	-
Reason for seeking delivery care, among in-facility births			
Because of emergency	209	52.0	3.6
According to birth plan	180	46.1	3.7
Other reason	9	1.9	0.7
Don't know	1	-	-
Decline to respond	0	-	-

Table 6.16: Delivery complications for most recent birth in the last two years, women 15-49 years of age

	n	N	%	SE
Respondent experienced excessive bleeding in the first day after delivery	86	401	21.0	2.8
Child entered neonatal intensive care unit after delivery	61	404	15.3	2.5
Respondent experienced seizures prior to delivery	3	404	0.7	0.4

6.2.4 *Birth size and weight*

Birth weight is a major determinant of infant and child health and mortality. Birth weight of less than 2.5 kilograms is considered low. For all births during the five-year period preceding the survey, mothers were asked about their perception of the child's size at birth: very large, larger than average, smaller than average, or very small. They were then asked to report the actual weight in kilograms if the child had been weighed after delivery. To reduce recall bias, only data from the most recent birth within the last two years are summarized below (Table 6.17).

Many women perceived their infant to be average in size (84.4%). With most births occurring in institutional settings, it is not surprising that 97.6% of newborns were weighed at birth. Among those who were weighed, 16.6% weighed less than 2.5 kilograms according to the mother's recall (low birth weight).

Table 6.17: Birth size and weight for most recent live birth in the past two years, women 15-49 years of age

	n	%	SE
Very large	7	1.6	0.8
Larger than average	28	7.3	1.8
Average	339	84.4	2.6
Smaller than average	18	4.4	1.4
Very small	10	2.2	0.7
Don't know	2	-	-
Decline to respond	0	-	-

	n	N	%	SE
Child was weighed at birth	383	392	97.6	0.9
Low birth weight (<2.5kg), among those weighed	52	310	16.6	2.4

6.3 Early initiation of breastfeeding

Coverage of early initiation of breastfeeding is defined as the percentage of women who had a live birth in the past two years and put the child to the breast with one hour of birth. Table 6.18 shows that 81.1% of women initiated breastfeeding within one hour of birth.

Table 6.18: Early initiation of breastfeeding for most recent live birth in the past two years, women 15-49 years of age

	n	N	%	SE
Early initiation of breastfeeding among children <24 months	273	341	81.1	2.6

6.4 Postnatal Care

Postnatal care is important both for the mother and the child to treat complications arising from the delivery, as well as to provide the mother with important information on how to care for herself and her child. The postnatal period is defined as the time between the delivery of the placenta and 42 days (six weeks) following the delivery. The timing of postnatal care is important: the first two days after delivery are critical, because most maternal and neonatal deaths occur during this period.

Characteristics of postnatal care, including timing, location, and personnel providing care were captured for all births in the five years preceding the survey. To reduce recall bias, only data from the most recent delivery in the last two years are summarized in the tables below.

6.4.1 *Postnatal checkup for the mother*

During the survey, women are first asked whether they were ever checked after delivery by a medical professional. Those who answer affirmatively are asked for the timing, location, and provider for each checkup. Data on postnatal care for the mother for women who reported at least one checkup after delivery are summarized in Table 6.19, which shows the percentage of women with a birth in the last two years who were checked at any time after delivery and within seven days after delivery; and percentage by timing of the check for women with an in-facility delivery. In El Salvador, to maintain comparability with the baseline survey, women were also asked separately whether they were checked one week after delivery, but facility type and provider were not captured for this question and thus it is not reported in Table 6.19.

Only 54.3% of women recalled being checked after delivery during the second follow-up, and 31.7% reported being checked within seven days after delivery by a health care provider. Among women who were ever checked, 71% of women with an institutional birth recalled being checked every 15 minutes for the first hour post-partum.

Table 6.20 shows the percent distribution of women who were checked at any time after delivery by type of personnel. Among women with postnatal care visits in the second follow-up, most received care from a doctor (88.6%) or professional nurse (6.7%).

Table 6.19: Postnatal checkup for the mother for most recent live birth in the past two years, women 15-49 years of age

	n	N	%	SE
Any checkup after delivery	215	401	54.3	3.6
Checked every 15 minutes during the first hour after delivery, among in-facility births	149	210	71.0	4.6
Checked within 7 days after delivery by a skilled provider	122	401	31.7	4.4

Table 6.20: Provider of care at first postnatal checkup for the mother, most recent live birth in the past two years, among women who attended at least one postnatal care visit

	n	%	SE
Doctor	188	88.6	3.2
Professional nurse	15	6.7	2.1
Community health worker	9	3.8	1.8
Auxiliary nurse	2	0.9	0.7
Laboratory technician	0	0.0	-
Midwife/comadrona	0	0.0	-
Pharmacy assistant	0	0.0	-
Traditional healer	0	0.0	-
Relative	0	0.0	-
Other	0	0.0	-
Don't know	1	-	-
Decline to respond	0	-	-

6.4.2 *Postnatal checkup for the infant*

The results regarding postnatal care for the neonate are shown in Table 6.21: percentage of women with a birth in the last two years whose infants were checked after delivery; percent checked by skilled personnel within 24 hours of delivery; and percent checked by skilled personnel within one week of delivery.

Approximately 76.6% of women in the second follow-up reported that their infant was checked at any time after delivery. Among all deliveries, 19.8% of women reported that a qualified medical professional checked on their infant within 24 hours of delivery. Table 6.22 shows the attendants for neonatal postnatal care. Most women indicated that a doctor performed a checkup (93.9%). Professional nurse and community health worker were also reported, though much less frequently.

Table 6.21: Postnatal checkup for neonate for woman's most recent live birth in the past two years, women 15-49 years of age

	n	N	%	SE
Any checkup after delivery	302	395	76.6	3.7
Checked within 24 hours after delivery by a skilled provider	62	338	19.8	5.2
Checked within 7 days after delivery by a skilled provider	153	338	47.1	4.7

Table 6.22: Provider of care at first postnatal checkup for the infant, woman's most recent live birth in the past two years, among women whose child attended at least one postnatal care visit

	n	%	SE
Doctor	279	93.9	1.7
Professional nurse	10	3.1	1.1
Community health worker	8	2.2	1.0
Auxiliary nurse	2	0.8	0.5
Laboratory technician	0	0.0	-
Midwife/comadrona	0	0.0	-
Pharmacy assistant	0	0.0	-
Traditional healer	0	0.0	-
Relative	0	0.0	-
Other	0	0.0	-
Don't know	3	-	-
Decline to respond	0	-	-

6.5 Vouchers, Incentives, and Maternal Waiting Homes

To increase use of their services, some facilities and waiting homes offer vouchers and incentives to women to attend care. Table 6.23 displays the percentage of women who gave birth the past two years and received a voucher at a health facility. Zero percent of women received a voucher or financial assistance to attend antenatal care, 0.5% received a voucher or financial assistance for delivery at a health facility, and 0% received a voucher or financial assistance for postpartum or postnatal care at a health facility.

Table 6.23: Voucher incentives for care-seeking for most recent live birth in the past two years, women 15-49 years of age

	n	N	%	SE
Received a voucher or other form of financial assistance to attend antenatal care at a health facility	2	397	0.5	0.4
Received a voucher or other form of financial assistance to deliver at a health facility	2	399	0.5	0.5

	n	%	SE
No voucher	399	100	0
Yes, for woman's care	0	0	-
Yes, for infant's care	0	0	-
Yes, for both woman and infant	0	0	-
Don't know	0	-	-
Decline to respond	0	-	-

Some facilities that attend deliveries have a *casa materna* or maternal waiting home nearby to provide women who live far away a place to stay while they await delivery or while they recover and prepare to travel home with their infant. Table 6.24 displays how women have commonly used maternal waiting homes during their most recent pregnancy in the past two years. 5.4% of women in the second follow-up report using a maternal waiting home before giving birth and 87.6% of these women report receiving counseling while staying at a maternal waiting home. On average, women stayed at a maternal waiting home for two days, and none had to pay to use the home.

Table 6.24: Use of maternal waiting homes for most recent live birth in the past two years, women 15-49 years of age

	n	N	%	SE
Used a maternal waiting home before giving birth	20	404	5.4	1.7
Among women who used maternal waiting homes				
Received counseling on health and parenting topics while at waiting home	17	20	87.6	7.6

	N	DK/DTR	Min	25th Percentile	Median	75th Percentile	Max
Days spent in maternal home	20	0	0	1	2	2	10
Out-of-pocket cost to use maternal home, USD	20	0	0	0	0	0	0

7 Chapter 7: CHILD HEALTH

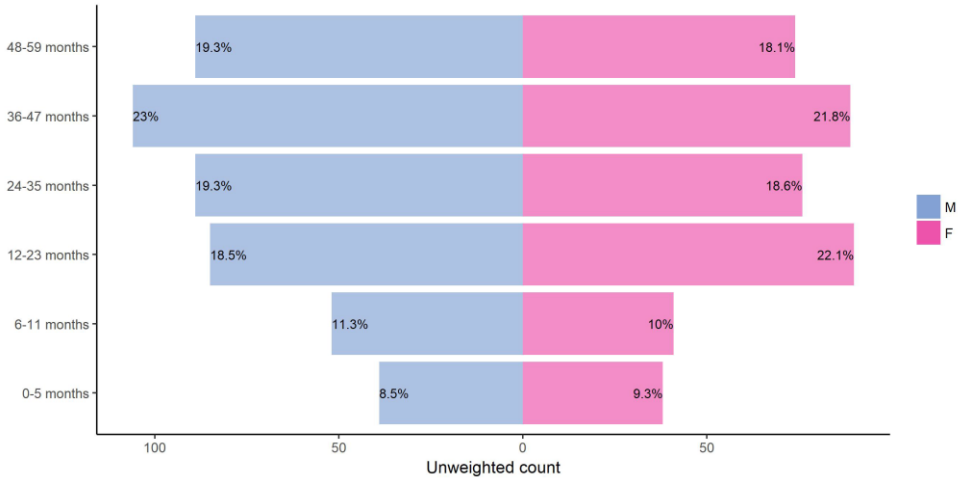
This chapter summarizes the health status of children aged 0-59 months whose caregivers participated in the SMI-El Salvador Second Follow-up Household Survey. All data summarized in this chapter are based on the caregiver's report.

