

PMA Ethiopia Six-Week Postpartum Maternal and Newborn Health Technical Report, 2019-2021 Cohort



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Bill & Melinda Gates Institute for
Population and Reproductive Health



PMA Ethiopia Six Week Maternal and Newborn Health Technical Report, 2019-2021 Cohort

Title: Six Week Postpartum Data Collected on Women's Experiences Related to Pregnancy, Delivery, and Postpartum Care

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Executive Summary

Background and Objective:

To fill the data gap in priority maternal and newborn health (MNH) indicators in Ethiopia and assess factors associated with the initiation and continuation of care, Performance Monitoring for Action Ethiopia (PMA Ethiopia) implemented a longitudinal survey that enrolled and followed pregnant women at six-weeks, six-months, and one-year postpartum.

This report summarizes key findings from the **six-week postpartum survey**. During the six-week postpartum interview, resident enumerators collected information on essential MNH services, including receipt, timing, and specific components of antenatal care (ANC), delivery care, and immediate postnatal and neonatal services.

Data collection for the six-week postpartum interview occurred between October 2019 and September 2020, with a pause due to the COVID-19 pandemic from April 2020 to July 2020. This delay caused some women to be interviewed late. Among 2,855 eligible women, 2,664 completed the interview (1,681 completed before COVID-19 lockdowns; 983 completed after data collection resumed in July 2020). The analytic sample of this report included 2,557 women with live births or stillbirths.

Key Findings:

- ANC:
 - Overall, more than three in four (77.4%) women received at least one ANC contact over the course of their pregnancy; however, less than half (42.5%) had complete (4+) ANC.
 - Only 11.2% of women discussed all birth readiness and pregnancy complication topics with their ANC provider.
 - While three in five women reported that their weight and blood pressure were taken at ANC (60.7% and 65.3%, respectively), less than one in five (17.9%) received all five maternal assessments (with addition of urine, blood, and stool sample).
 - Less than one in five (15.7%) women received counseling on postpartum family planning during ANC.
- Delivery Care:
 - Over half of women delivered in a health facility with a skilled birth attendant (54.5%).
 - More than one-third of women reported experiencing complications during delivery (37.4%). The most common delivery complications were severe bleeding (20.2%), followed by prolonged labor (16.2%).
- Postnatal Care (PNC):
 - Half of all women (49.8%) did not receive PNC after delivery; just over one-third of women (35.2%) received PNC within 48 hours of delivery.
 - Among women who delivered in a health facility, over three in five (62.7%) reported that their provider checked on their health after delivery.

- Among women who received PNC, three in five (60.3%) received counseling on child immunization; almost half (47.8%) received counseling on exclusive breastfeeding; three in ten (30.4%) were counseled on infant feeding.
- Postpartum Family Planning:
 - 2.9% of women who delivered at a health facility received a modern contraceptive method immediately after delivery.
 - At the time of the six-week interview, about one in ten (9.1%) women were using any modern contraception method except breastfeeding (LAM).
- Neonatal and Newborn Care:
 - Three in four (74.5%) live births born in a facility were weighed at birth. The vast majority (94.2%) of all live births were wrapped at birth; less than half (45.4%) were placed skin-to-skin with the mother's chest immediately after birth; more than three in four (78.9%) babies were breastfed within one hour of birth.
 - Nearly two in five (37.3%) and one in two (48.7%) children received the BCG and oral polio vaccine at the time of the six-week interview, respectively.

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Introduction and Survey Methodology

Performance Monitoring for Action Ethiopia (PMA Ethiopia) builds upon the previous success of the Performance Monitoring and Accountability 2020 (PMA2020)/Ethiopia survey, conducted between 2013 and 2018, and the PMA Maternal and Newborn Health (MNH) survey, conducted in the SNNP region between 2016 and 2017. PMA Ethiopia features an enhanced topical scope, moving beyond the family planning indicators captured in the PMA2020 surveys to include MNH indicators, expands geographically to provide greater regional representation, and broadens its survey methodology to include both cross-sectional and longitudinal data collection.

This report summarizes six-week postpartum data collected from women who participated in the first cohort of PMA Ethiopia, summarizing their experiences related to antenatal care (ANC), delivery, and immediate postpartum care.

Research Objective

The PMA Ethiopia study:

- Monitors the use of proven, effective, and cost-effective interventions and the practice of healthy behaviors aimed at reducing maternal and newborn mortality in Ethiopia using priority indicators identified by the Ethiopian Federal Ministry of Health (FMoH) and the Bill and Melinda Gates Foundation (BMGF).
- Identifies factors associated with the use of Reproductive, Maternal and Newborn Health (RMNH) services, including individual, partner, and community influences.
- Develops and validates measures of reproductive empowerment, fertility intentions, and community norms that are hypothesized to be associated with the use of health services.
- Assesses whether key MNH outcomes have been affected by the COVID-19 pandemic, including healthcare-seeking behaviors related to antenatal, delivery, newborn postnatal care, and early infant vaccinations.

Methods

PMA Ethiopia features cross-sectional and longitudinal data collection in four large, predominantly agrarian regions (Tigray, Oromia, Amhara, and SNNP), one pastoralist region (Afar) and one urban region (Addis Ababa) and annual cross-sectional data collection in the remaining five regions. The three data collection activities featured by PMA Ethiopia include:

- A longitudinal survey that follows eligible women at 6-weeks, 6-months, and one-year postpartum after pregnancy screening and enrollment in panel regions.
- A cross-sectional survey administered to 35 randomly selected households in each enumeration area, annually
- The Service Delivery Point (SDP), or health facility survey, conducted at selected health facilities annually in both panel and cross-sectional regions.

This report presents results from the **6-week postpartum survey of the PMA Ethiopia panel**. Findings from the baseline and SDP surveys have been previously published

(<https://www.pmadata.org/countries/ethiopia>); findings from the 6-month and 1-year surveys will be published in separate upcoming reports. Cross-sectional results can be found in various briefs (<https://www.pmadata.org/countries/ethiopia>) and on the PMA data visualization platform, DataLab (<datalab.pmadata.org>).

Sampling

PMA Ethiopia employed multistage stratified cluster sampling, where households were selected in sampled clusters or enumeration areas (EAs). EAs were selected with probability proportional to size within strata. For Afar, Amhara, Oromia, Tigray, and SNNP, strata were defined by both region and urban/rural residence. For the remaining regions, regions served as the strata, without additional urban/rural stratification.

Within panel regions, a census of all households was conducted. From the census, enumerators identified all women who were age 15-49 and regular members of the household. Women were screened and those who reported being pregnant or having given birth in the past six weeks were eligible for the survey. Those who were able and willing to give consent were enrolled into the study.

To arrive at the required sample size, PMA Ethiopia used previous data from PMA2020 surveys to estimate point prevalence of modern Contraceptive Prevalence Rate (mCPR), design effect, and non-response. The 217 EAs required for the panel were sufficient to achieve regional estimates of mCPR in all panel regions and were distributed across the regions based on the anticipated mCPR. Across the remaining non-panel regions, we estimated that an additional 56 EAs were needed to estimate mCPR with a 5% margin of error. Based on anticipated fertility across the six panel regions, we estimated that we would enroll approximately 3,000 women into the panel. Additional information on the cross-section and SDP surveys, and additional information on sampling, including sample size calculations, is available from Zimmerman et al., 2020.¹

Questionnaire

From the census, enumerators used the female screening form to identify all women who were currently pregnant or who had given birth in the six weeks prior to the survey. These women were eligible for enrollment in the panel survey, which served as the data source of this analysis. The content of the panel surveys is presented below.