7.1 Health status

The age and sex distribution of the de facto population of children aged 0-59 months participating in the caregiver interview module or the anthropometric measures in El Salvador is shown in Figure 7.1 by six- or 12-month age groups.

Twenty percent of children surveyed were under 1 year old at the time of the interview. The age distributions of female and male children are similar.

Figure 7.1: Age and sex of children aged 0-59 months in child health survey or anthropometric measures of the de facto population by six- to twelve-month age groups, unweighted



7.1.1 *Current health status*

Table 7.1 shows the current health status of all children aged 0-59 months, as reported by their caregivers. The table includes the caregiver's evaluation of current health relative to health the previous year and the percentage of children who can easily perform daily activities. In the second follow-up, approximately 86.1% of children's health was considered by their caregiver to be "good," "very good," or "excellent."

Relative to the past year, caregivers reported that 38.2% of children's health was "about the same". While 59.1% of children's health had improved, 2.8% of children experienced reportedly worse health on the day of the interview, compared to last year. Ninety six percent of children could "easily" perform their daily activities (e.g., playing and going to school) according to their caregivers. Three percent of children had some degree of difficulty performing these activities, 0.1% of children had a significant degree of difficulty performing these activities, and 1.5% of children were unable to complete daily activities, according to

their caregivers.

Table 7.1: Current health status, among children aged 0-59 months

	n	%	SE
Current health status			
Excellent	303	33.8	3.8
Very good	237	27.1	1.7
Good	211	25.2	3.5
Fair	104	12.3	1.5
Poor	14	1.6	0.4
Don't know	0	-	-
Decline to respond	0	-	-
Health status relative to a year ago			
Better	395	59.1	3.2
Worse	18	2.8	0.7
About the same	255	38.2	3.2
Don't know	0	-	-
Decline to respond	0	-	-
Ability to perform daily activities			
Easily	831	95.8	0.8
With some difficulty	23	2.6	0.7
With much difficulty	1	0.1	0.1
Unable to do	13	1.5	0.5
Don't know	1	-	-
Decline to respond	0	-	-

7.1.2 *Recent illness*

Caregivers were asked a series of questions about any illnesses or health problems that their children had in the two weeks preceding the interview. Approximately 21% of children were reported as sick during that time (Table 7.2). Of the 869 children who were recently ill, cough (35.5%), fever (19%), and eye/ear infection (3.4%) were the most commonly specified complaints.

Table 7.2: Recent illness, among children aged 0-59 months

	n	N	%	SE
Child was sick in the last two weeks	178	869	20.6	2.4

	n	%	SE
Recent illness among children ill in the last 2 weeks			
Cough	62	35.5	3.1
Fever	34	19.0	2.4
Eye/ear infection	6	3.4	1.2
Diarrhea without blood	6	3.1	1.5
Vomiting	4	2.1	1.0
Pneumonia	3	1.7	1.0
Skin rash/infection	3	1.7	0.9
Bronchitis	3	1.5	0.8
Diarrhea with blood	1	0.7	0.7
Abdominal pain	1	0.7	0.7
Malaria	0	0.0	-
Tuberculosis	0	0.0	-
Asthma	0	0.0	-
Anemia	0	0.0	-
Measles	0	0.0	-
Jaundice	0	0.0	-
Headache	0	0.0	-
Stroke	0	0.0	-
Diabetes	0	0.0	-
HIV/AIDS	0	0.0	-
Paralysis	0	0.0	-
Chest infection	0	0.0	-
Blood in urine	0	0.0	-
Difficulty urinating	0	0.0	-
Swelling in legs, ankles, or feet	0	0.0	-
Other	55	30.6	3.7
Don't know	0	-	-
Decline to respond	0	-	-

7.1.3 *Utilization of health services for recent illness*

Table 7.3 summarizes data regarding the utilization of health services among the 178 children who were sick in the two weeks preceding the interview. The table shows the percentage of children 0-59 months who were sick in the last two weeks for whom care was sought for recent illness and among these, the percent distribution by type of medical facility where care was sought and whether the child was hospitalized.

In the second follow-up survey, care was sought for 64.9% of these cases. Care was typically sought at public health center (44.2%) or community health unit (21.4%) facilities; some attended public hospitals (12.5%). Only four children were hospitalized for their recent illness.

Table 7.3: Utilization of health services for recent illness in the last two weeks, among children 0-59 months

	n	N	%	SE
Sought care for recent illness	117	178	64.9	4.0
Child was hospitalized for recent illness	4	70	6.6	3.1

	n	%	SE
Public health center	51	44.2	5.6
Community health unit	25	21.4	4.6
Public hospital	14	12.5	3.3
Private doctor's office	10	7.8	2.3
Pharmacy	5	4.8	2.1
Private health clinic	3	2.1	1.5
Community health worker	1	0.9	0.9
Public mobile clinic	1	0.8	0.8
Other public health facility	1	0.7	0.7
Private hospital	0	0.0	-
Private mobile clinic	0	0.0	-
Other private health facility	0	0.0	-
Traditional healer	0	0.0	-
Other	6	4.8	2.0
Don't know	0	-	-
Decline to respond	0	-	-

7.2 Acute respiratory infection

Acute respiratory infection is a leading cause of morbidity and mortality among children. Early diagnosis and treatment with antibiotics can prevent deaths resulting from pneumonia, a common acute respiratory disease. The prevalence of acute respiratory infection was estimated by asking caregivers whether their children aged 0-59 months had been ill with a cough accompanied by short, rapid breathing in the two weeks preceding the interview. If the child had symptoms of an acute respiratory infection, the caregiver was asked about what was done to treat the symptoms and feeding practices during the illness.

7.2.1 *Prevalence of acute respiratory infection and fever*

The prevalence of cough, suspected acute respiratory infection, and fever among children aged 0-59 months, as reported by their caregivers, is displayed in Table 7.4. In the second follow-up, 18% of children experienced cough, 12.3% had symptoms of an acute respiratory infection (cough with difficulty breathing), and 9.1% had a fever in the two weeks preceding the interview.

Table 7.4: Prevalence of suspected acute respiratory infection and fever in the last two weeks, among children 0-59 months

	n	%	SE
Child had cough in the last two weeks, by type			
No cough	708	81.7	2.8
Cough without difficulty breathing	52	6.1	0.9
With difficulty breathing due to congested/runny nose	41	4.9	1.1
With difficulty breathing due to chest problem and congested/runny nose	37	4.3	0.9
With difficulty breathing due to chest problem	27	3.0	0.7
With difficulty breathing due to other reason	0	0.0	-
Don't know	4	-	-
Decline to respond	0	-	-

	n	N	%	SE
Symptoms of acute respiratory infection in the last two weeks	106	866	12.3	2.2
Fever in last two weeks	80	869	9.1	1.6

7.2.2 *Utilization of health services for suspected acute respiratory infection*

Sixty percent of children with symptoms of acute respiratory infection were taken for evaluation and/or treatment of their condition at the second follow-up (Table 7.5).

Table 7.5: Utilization of health services for suspected acute respiratory infection in the last two weeks, among children 0-59 months

	n	N	%	SE
Sought care for suspected acute respiratory infection	109	182	60.1	4.7

	n	%	SE
Type of medical facility where care was sought			
Public health center	53	50.2	7.4
Community health unit	25	22.9	5.3
Private doctor's office	11	8.9	2.9
Public hospital	7	6.2	2.7
Pharmacy	3	3.1	1.6
Traditional healer	1	1.1	1.1
Community health worker	1	1.0	1.0
Public mobile clinic	1	0.8	0.8
Other public health facility	1	0.7	0.7
Private health clinic	1	0.7	0.7
Private hospital	0	0.0	-
Private mobile clinic	0	0.0	-
Other private health facility	0	0.0	-
Other	5	4.4	2.1
Don't know	0	-	-
Decline to respond	0	-	-

7.2.3 *Utilization of medications for suspected acute respiratory infection*

Ninety four percent of children with symptoms of acute respiratory infection were given some type of medication for their condition during the second follow-up (Table 7.6). Sixty seven percent of children were administered antibiotic syrups or pills for a suspected acute respiratory infection. Acetaminophen (31.6%) and ibuprofen (14.2%) were also commonly administered. Thirty percent of children received a treatment other than those listed.

Table 7.6: Utilization of medications for suspected acute respiratory infection in the last two weeks, among children 0-59 months

	n	N	%	SE
Any treatment	170	182	93.5	1.8
Antibiotic injection	9	170	5.5	1.7
Antibiotic pill or syrup	114	170	66.7	4.4
Aspirin	13	169	8.1	2.3
Acetaminophen	51	170	31.6	5.8
Ibuprofen	25	170	14.2	2.5
Oral rehydration therapy	23	170	13.3	3.3
Other	53	169	29.8	4.0

7.2.4 *Feeding practices during suspected acute respiratory infection*

Data on feeding practices during the recent episode of suspected acute respiratory infection are summarized in Table 7.7. The table shows the volume of fluids and the volume of solids given during the illness. At the second follow-up, only 19.8% of children were given more fluids than usual. In total, 28%

of children were offered less fluid than usual (or none at all). Forty percent of children were offered the same volume of solid food as usual during their illness. Approximately 58% of children were given less than the usual amount of solid food (or none at all).

Table 7.7: Feeding practices during suspected acute respiratory infection in the last two weeks, among children 0-59 months

	n	%	SE
Volume of fluids (including breastmilk) given during illness			
No fluids	6	2.9	1.5
Much less	9	5.1	1.7
Somewhat less	37	20.5	3.4
About the same	94	51.7	3.1
More	36	19.8	3.3
Don't know	0	-	-
Decline to respond	0	-	-
Volume of solid foods given during illness			
No solids	5	2.7	1.1
Much less	25	14.0	2.6
Somewhat less	74	41.1	4.2
About the same	73	40.1	3.1
More	4	2.2	1.1
Don't know	1	-	-
Decline to respond	0	-	-

7.3 Diarrhea

Dehydration caused by severe diarrhea in a major cause of morbidity and mortality among children. Exposure to diarrheal disease-causing agents is frequently a result of use of contaminated water and unhygienic practices related to food preparation and disposal of feces. The prevalence of diarrhea was estimated by asking caregivers whether their children aged 0-59 months had had diarrhea in the two weeks preceding the interview. If the child had had diarrhea, the caregiver was asked about treatment and feeding practices during the diarrheal episode.

7.3.1 *Prevalence*

Table 7.8 shows the proportion of children aged 0-59 months with diarrhea in the two weeks preceding the interview, as reported by their caregivers (4.9% at the second follow-up). Only 0.4% of children had bloody diarrhea.

Table 7.8: Prevalence of diarrhea in the last two weeks, among children aged 0-59 months

	n	%	SE
No diarrhea	820	95.1	0.8
Diarrhea without blood	39	4.5	0.8
Diarrhea with blood	4	0.4	0.2
Don't know	4	-	-
Decline to respond	2	-	-

7.3.2 *Utilization of health services for diarrhea*

Nearly half of children with diarrhea were taken for evaluation and/or treatment of their condition (Table 7.9). Care for these children was often sought in the public sector, although private health centers were visited by 18% of these cases.

Table 7.9: Utilization of health services for diarrhea in the last two weeks, among children aged 0-59 months

	n	N	%	SE
Sought care for diarrhea	19	43	42.4	7.9

	n	%	SE
Type of medical facility where care was sought			
Public health center	6	32.0	12.9
Pharmacy	3	17.6	8.2
Community health unit	3	17.0	8.2
Public hospital	3	15.6	7.5
Private doctor's office	3	12.8	6.4
Private health clinic	1	5.0	5.1
Public mobile clinic	0	0.0	-
Other public health facility	0	0.0	-
Private hospital	0	0.0	-
Private mobile clinic	0	0.0	-
Other private health facility	0	0.0	-
Community health worker	0	0.0	-
Traditional healer	0	0.0	-
Other	0	0.0	-
Don't know	0	-	-
Decline to respond	0	-	-

7.3.3 *Utilization of treatments for diarrhea*

A simple and effective response to dehydration caused by diarrhea is a prompt increase in the child's fluid intake through some form of oral rehydration therapy. Oral rehydration therapy may include the

use of a solution prepared from commercially produced packets of powdered oral rehydration salts, commercially-produced bottled oral serums, or homemade fluids usually prepared from sugar, salt, and water. Other treatments, including zinc, may be administered as well.

Although care was sought in only 42.4% of diarrhea cases, 92.6% of cases were given some form of treatment. Fluid made with powdered oral rehydration salts was the most common form oral rehydration therapy (56%). Thirty six percent of cases were treated with zinc syrup or pills. Thirty seven percent of cases were treated with an antibiotic pill or syrup.

Table 7.10: Utilization of treatments for diarrhea during the last two weeks, among children aged 0-59 months

	n	N	%	SE
Any treatment	40	43	92.6	3.5
Fluids				
Fluid made with powdered oral rehydration salts	24	43	56.0	7.5
Bottled oral rehydration serum	15	43	36.0	6.3
Homemade fluid recommended by health authorities	5	43	12.3	5.6
Medications				
Antibiotic pill or syrup	16	42	37.1	7.6
Antidiarrheal pill or syrup	5	42	11.5	5.1
Zinc pill or syrup	15	42	36.3	7.9
Other pill or syrup	3	42	7.6	3.5
Unknown pill or syrup	5	42	12.2	5.2
Antibiotic injection	2	42	4.3	2.9
Non-antibiotic injection	0	42	0.0	-
Unknown injection	0	42	0.0	-
Intravenous therapy	1	42	2.3	2.2
Home remedy/herbal medicine	4	42	11.1	6.0
Other treatment	6	41	14.9	5.5

7.3.4 *Feeding practices during diarrhea*

Caregivers are encouraged to continue feeding children normally when they suffer from diarrheal diseases and to increase the fluids they are given. These practices help to prevent dehydration and minimize the adverse consequences of diarrhea on the child's nutritional status.

Data on feeding practices during the recent diarrheal episode are summarized in Table 7.11. The table shows the volume of fluids and the volume of solids given during the illness. Only 12.4% of children were given more fluids than usual. Approximately 42% of children were offered less fluid than usual (or none at all). Thirty three percent of children were offered the same volume of solid food as usual during their illness. Approximately 67% of children were given less than the usual amount of solid food (or none at all).

Table 7.11: Feeding practices among children aged 0-59 months who had diarrhea in the last two weeks

	n	%	SE
Volume of fluids (including breastmilk) given during illness			
No fluids	5	11.8	5.2
Much less	4	7.7	4.6
Somewhat less	9	22.8	6.6
About the same	20	45.3	7.7
More	5	12.4	4.8
Don't know	0	-	-
Decline to respond	0	-	-
Volume of solid foods given during illness			
No solids	1	2.6	2.6
Much less	11	24.5	5.3
Somewhat less	16	39.9	6.6
About the same	15	33.0	7.2
More	0	0.0	-
Don't know	0	-	-
Decline to respond	0	-	-

7.4 Immunization against common childhood illnesses

Information on immunization coverage was collected for all children aged 0-59 months whose caregivers participated in the survey. Both caregiver's report and review of vaccination card (if available) were used to determine coverage. A vaccination card was available for review for 639 children (73.6% of the sample, unweighted). In Table 7.12, coverage is estimated by vaccine type to include all children with full compliance for age as specified in the national immunization scheme at the time of the survey, according to either an affirmative response from the caregiver that the immunization was received, or a mark that the immunization was received on the vaccination card (for children with a vaccination card available for review at the time of the interview). Children too young to have received a specific vaccine are counted as covered in order to maintain a comparable all-ages sample across vaccine types.

Table 7.12: Immunization against common childhood illnesses, children aged 0-59 months, according to caretaker recall and vaccination card

	n	N	%	SE
BCG vaccine (tuberculosis)	790	800	98.8	0.4
Polio vaccine	613	800	76.3	3.3
Pentavalent vaccine (DPT, HepB, HiB)	646	800	80.2	3.0
Rotavirus vaccine	668	794	83.4	3.0
Pneumococcal conjugate vaccine	657	794	82.4	3.1
Measles, mumps, and rubella (MMR) vaccine	758	808	93.9	0.9
Hepatitis B vaccine	670	790	85.8	3.0
Diphtheria, tetanus, and pertussis (DPT) vaccine	834	857	97.1	0.8

In Table 7.13, coverage estimates based on recall are summarized for the full sample, and coverage estimates based on vaccination card data are summarized among the subset with a vaccination card available for review. When considering only caregivers' recall, only 45.8% of children aged 0-59 months were fully immunized for age at the second follow-up survey, reflecting many "Don't know" or "Decline" responses that call into question the reliability and validity of the caregiver recall data. Caregivers were able to definitively answer the entire vaccine recall section for only 527 children at the second follow-up. Immunization coverage for children 0-59 months based only upon the vaccine card is 52.5%, and when combined with recall-based information, the estimate of full vaccination for age among children 0-59 months is 59.8%.

Table 7.13: Full immunization compliance for age, children aged 0-59 months

	n	N	%	SE
According to recall + card	467	783	59.8	3.7
According to caregiver's recall	242	527	45.8	5.6
According to vaccine card	345	656	52.5	4.1

7.5 Deworming treatment

Administration of deworming treatment every six months has been shown to reduce the prevalence of anemia in children. Only 40.7% of children aged 12-59 months received at least two doses of deworming treatment in the year preceding the second follow-up interview (Table 7.14).

Table 7.14: Deworming treatment among children aged 12-59 months

	n	%	SE
No deworming	121	17.6	2.4
One dose	286	41.8	2.8
Two or more doses	283	40.7	2.9
Don't know	2	-	-
Decline to respond	0	-	-

8 Chapter 8: INFANT AND YOUNG CHILDREN FEEDING PRACTICES

This chapter summarizes the feeding practices of infants and children aged 0-59 months whose caregivers participated in the SMI-El Salvador Household Survey. All data summarized in this chapter are based on the caregiver's report.

8.1 Breastfeeding

8.1.1 *Exclusive breastfeeding*

Coverage of exclusive breastfeeding is defined as the percentage of infants born in the six months prior to the survey who received only breast milk during the previous day. This information is obtained through a 24-hour dietary recall in which the caregiver indicates what the child consumed during the previous day and night. In El Salvador during the second follow-up, the sample includes 77 children who are under 6 months of age, and 76 of those children have sufficiently complete dietary recall information to determine whether they are exclusively breastfed. Table 8.1 shows that 49.6% of children under 6 months of age are exclusively breastfed.