Six weeks postpartum survey: For the six-week postpartum interview, enumerators administered a survey that collected information on key MNH and delivery services, including receipt, timing, and specific components of antenatal care (ANC), delivery-related information, and the receipt of immediate postpartum services for both the mother and child. Information on women's sociodemographic characteristics including age, education, region, parity, residence, marital

¹ Zimmerman L, Desta S, Yihdego M et al. (2020) "Protocol for PMA-Ethiopia: A new data source for cross-sectional and longitudinal data of reproductive, maternal, and newborn health" [version 1; peer review: awaiting peer review]. Gates Open Research, 4:126 <https://doi.org/10.12688/gatesopenres.13161.1>

status, household wealth, migration status, fertility preferences, and birth histories were matched from the baseline interview. For women who were six weeks postpartum at enrollment, they completed the baseline and six-week postpartum interview within one survey, at baseline.

A State of Emergency in Ethiopia was declared in response to COVID-19 approximately halfway through fielding the 6-week postpartum interview (April 8, 2020). Specifically, 1,405 6-week interviews were conducted pre-COVID-19; the remaining 983 occurred after COVID-19 emergency lockdown procedures eased in early June.

Survey Implementation and Participants

Training for data collection was implemented from August through September 2019 and data collection began with the census and household screenings in October. Women eligible for the cohort were enrolled into the study and completed baseline interviews from October through December 2019. Six-week postpartum data collection occurred between October 2019 and September 2020, with a pause for COVID-19 from April 2020 to late July 2020; due to this delay, some women were interviewed late. Women who were six weeks postpartum at baseline completed both baseline and six weeks surveys at the same data collection timepoint.

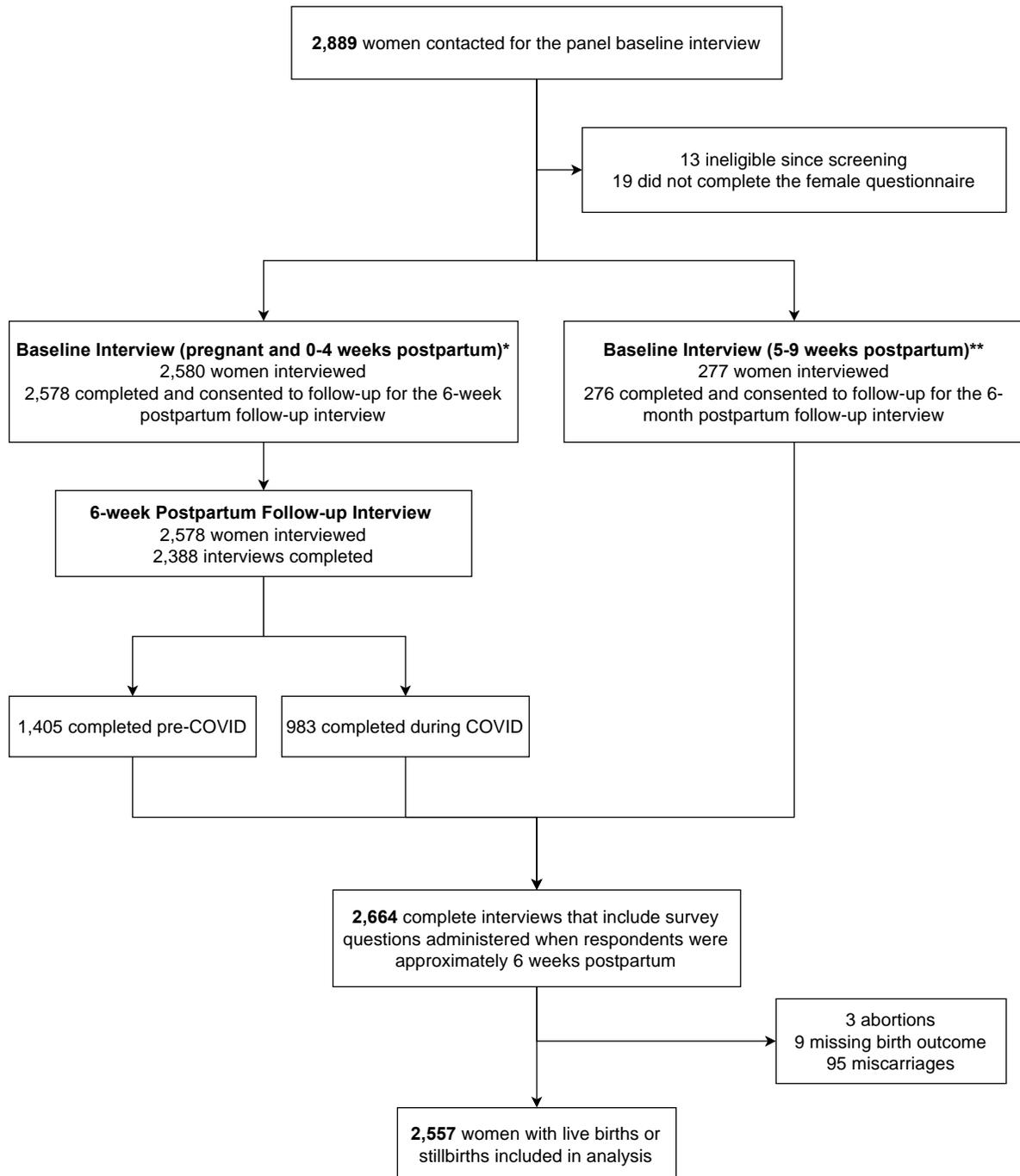
As shown in Figure 1, 2,889 women were contacted for the baseline interview. 2,664 women completed the 6-week postpartum follow-up interview, of which 1,405 were interviewed before the pause in data collection due to COVID-19 and 983 were interviewed after resuming data collection. Among the complete interviews, we excluded 3 women with abortion, 9 with missing birth outcome, and 95 with miscarriage from the analysis. The final analytic sample includes 2,557 women with live or stillbirths.

Response Rate and Mean Time to Interview

Table 1 shows response rates from the six-week postpartum interview of the first PMA Ethiopia cohort. A total of 2,855 women were eligible for six-week postpartum interview, of which 2,664 women completed this interview (response rate 93.3%). The analytic sample is comprised of 2,664 women aged 15-49 who provided complete six-week postpartum survey data, either from enrollment or at six-week postpartum data collection.

Also shown in Table 1 is the mean number of weeks postpartum at the time of interview. On average, before the pause in data collection due to COVID-19, women were less than 7 weeks postpartum (mean=6.3) when they completed the 6-week follow-up interview. The average time to interview was 16 weeks (mean=16.2) for women who were interviewed during the pandemic, after data collection had resumed.

Figure 1. Six-Week Postpartum Follow-up Interview Enrollment Flowchart



*Women who were pregnant or 0-4 weeks postpartum at the time of the first panel interview received survey questions related to maternal care services they received up to the time of interview. Estimated or actual delivery dates of women were used to schedule a second interview, which was conducted when respondents were about 6 weeks postpartum. Some 6-week postpartum interviews were conducted before the COVID-19 pandemic; others were conducted during the COVID pandemic. PMA survey interview questions slightly for interviews conducted during the COVID pandemic.

**Women who were 5-9 weeks postpartum at the time of the first panel interview received a combined set of survey questions that other women received during two separate interviews. All of these interviews were conducted before the COVID-19 pandemic.

Table 1. Six-Week Postpartum Follow-up Interview Response Rate and Mean Time to Interview

Response rate			
	Total	Pregnant or 0-4 weeks postpartum	5-9 weeks postpartum
Number of eligible women	2,855	2,578	277
Number of eligible women who completed the interview	2,664	2,388	276
6-week interview response rate		93.3%	
Mean number of weeks postpartum at time of interview			
	Number of women	Number of weeks postpartum	
Overall	2,557	10.1	
Pre-COVID	1,644	6.6	
During COVID	913	16.2	

Interpretation of Sampling Weights

In the PMA Ethiopia panel survey, the sample was designed to represent all pregnant women age 15-49 in the six regions in which the survey was conducted. To make results meaningful in less populated geographical areas, the sample also needed to be representative at regional levels, which required oversampling of the smaller regions. The rationale for this is that, as the population in Ethiopia is not evenly distributed, drawing random samples across the entire country will result in less-populated regions being less likely to be selected, and therefore not having sufficient sample sizes.