8.1.2 *Continued breastfeeding at 1 year*

Coverage of continued breastfeeding at 1 year is defined as the percentage of children 12-15 months old who received breast milk during the previous day according to caregiver's dietary recall. In El Salvador during the second follow-up, the sample includes 62 children who are between 12 and 15 months of age, and 62 of those children have adequate responses to determine their breastfeeding status. Table 8.1 shows that 72% of children continue to receive breast milk at 1 year.

Table 8.1: Breastfeeding among children

	n	N	%	SE
Exclusive breastfeeding among children <6 months	37	76	49.6	6.0
Continued breastfeeding at one year among children 12-15 months	45	62	72.0	7.2

8.2 Acceptable diet

8.2.1 *Introduction of solid, semi-solid, or soft foods*

Coverage of appropriate introduction of solid foods is measured as the percentage of infants 6-8 months of age who received solid or semi-soft foods during the previous day according to caregiver's dietary recall. In El Salvador during the second follow-up, the sample includes 49 children who are 6-8 months of age, and 49 of those children have sufficiently complete dietary recall information. Table 8.2 shows that 84.3% of children consumed solid or semi-soft foods.

8.2.2 *Dietary diversity*

Coverage of minimum dietary diversity is measured as the percentage of children 6-23 months of age who received foods from at least four food groups during the previous day according to caregiver's dietary recall. In El Salvador during the second follow-up, the sample includes 268 children who are 6-23 months of age, and 268 of those children have sufficiently complete dietary recall information to determine dietary diversity. Table 8.2 shows that 60.1% of children achieved the minimum dietary diversity during the previous day.

8.2.3 *Meal frequency*

Coverage of minimum meal frequency is measured as the percentage of children 6-23 months of age who received solid foods at least the minimum number of times the previous day, based on age and breastfeeding status. For breastfed children, the minimum is two times for children 6-8 months of age and three times for children 9-23 months of age. For non-breastfed children, the minimum number is four times for all children 6-23 months of age. This information is obtained through caregiver's dietary recall. In El Salvador during the second follow-up, the sample includes 268 children who are 6-23 months of age, and 243 of those children have sufficiently complete dietary recall information to determine meal frequency. Table 8.2 shows that 54.9% of children achieved the minimum meal frequency during the previous day.

8.2.4 *Minimum acceptable diet*

Coverage of minimum acceptable diet is measured for children 6-23 months of age. For breastfed children to meet the minimum acceptable diet they must have had at least the minimum dietary diversity and the minimum meal frequency during the previous day. For non-breastfed children to meet the minimum acceptable diet they must have had at least two milk feedings, as well as at least the minimum dietary diversity (not including milk feedings) and the minimum meal frequency during the previous day. This information is obtained through caregiver's dietary recall. In El Salvador during the second follow-up, the sample includes 268 children who are 6-23 months of age, and 266 of those children have sufficiently complete dietary recall information to determine minimum acceptable diet. Table 8.2 shows that 32.4% of children achieved the minimum acceptable diet during the previous day.

8.2.5 *Consumption of iron-rich or iron-fortified foods*

Consumption of iron-rich foods is measured as the percentage of children 6-23 months of age who receive an iron-rich food (e.g., liver, beef, or fish), an iron supplement, or a fortified food that is specially designed for infants and young children, or a food fortified in the home with a product that included iron during the previous day. This information is obtained through caregiver's dietary recall. In El Salvador during the second follow-up, the sample includes 268 children who are 6-23 months of age and 268 of those children have sufficiently complete dietary recall information to determine iron consumption. Table 8.2 shows that 54.6% of children consumed an iron-rich food during the previous day.

Table 8.2: Acceptable diet among children 6-23 months

	n	N	%	SE
Introduction of solid foods among children 6-8 months	42	49	84.3	4.8
Minimum dietary diversity among children 6-23 months	163	268	60.1	3.2
Minimum meal frequency among children 6-23 months	135	243	54.9	3.6
Consumption of iron-rich foods among children 6-23 months	150	268	54.6	3.8
Minimum acceptable diet among children 6-23 months	88	266	32.4	3.0

8.3 Micronutrient supplementation

8.3.1 *Vitamin A*

Interviewers asked the caregiver if their child received a dose of vitamin A in the last six months. Table 8.3 shows that of the 869 sampled children 0-59 months of age in the second follow-up, 77.3% received a dose of vitamin A in the last six months.

8.3.2 *Iron*

Interviewers showed the caregiver photos of common types of bottles, powders, or syrups and asked if their child received iron pills, powder, or syrup in the last day. Table 8.3 shows that of the 869 children 0-59 months of age in the second follow-up sample, 21.5% received a dose of iron in the last day.

Table 8.3: Vitamin A and Iron consumption among children 0-59 months

	n	N	%	SE
Vitamin A in the last six months	646	841	77.3	2.3
Iron supplement the previous day	187	865	21.5	2.4

8.3.3 *Packets of micronutrients*

Interviewers showed the caregiver a card with packets of micronutrients and asked how many packets their child received from a health facility and consumed in the last six months. Children are intended to take 60 consecutive daily doses of micronutrient powder in each of three rounds, beginning at age 6, 12, and 18 months, with an adequate consumption considered to be 50 packets. Table 8.4 shows that among children 6-23 months of age sampled in the second follow-up, 61.7% received no packets of micronutrients from a health facility in the last six months.

Table 8.4: Micronutrient powders among children 6-23 months

	n	N	%	SE
Received any micronutrient packets from health facility in the last six months	100	260	38.3	3.6
Consumed any micronutrient packets	78	243	31.7	3.1
Consumed adequate dose (>=50 packets) of micronutrient powders	33	243	13.3	2.5

9 CHAPTER 9: NUTRITIONAL STATUS IN CHILDREN

The nutritional status of children aged 0-59 months is an important outcome measure of children's health. The SMI-El Salvador Second Follow-up Household Survey collected data on the nutritional status of children by measuring the height and weight of all children aged 0-59 months residing in surveyed households, using standard procedures. Hemoglobin levels of these children were also assessed in the field, using a portable HemoCue™ machine, and these data were used to estimate anemia prevalence. As described in Chapter 1, medically trained personnel who were specifically trained to standardize the anthropometric and hemoglobin measurements conducted the testing. This evaluation allows identification of subgroups of the child population that are at increased risk of malnutrition. The parents of anemic children (hemoglobin level <11.0 g/dL) were informed of this result in real-time and were referred for treatment to the appropriate health service.

Three indicators were calculated using the weight and height data – weight-for-age, height-for-age, and weight-for-height. For this report, indicators of the children's nutritional status were calculated using growth standards published by the World Health Organization (WHO) in 2006. The growth standards were generated using data collected in the WHO Multicenter Growth Reference Study. The findings of the study, whose sample included children in six countries (Brazil, Ghana, India, Norway, Oman, and the United States), describe how children should grow under optimal conditions. As such, the WHO Child Growth Standards can be used to assess children all over the world, regardless of ethnicity, social and economic influences, and feeding practices. The three indicators are expressed in standard deviation units from the median in the Multicenter Growth Reference Study.

A total of 870 children aged 0-59 months participated in the SMI-El Salvador second follow-up. In practice, 818 of these children underwent the physical measurement module. Height and weight data are presented for 811 of these children (99.1%, unweighted). Seven hundred forty three children 6-59 months of age were eligible for the anemia test. Hemoglobin was measured in 696 children (93.7%, unweighted, of children 6-59 months of age). Parental consent was refused for 42 children, one was not measured because anthropometrists could not obtain a sufficient capillary blood sample or any sample at all, and four cases were not tested for other reasons (for example, because the child did not cooperate). The age and sex distribution of children participating in the physical measurement module is displayed in Figure 9.1 and Figure 9.2.

Figure 9.1: Height and weight measured: Age and sex of sample, unweighted percent distribution of the de facto population