The number of women needed to interview from each region was determined by statisticians at PMA Ethiopia. To generate statistics that are representative of Ethiopia's population, sample weights were introduced. Sample weights were constructed based on the selection probabilities of the EAs provided by the Central Statistics Agency (CSA). After data collection for the baseline survey was complete, two weights – household and female – were created to adjust for selection probability and non-response.

As all households were included in the census, there was no additional selection probability of households; thus, the household weight was the inverse of the EA selection probability and the response rate to the census within the EA. Female weights for women in the panel were adjusted for non-response within the EA, and six-week postpartum survey weight has adjusted for loss to follow-up from the baseline panel survey sample. Application of the PMA Ethiopia household and female survey weights for the panel survey would result in a sample that is representative of all households with pregnant or recently postpartum women and all pregnant or recently postpartum women age 15–49 residing in the six regions included in the PMA Ethiopia panel, respectively.

Six-week postpartum weights were calculated using the unnormalized baseline weight, adjusted for the inverse probability of completing the 6-week postpartum survey. The log odds of having completed the 6-week postpartum survey was modeled as a linear combination of age, education, marital status, wealth, and residence at baseline.

With this sampling and weighting strategy, PMA Ethiopia was able to interview the minimal number of women per EA and achieve a sample that was representative on both national and regional levels. Because of this representativeness, the majority of this report will only present weighted results.

Characteristics of Respondents

The sociodemographic characteristics of the overall sample are presented in Table 2. These data are taken from the baseline survey and matched with six-week survey responses, other than pregnancy outcome, which came from the six-week survey for women who were pregnant at baseline.

Age: On average, women who enrolled in the cohort were 27 years old. Nearly one-third (30.6%) of respondents were between the ages of 25-29 and 10.6% were aged 15-19 years.

Education: More than forty percent (41.0%) of women had no education, and an almost equal proportion had ever attended primary school (40.0%). About one in ten (11.7%) women attended secondary education. Fewer than one in ten (7.2%) women attained any education beyond secondary education (technical & vocational or higher education).

Parity: About one in five (18.0%) women were nulliparous at the baseline interview. More than a third of respondents (38.1%) had 1-2 children; about equal proportions had 3-4 (22.6%) or more than 5 children (21.4%).

Region: Respondents were enrolled from six regions in Ethiopia. The largest proportion of respondents lived in Oromia (44.0%), followed by SNNP (22.5%) and Amhara (20.9%) regions, while smaller proportions of women were from Tigray (7.0%), Addis (3.8%), and Afar (1.8%).

Residence: The vast majority (77.4%) of women lived in rural areas, with fewer than one-quarter (22.6%) of respondents from urban areas.

Pregnancy Outcome: Stillbirths were rare (1.5%), with majority of pregnancies ending in live birth (98.5%).

Table 2. Background Characteristics of Respondents

Percent distribution of respondents by selected background characteristics and birth outcomes, PMA Ethiopia 2019-2021 Cohort			
Background characteristics	Weighted percent	Weighted N ¹	Unweighted N ¹
Age			
15-19	10.6	272	229
20-24	24.3	622	631
25-29	30.6	783	828
30-34	18.2	466	474
35-39	12.5	319	315
40-49	3.7	95	80
Education²			
No education	41.0	1,049	974
Primary	40.0	1,024	927
Secondary	11.7	299	384
More than secondary	7.2	184	272
Parity			
0	18.0	460	492
1-2	38.1	973	1,031
3-4	22.6	578	567
5+	21.4	546	467
Region			
Tigray	7.0	179	433
Afar	1.8	47	208
Amhara	20.9	533	447
Oromia	44.0	1,125	635
SNNP	22.5	576	588
Addis	3.8	98	246
Residence			
Rural	77.4	1,978	1,575
Urban	22.6	579	982
Wealth quintile			
Lowest	20.1	515	456
Lower	19.9	509	386
Middle	20.0	510	401
Higher	20.1	513	473
Highest	19.9	510	841
Pregnancy outcome			
Live births	98.5	2,519	2,520
Stillbirths	1.5	38	37
Total	100.0	2,557	2,557
Note:			
1. Analysis excluded women with abortions and miscarriages.			
2. Education categories refer to the highest level of education attended. More than secondary education includes technical & vocational and higher education.			