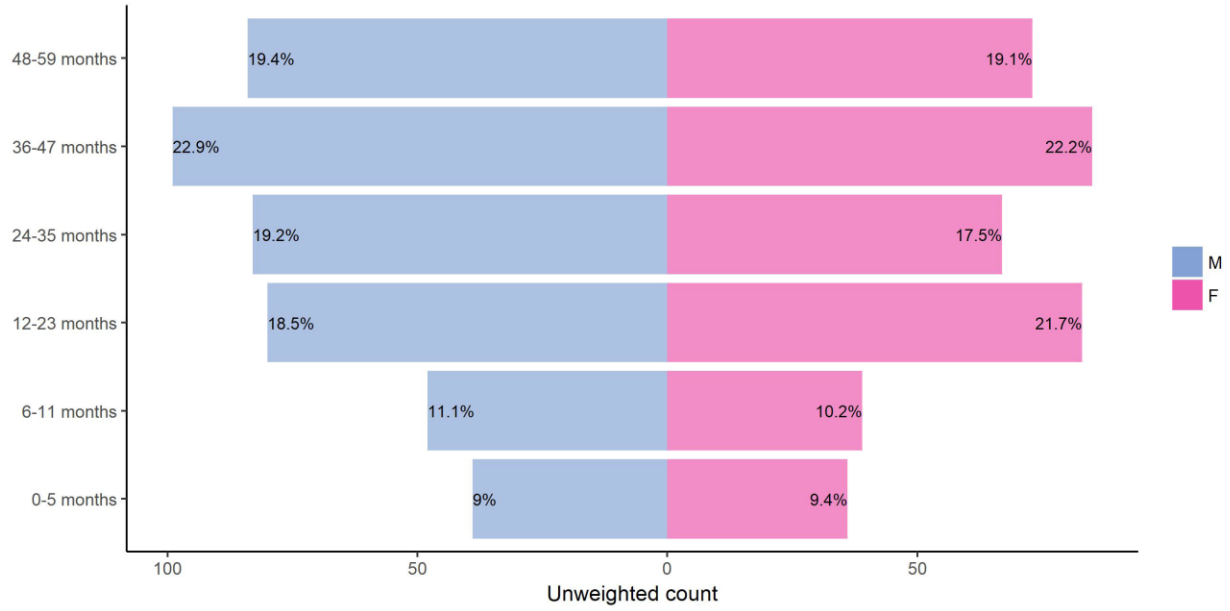
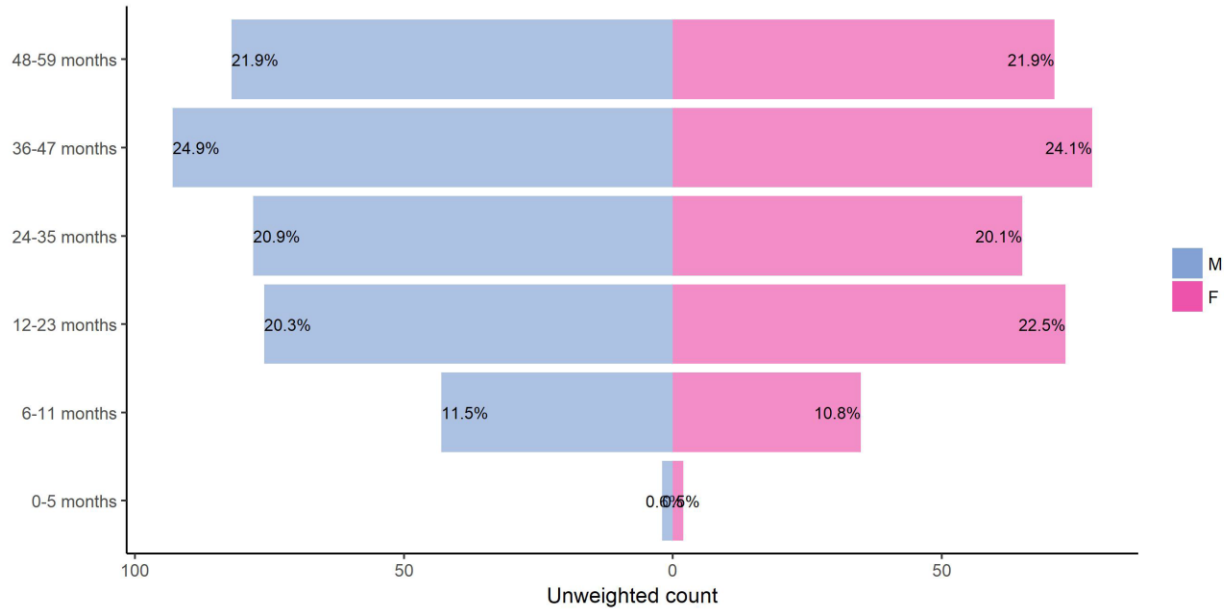


Figure 9.2: Hemoglobin measured: Age and sex of sample, unweighted percent distribution of the de facto population



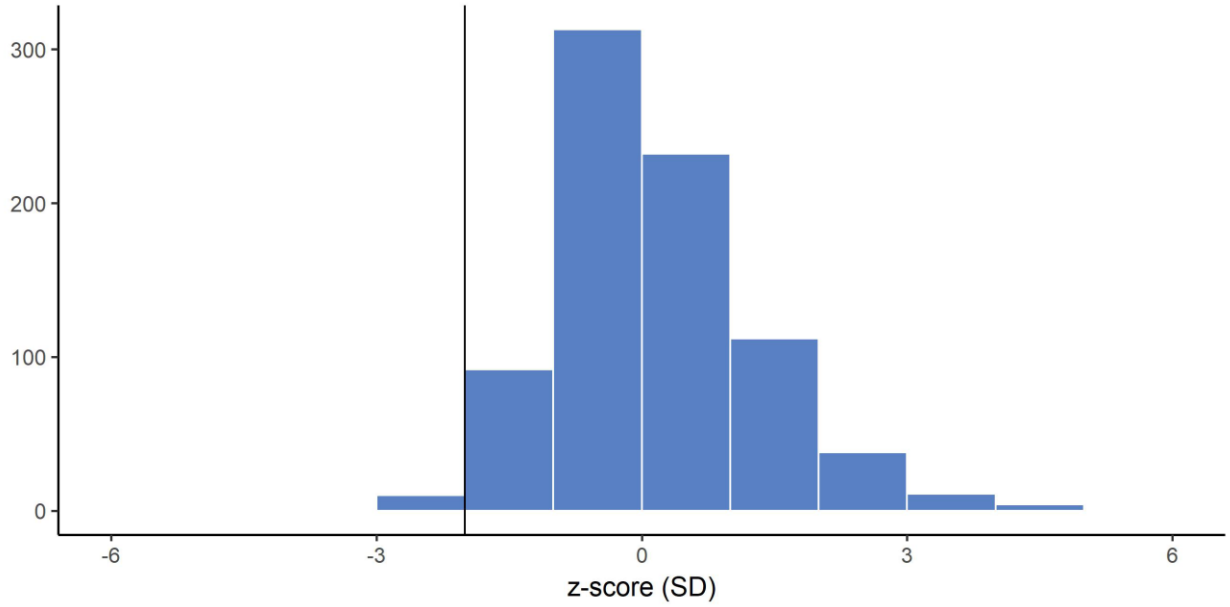
9.1 Weight-for-Age

Weight-for-age is a good overall indicator of a population's general health, as it reflects the effects of both acute and chronic undernutrition. The weight-for-age indicator does not distinguish between chronic malnutrition (stunting) and acute malnutrition (wasting); a child can be underweight because of stunting, wasting, or both. Children with weight-for-age below minus two standard deviations (-2 SD) are classified as underweight. Children with weight-for-age below minus three standard deviations (-3 SD) are considered severely underweight.

9.1.1 *Unweighted distribution of weight-for-age z-scores*

Figure 9.3 shows the distribution of weight-for-age z-scores among all children aged 0-59 months whose measurements were taken. The vertical black lines in the figure denote minus two standard deviations – children to the left of the line are classified as underweight.

Figure 9.3: Distribution of weight-for-age z-scores among children 0-59 months, unweighted



9.1.2 *Prevalence of underweight*

As shown in Table 9.1, 2.8% of children aged 0-59 months in the second follow-up are underweight (have low weight-for-age) and 0.6% are severely underweight. The proportion of underweight children is lowest (2.5%) in the age groups 24 to 59 months and highest (5.3%) among those under 6 months. Female children (2%) are less likely to be underweight than male children (3.2%).

Table 9.1: Prevalence of underweight in children aged 0-59 months, by sex and age

	n	N	%	SE
Prevalence of underweight (< -2 SD)				
Male	14	432	3.2	0.9
Female	8	383	2.0	0.7
0-5 months	4	75	5.3	2.4
6-11 months	2	87	2.9	2.0
12-23 months	5	163	2.6	1.1
24-59 months	13	492	2.5	0.7
0-59 months	24	817	2.8	0.6
6-23 months	7	250	2.7	1.0
Prevalence of severe underweight (< -3 SD)				
Male	3	432	0.7	0.5
Female	1	383	0.2	0.2
0-5 months	1	75	1.4	1.4
6-11 months	0	87	0.0	-
12-23 months	2	163	1.0	0.7
24-59 months	3	492	0.5	0.3
0-59 months	6	817	0.6	0.3
6-23 months	2	250	0.7	0.5
Prevalence of high weight for age (> 2 SD)				
Male	26	432	5.6	1.1
Female	21	383	5.7	1.1
0-5 months	21	75	28.9	4.2
6-11 months	3	87	4.1	2.9
12-23 months	8	163	4.5	1.5
24-59 months	15	492	2.8	0.8
0-59 months	47	817	5.6	0.8
6-23 months	11	250	4.4	1.3

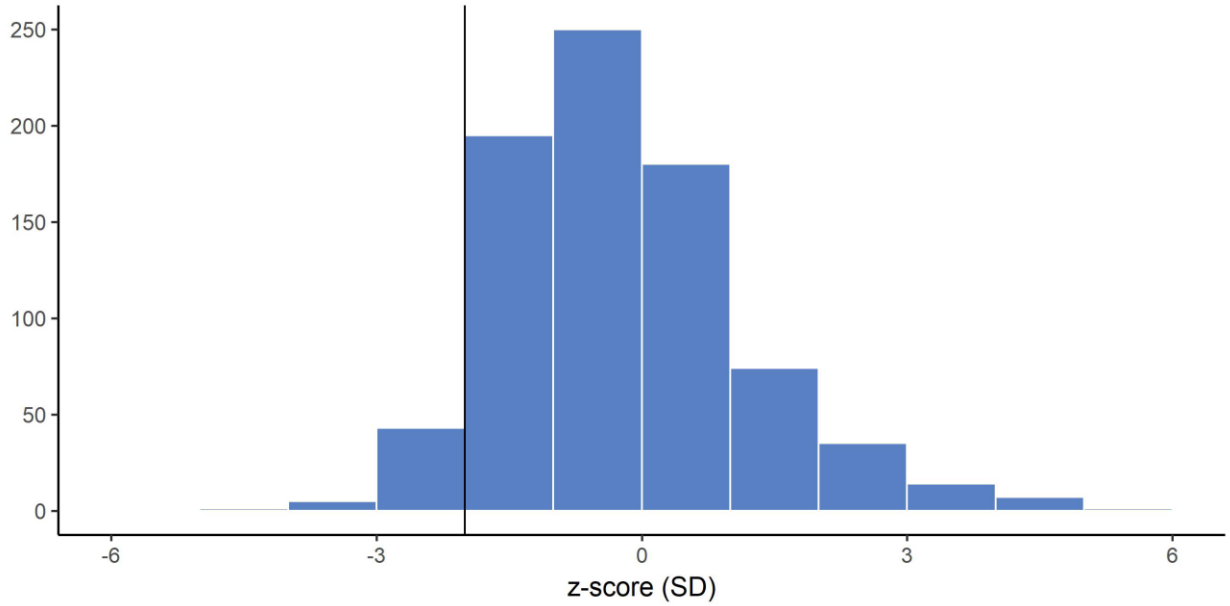
9.2 Height-for-Age

Height-for-age is an indicator of linear growth retardation and cumulative growth deficits in children. Children whose height-for-age z-score is below minus two standard deviations (-2 SD) from the median of the WHO reference population are considered short for their age (stunted) or chronically malnourished. Children who are below minus three standard deviations (-3 SD) are considered severely stunted. Stunting reflects failure to receive adequate nutrition over a long period of time and is affected by recurrent and chronic illness. Height-for-age, therefore, represents the long-term effects of malnutrition in a population and is not sensitive to recent, short-term changes in dietary intake.

9.2.1 *Distribution of height-for-age z-scores*

Figure 9.4 presents the distribution of height-for-age z-scores among all children aged 0-59 months whose measurements were taken. The vertical black lines in the figure denote minus two standard deviations – children to the left of the line are classified as stunted.

Figure 9.4: Distribution of height-for-age z-scores among children 0-59 months, unweighted



9.2.2 *Prevalence of stunting*

Table 9.2 presents the prevalence of stunting in children aged 0-59 months as measured by height-for-age. In the second follow-up, 6.8% of children under age 5 are stunted and 1% are severely stunted. Analysis of the indicator by age group shows that stunting is highest (8.4%) in children 24-59 months and lowest (2.3%) in children aged 6-11 months. Children 0-5 months old have the highest proportion of severe stunting (1.4%). A higher proportion (7.7%) of male children is stunted compared with the proportion of female children (5.4%).

Table 9.2: Prevalence of stunting in children aged 0-59 months, by sex and age

	n	N	%	SE
Prevalence of stunting (< -2 SD)				
Male	31	428	7.7	1.4
Female	19	381	5.4	1.3
0-5 months	2	75	2.6	1.8
6-11 months	2	87	2.3	1.7
12-23 months	10	163	6.2	1.8
24-59 months	38	486	8.4	1.3
0-59 months	52	811	6.8	0.9
6-23 months	12	250	4.8	1.2
Prevalence of severe stunting (< -3 SD)				
Male	4	428	0.9	0.4
Female	3	381	0.8	0.4
0-5 months	1	75	1.4	1.4
6-11 months	0	87	0.0	-
12-23 months	2	163	1.0	0.7
24-59 months	6	486	1.1	0.4
0-59 months	9	811	1.0	0.3
6-23 months	2	250	0.7	0.5

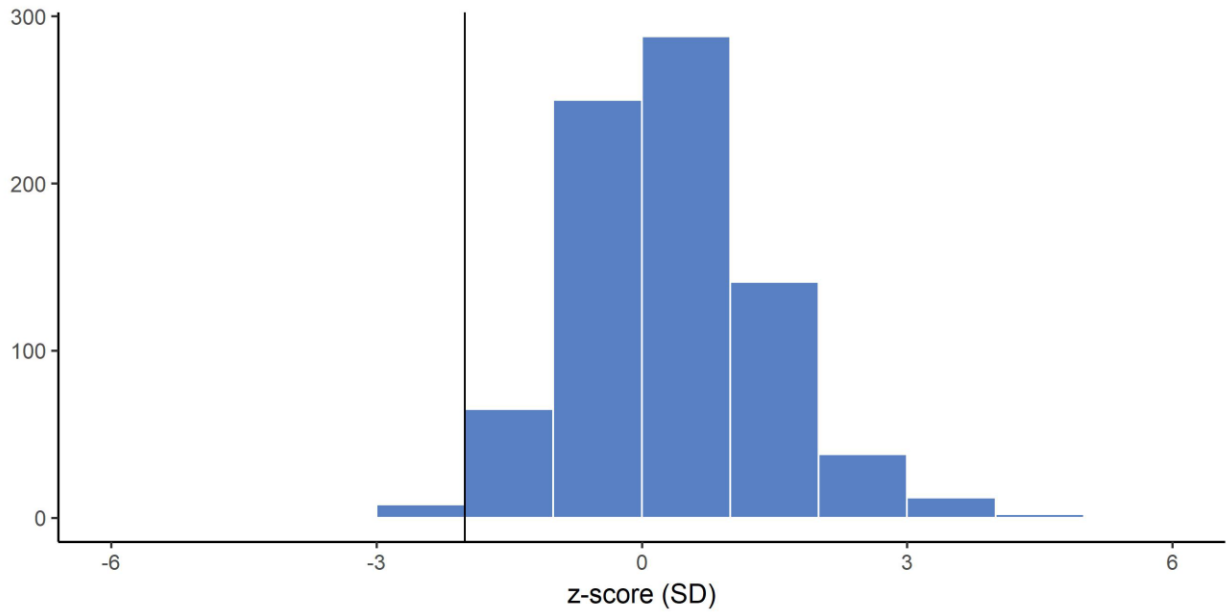
9.3 Weight-for-Height

The weight-for-height indicator measures body mass in relation to body height or length and describes current nutritional status. Children with z-scores below minus two standard deviations (-2 SD) are considered thin (wasted) or acutely malnourished. Wasting represents the failure to receive adequate nutrition in the period immediately preceding the survey and may be the result of inadequate food intake or a recent episode of illness causing loss of weight and the onset of malnutrition. Children with a weight-for-height index below minus three standard deviations (-3 SD) are considered severely wasted. This weight-for-height indicator also provides data on over-weight and obesity. Children more than two standard deviations (+2 SD) above the median weight-for-height are considered overweight or obese.

9.3.1 *Distribution of weight-for-height z-scores*

Figure 9.5 shows the distribution of weight-for-height z-scores among all children aged 0-59 months whose measurements were taken. The vertical black lines in the figure denote minus two standard deviations – children to the left of the line are classified as wasted.

Figure 9.5: Distribution of weight-for-height z-scores among children 0-59 months, unweighted



9.4 Prevalence of Wasting

Table 9.3 shows the breakdown of nutritional status of children aged 0-59 months as measured by weight-for-height by age groups and sex. In the second follow-up, 2% of children are wasted and 0.3% of children are severely wasted. Analysis of the indicator by age group shows that wasting is highest (4.3%) in children 0-5 months old and lowest (1.1%) in children aged 24-59 months. Male children are less likely to be wasted than female children (1.4% to 2.6%). Male children are also less likely to be severely wasted (0.2%) than females (0.4%).

Overweight and obesity affect a greater proportion of children in SMI areas El Salvador than wasting. In this sample, 5.6% of children are overweight or obese (weight-for-height more than +2 SD). The coexistence of both growth retardation and obesity reveals the burden of malnutrition in El Salvador.

Table 9.3: Prevalence of underweight in children aged 0-59 months, by sex and age

	n	N	%	SE
Prevalence of wasting (< -2 SD)				
Male	6	426	1.4	0.6
Female	10	381	2.6	0.8
0-5 months	3	75	4.3	2.3
6-11 months	2	87	2.9	2.0
12-23 months	5	163	3.0	1.2
24-59 months	6	482	1.1	0.6
0-59 months	16	807	2.0	0.5
6-23 months	7	250	3.0	1.0
Prevalence of severe wasting (< -3 SD)				
Male	1	426	0.2	0.2
Female	2	381	0.4	0.3
0-5 months	1	75	1.4	1.4
6-11 months	0	87	0.0	-
12-23 months	1	163	0.5	0.5
24-59 months	1	482	0.2	0.2
0-59 months	3	807	0.3	0.2
6-23 months	1	250	0.3	0.3
Prevalence of overweight (> 2 SD)				
Male	27	426	6.1	1.3
Female	19	381	5.0	1.0
0-5 months	6	75	7.8	2.9
6-11 months	4	87	5.0	2.4
12-23 months	11	163	6.5	1.7
24-59 months	25	482	5.1	1.0
0-59 months	46	807	5.6	0.9
6-23 months	15	250	6.0	1.4

9.5 Anemia

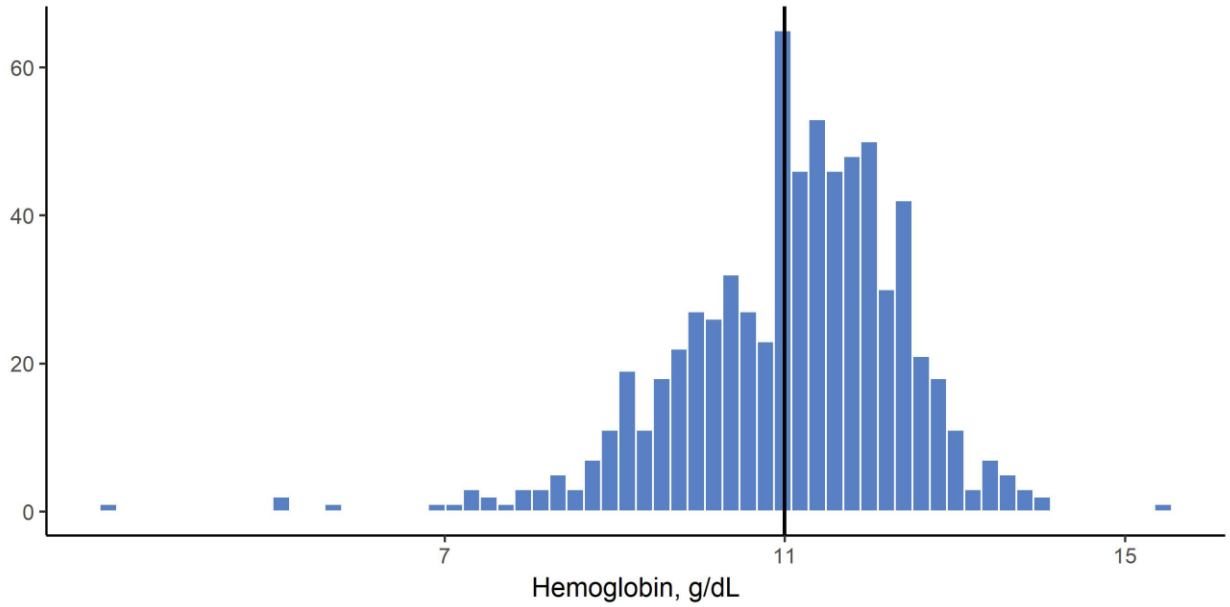
Anemia is a condition characterized by low concentration of hemoglobin in the blood. Hemoglobin is necessary for transporting oxygen to tissues and organs in the body. The reduction in oxygen available to organs and tissues when hemoglobin levels are low is responsible for most of the symptoms experienced by anemic persons. The consequences of anemia include general body weakness, frequent tiredness, and lowered resistance to disease. It is of concern in children because anemia is associated with impaired mental and motor development. Overall, morbidity and mortality risks increase for individuals suffering from anemia.

Common causes of anemia include inadequate intake of iron, folate, vitamin B12, or other nutrients. This form of anemia is commonly referred to as iron-deficiency anemia and is the most widespread form of anemia in the world. Anemia can also be the result of thalassemia, sickle cell disease, malaria, or intestinal worm infestation.

9.5.1 *Distribution of hemoglobin values*

Figure 9.6 shows the distribution of hemoglobin values (in g/dL) among children 0-59 months of age. The vertical black lines in the figure denote a hemoglobin concentration of 11.0 g/dL – children to the left of the line are classified as anemic.

Figure 9.6: Distribution of raw hemoglobin values among children 0-59 months, unweighted



9.5.2 *Prevalence of anemia*

Levels of anemia were classified as severe (<7.0 g/dL) and any (<11.0 g/dL) based on the hemoglobin concentration in the blood. Cutpoints for anemia diagnosis were not adjusted based on high altitude in El Salvador. Children whose hemoglobin levels are below 11 g/dL are considered anemic, and children who have hemoglobin levels below 7 g/dL are considered severely anemic. Table 9.4 indicates that 37.2% of children under age 5 in El Salvador are anemic. Overall, the anemia prevalence is mostly mild to moderate (36.5%), with only 0.7% of children under 5 years presenting as severely anemic. Anemia prevalence is highest among children aged 0-5 months, though the sample in this age range is very small (4 individuals). More than 47.3% of all children aged 6-23 months, the targeted population for anemia intervention, were found to be anemic.

Table 9.4: Prevalence of anemia, children aged 0-59 months, by sex and age

	n	N	%	SE
Prevalence of anemia in children 0-59 months, by sex and age				
Male	139	374	36.5	4.3
Female	121	324	38.2	4.5
0-5 months	4	4	100.0	-
6-11 months	48	78	62.9	7.6
12-23 months	59	149	39.4	5.7
24-59 months	149	469	31.9	3.9
0-59 months	260	700	37.2	4.1
6-23 months	107	227	47.3	5.8
Prevalence of severe anemia in children 0-59 months, by sex and age				
Male	1	374	0.2	0.2
Female	4	324	1.3	0.8
0-5 months	0	4	0.0	-
6-11 months	2	78	2.4	1.7
12-23 months	0	149	0.0	-
24-59 months	3	469	0.7	0.4
0-59 months	5	700	0.7	0.4
6-23 months	2	227	0.8	0.6

APPENDIX A. SAMPLING DESIGN AND METHODOLOGY

A.1 Sample Size

Sample sizes were determined based on IDB's pre-specified plan for the second follow-up measurement to complete a full census of sampled segments (described in section A.2 "Sampling Procedures", below), followed by a survey of 1,017 selected eligible households. Households were eligible if they had at least one child aged 0-59 months or one woman aged 15-49 years.

In order to achieve the desired sample size of 1,017 households, we sought to complete interviews with residents of 30 randomly-selected households in each of the 34 randomly selected segments in intervention areas. More specifically, we drew a sample of 30 randomly-selected households with age-eligible women and/or children as residents, and then drew a backup sample of 10 households from the remaining households with eligible participants in the segment. In some cases, selected households were absent or declined to participate in the SMI-El Salvador Household Survey. These households were replaced in order by households from the backup sample for the same segment. In each selected household, all eligible women and children were selected to participate in the study. Informed consent was sought from each respondent to the household questionnaire and woman's health interview, and from the guardian of each child participating in physical measurements. Occasionally, one or more eligible participant refused the interview despite other household members participating, or a survey was refused in course, resulting in a partially complete household result. In the second follow-up, counts of complete households by segment range from 28 to 30 households. Fifteen segments with fewer than 30 complete households had one or two partially complete households. Data from partially complete households is used wherever individual modules are sufficiently complete.

A.2 Sampling Procedures

IDB identified 15 intervention municipalities in which to conduct the SMI household survey for the Initiative on the basis of their high concentration of residents in the country's lowest wealth quintile. From these 15 municipalities, a two-stage clustered random sample of eligible households was selected.

In this section, we describe the random sampling procedures for selecting the segments from the target area, and the households within the segment. An alternative sample was also selected in the event that the survey could not be conducted in the selected segments. Below we describe the selection of the primary and alternate samples.

A.2.1 Cluster sampling

Cluster sample sizes were determined based on the total estimated household sample size divided by a fixed cluster size "μ" of 30 households per segment. The primary sample at the second follow-up of 35 intervention clusters (segments) was randomly selected from a total of 523 segments in 15 municipalities which, based on data from the 2007 El Salvador Population Census, contained 51,466

occupied households. As stated previously, segments were selected in each study arm with probability proportional to size and with replacement, as follows:

Size was represented by the number of occupied households within the segment, based on data from the 2007 El Salvador Population Census. We generated a variable for the cumulative number of households in each of the intervention and comparison sampling frames. We divided the cumulative total by the number of segments we meant to sample to obtain an interval length "Δ". A random starting point "Σ" was drawn from a uniform distribution between 1 and the interval length Δ. The n^{th} segment in the sample was the first segment whose cumulative number of households was greater than $\Sigma + (n-1) * \Delta$.

After selecting the 35 total segments to be surveyed, a set of 40 alternate segments were randomly selected with probability proportional to size. These segments could be used in the event that any of the selected segments could not be surveyed and needed to be replaced due to security concerns, community rejection of the study, or a high proportion of absent households. Two segments were substituted due to security concerns by alternate segments from the same municipalities (Ilobasco and Sensuntepeque) in the second follow-up.

A.2.2 Household sampling

Within each randomly-selected cluster, a complete household listing exercise was carried out, enabling the systematic selection of households for participation in the survey, based on household composition. All households in which women aged 15-49 years and/or children aged 0-59 months resided were eligible to be selected for the survey. Eligible households were sorted according to a random variable. The first 25 households with eligible children were selected for participation. The first five households with eligible women only were selected to complete the sample of 30 households. Ten additional households were identified as an alternate sample, eight with eligible children and two with eligible women only. These alternate households were substituted in order for selected households that were absent throughout the data collection or refused participation in the study.

APPENDIX B. SURVEY WEIGHTS, SAMPLING ERROR, AND DESIGN EFFECTS

B.1 Weighting Methodology

Survey weights reflect the three-stage cluster sampling design of the study. The primary sampling unit is referred to as the "segment." The segment is censused, and 30 households with eligible participants selected at random. Within selected households, all women 15-49 years of age and all children 0-59 months of age are selected for participation in the survey. Design weights for households, women and children were generated according to the inverse probability of selection of the unit and incorporated into the merged datasets for analyses. The weights were calculated as follows for households:

$$Weight = \frac{1}{p(selecting\ Household\ Y)} = \frac{1}{p(selecting\ Segment\ X) * p(selecting\ Household\ Y\ in\ segment\ X)}$$

where

$$p(selecting\ Segment\ X) = \frac{\#\ occupied\ households\ in\ Segment\ X\ in\ 2007\ Population\ Census}{Total\ \#\ occupied\ households\ in\ target\ municipalities\ in\ 2007\ Population\ Census} * \#\ draws$$

and the number of draws corresponds to the number of segments in the study area (35 at the second follow-up), and the total number of occupied households in target municipalities in the 2007 El Salvador Population Census corresponds to 51,466 and

if the household includes children under 5 according to the SMI-El Salvador census:

$$p(selecting\ household\ Y\ in\ segment\ X) = \frac{\#\ households\ with\ age\text{-}eligible\ children\ interviewed\ for\ SMI\ in\ segment\ X}{\#\ occupied\ households\ with\ age\text{-}eligible\ children\ in\ Segment\ X\ from\ SMI\ census}$$

or if the household does not include children under 5 according to the SMI-El Salvador census:

$$p(selecting\ household\ Y\ in\ segment\ X) = \frac{\#\ households\ with\ eligible\ women\ but\ no\ eligible\ children\ interviewed\ for\ SMI\ in\ segment\ X}{\#\ occupied\ households\ with\ age\text{-}eligible\ women\ but\ no\ children\ in\ Segment\ X\ from\ SMI\ census}.$$

Minor modifications to this formula were used to calculate weights for women and children as follows:

$$p(selecting\ woman\ Z) = \frac{p(selecting\ Segment\ X) * p(selecting\ Household\ Y\ in\ Segment\ X)}{average\ number\ of\ women\ 15\text{-}49\ years\ old\ per\ household\ in\ SMI\ census} * p(selecting\ Woman\ Z\ in\ household\ Y)$$

where the average number of women 15-49 years old per household in the sample was 1.04 (according to the SMI-El Salvador Household Census), and

if the household includes children under 5 according to the SMI-El Salvador census:

$$p(\text{selecting Household } Y \text{ in Segment } X) = \frac{\#\ \text{households with eligible children completing women's health survey for SMI in Segment } X}{\#\ \text{occupied households with age-eligible children in Segment } X \text{ from SMI census}},$$

or if the household does not include children under 5 according to the SMI-El Salvador census:

$$p(\text{selecting Household } Y \text{ in Segment } X) = \frac{\#\ \text{households with eligible women but not children completing women's health survey for SMI in Segment } X}{\#\ \text{occupied households with age-eligible women but not children in Segment } X \text{ from SMI census}},$$

and

$$p(\text{selecting Woman } Z \text{ in Household } Y) = \frac{\#\ \text{women in Household } Y \text{ completing the survey}}{\#\ \text{women 15-49 years old residing in Household } Y \text{ from SMI census}},$$

and

$$p(\text{selecting Child } W) = \frac{p(\text{selecting Segment } X) * p(\text{selecting Household } Y \text{ in Segment } X)}{\text{average number of children 0-59 months old per household in sample}} * p(\text{selecting child } W \text{ in Household } Y)$$

where the average number of children 0-59 months old per household in the sample was 0.33 (according to the SMI-El Salvador Household Census), and

$$p(\text{selecting Household } Y \text{ in Segment } X) = \frac{\#\ \text{households completing children's health survey for SMI in Segment } X}{\#\ \text{occupied households with age-eligible children in Segment } X \text{ from SMI census}},$$

and

$$p(\text{selecting Child } W \text{ in Household } Y) = \frac{\#\ \text{children in Household } Y \text{ completing the survey}}{\#\ \text{children 0-59 months residing in Household } Y \text{ from SMI census}}.$$

The weights yielded results which were similar to the unweighted results.

B.2 Sampling Errors

As described in Appendix A, a random sample of eligible households was selected from each of 35 clusters (segments) which had been randomly sampled with probability proportional to size from the target intervention area of the initiative. Although cluster sampling can improve efficiency when the

target population is spread out over a large area, the resultant sample consists of observations that are not completely independent of one another. The standard errors presented throughout this report and in Appendix C account for this intra-class correlation, using Taylor-linearized variance estimation.

APPENDIX C. SMI HOUSEHOLD INDICATORS

Table C.1: Performance of payment indicators, SMI-El Salvador Second Follow-up Survey

		Second Follow-Up 2017			
	Indicator	n	N	%	SE
2010	Women (age 15-49) who are using a method of modern family planning**	537	687	75.0	2.4
4010	Women (age 15-49) delivered in a facility with skilled attendant in their most recent pregnancy in the last two years	397	404	98.2	0.8
4031	Women (age 15-49) who received postpartum care one week after delivery with skilled personnel in their most recent pregnancy in the last two years*	259	404	62.6	4.7
5025	Children 12-24 months who were vaccinated against measles, mumps, and rubella (MMR), according to card	120	131	91.1	2.9
5030	Children (0-59 months) who received two doses of de-worming medication in the last year	283	694	40.5	2.8
5060	Children 0-59 months who received ORS and zinc in the last episode of diarrhea in the past two weeks	14	42	33.7	6.8
1060	Children 6-23 months with hemoglobin <110g/L	107	227	47.3	5.8

* At baseline, women were asked one question regarding postpartum checkup one week after delivery; at the second follow-up, women were asked to report on every postpartum checkup they received in the first six weeks after delivery. The indicator calculation at second follow-up incorporated responses from these additional questions for compliance of postpartum check.
** Women who are infertile are excluded, maintaining the original definition. If calculated with new the definition, which excludes infertile women and women who want to become pregnant, as well as considering women who had a hysterectomy as using and in need of modern contraception, the indicator is 75.4%

Table C.2: Performance of monitoring indicators, SMI-El Salvador Follow-up Survey

		Second Follow-Up 2017			
	Indicator	n	N	%	SE
6110	Catastrophic health expenditure- 10% of itemized household expenditure	75	1018	7.0	1.6
6110	Catastrophic health expenditure- 25% of itemized household expenditure	32	1018	3.1	0.9
6110	Catastrophic health expenditure- 40% of itemized household expenditure	19	1018	2.1	0.7
1080	Women aged 15-49 with a live birth in the last year	173	1431	6.3	0.5
1090	Women aged 15-19 with a live birth in the last year	30	269	4.9	1.0
2020	Women (age 15-49) who did not wish to become pregnant and who were not using/not have access to family planning methods (temporary and permanent)	142	665	24.6	2.5
2030	Women (age 15-49) who report having stopped using a method of family planning during the previous year	32	504	5.1	1.6
4110	Women (age 15-49) with a birth in the last two years who can recognize at least 5 danger signs in newborns	85	320	26.0	3.9
6010	Women 15-49 who report having any illness in the past two weeks	164	1428	11.8	1.7
6020	Women (age 15-49) who report having any illness in the past two weeks but did not seek health care	63	164	39.8	6.4
6050	Women (age 15-49) who used health care services in the last two weeks	192	1430	12.7	1.6

6130	Women who reported satisfaction with health care services at their most recent visit to a health facility	578	640	91.5	2.1

(continued)

	Indicator	Second Follow-Up 2017			
		n	N	%	SE
6140	Women who reported satisfaction with cleanliness of the facility at their most recent visit to a health facility	402	630	68.6	3.5
6150	Women who reported satisfaction with competence of the medical personnel at their most recent visit to a health facility	622	637	98.3	0.5
6160	Women who reported they were treated with respect at their most recent visit to a health facility	458	640	70.6	2.9
3010	Women (age 15-49) who received at least one antenatal care visit by skilled personnel in their most recent pregnancy in the last two years	397	404	98.1	0.6
3020	Women (age 15-49) who received at least four antenatal care visits by skilled personnel in their most recent pregnancy in the last two years according to best practices	310	391	79.7	2.9
3040	Women (age 15-49) who received their first prenatal check with skilled personnel before 12 weeks of gestation for their most recent birth in the last two years.	237	393	58.9	3.1
4015	Women (age 15-49) who delivered in a facility for their most recent birth in the last two years.	399	404	98.8	0.5
4020	Women (age 15-49) who received postpartum care by skilled personnel within the first 48 hours in their most recent pregnancy in the last two years	84	401	22.6	4.1
4030	Women (age 15-49) who received a postpartum check within 7 days after delivery by a skilled attendant.	122	401	31.7	4.4
4035	Women (age 15-49) who received postpartum care by skilled personnel between 7 and 42 days after delivery in their most recent pregnancy in the last two years	106	401	25.7	3.2
4040	Women (age 15-49) who received postpartum care by skilled personnel within 24 hours after delivery, a second check before 7 days, and a third check between 7 and 42 days after delivery in their most recent pregnancy in the last two years	1	401	0.3	0.3
4100	Infants receiving neonatal care by skilled personnel in a health facility within 48 hours of birth in the last two years	86	340	26.9	5.3
4101	Infants receiving neonatal care by skilled personnel in a health facility within 24 hours of birth in the last two years	60	340	19.0	4.9
4102	Infants receiving neonatal care by skilled personnel in a health facility within 7 days of birth in the last two years	136	340	41.7	4.9
5050	Children born in the last two years who were breastfed within one hour after birth	276	344	81.3	2.5
4145	Children (0-59 months) with pneumonia symptoms who received antibiotics	46	64	73.6	5.0
5020	Children (0-59 months) fully vaccinated for age, according to vaccine card and recall	467	783	59.8	3.7
5040	Children 0-5 months who were exclusively breastfed on the previous day	37	76	49.6	6.0
5080	Children 12-15 months who were breastfed on the previous day	45	62	72.0	7.2
5090	Children 6-8 months who received solid or semi-solid food on the previous day	42	49	84.3	4.8
5100	Children 6-23 months who received foods from 4 or more food groups during the previous day	163	268	60.1	3.2
5110	Children 6-23 months breastfed or complimentary feeding who received solid, semi-solid, or soft foods the minimum number of times or more during the previous day	135	243	54.9	3.6
5120	Children 6-23 months who received the minimum acceptable diet (apart from breastmilk) during the previous day	88	266	32.4	3.0
5130	Children 6-23 months who received iron-rich or iron-fortified foods during the previous day	150	268	54.6	3.8

(continued)

		Second Follow-Up 2017			
	Indicator	n	N	%	SE
6030	Children (0-59 months) who had any illness in the past two weeks, according to report of mother or caregiver	178	869	20.6	2.4
6040	Children (0-59 months) who had any illness in the past two weeks but did not seek health care, according to report of mother or caregiver	53	170	31.9	3.9
1050	Children 0-59 months with hemoglobin <110g/L	260	700	37.2	4.1
1070	Children 0-59 months with height <-2 SD of the mean of the reference population for age	52	811	6.8	0.9

		Second Follow-Up 2017		
	Indicator	N	mean	SE
6090	Average out-of-pocket household itemized health expenditure for the last month (USD)	1012	6.6	1.3
6100	Average household itemized expenditure for the last month (USD)	1017	255.8	22.3
6080	Average travel time to nearest health facility (minutes)	1377	20.7	2.6
6085	Average distance to nearest health facility (km)	797	2.6	0.5
6120	Wait time at most recent visit to a health facility (minutes)	621	107.1	7.4
6082	Average travel time to delivery location for most recent birth in the last two years (minutes)	344	56.4	4.1