Antenatal Care (ANC) Utilization

Overall Utilization

Definition: During both the baseline and six-week interviews, respondents were asked various questions about the antenatal care (ANC) services received; data for this section are taken from the six-week interview to encompass ANC care received over the course of the entire pregnancy.

Women were asked whether they received antenatal care from a health extension worker (HEW), either at a health post or at home, or care from a professional health care provider other than a HEW. Women who responded “yes” to receiving any ANC from either a HEW or another health care professional were considered to have received any ANC. Women were then asked the number of times they received ANC from each health provider. Women who responded that they attended four or more ANC visits, regardless of provider, were considered as having “complete ANC”.

Key findings: Overall, more than three-quarters (77.4%) of women received any ANC over the course of their pregnancy; however, less than half received complete ANC (42.5%).

Patterns by background characteristics:

- **Age:** Any ANC receipt was consistent across groups, ranging from 72.9% for women age 40-49 and 79.6% for women age 20-24. Four or more ANC visits was most common for women aged 25-29 (46.7) and least common for women age 40-49 (34.9%).
- **Education:** Roughly three-quarters of women with no education and those with primary education received any ANC (71.3% and 78.0%, respectively). Nearly nine in ten women with secondary education and more than secondary education received any ANC (89.6% and 88.8%, respectively). Larger differences by education were observed for complete ANC—while approximately three-quarters of women with more than secondary education received four or more ANC visits (75.0%), less than one-third of women with no education received complete ANC (30.3%).
- **Parity:** Across parity, over three-quarters of women received any ANC, except women with five or more children, of which 68.6% attended one visit. Complete ANC decreased with increasing parity. Over half (55.1%) of nulliparous women attended four or more visits, this dropped to approximately one quarter (28.9%) for women with five or more children.
- **Region:** Any reported ANC in this sample of women ranged from 19.3% in Afar to 91.0% in Tigray. Complete ANC ranged from 3.0% in Afar to 74.4% in Addis.
- **Residence:** Report of any ANC was similar by urban and rural residence (83.3% and 75.7%, respectively), however, complete ANC was approximately double for urban versus rural regions (66.9% vs. 35.4%, respectively).
- **Wealth:** The majority of women across wealth quintiles received any ANC (ranging from 66.0% in lowest quintile to 85.9% in highest quintile). Only one quarter of women in the lowest quintile received complete ANC (24.2%), whereas nearly seven in ten women in the highest quintile received complete ANC (68.4%).

Table 3. Antenatal Care Utilization

Percent distribution of women who received any antenatal care (ANC) and 4+ ANC among all women, by background characteristics, PMA Ethiopia 2019-2021 Cohort			
	Any ANC	4+ ANC	Number of women (weighted)
Overall	77.4	42.5	2,557
Age			
15-19	75.2	37.2	272
20-24	79.6	45.3	622
25-29	79.4	46.7	783
31-34	77.2	40.7	466
35-39	71.8	36.4	319
40-49	72.9	34.9	95
Education level			
No education	71.3	30.3	1,049
Primary	78.0	42.8	1,024
Secondary	89.6	64.4	299
More than secondary	88.8	75.0	184
Parity			
0 children	81.4	55.1	460
1-2 children	81.4	48.6	973
3-4 children	75.9	35.2	578
5+ children	68.6	28.9	546
Region			
Tigray	91.0	64.4	179
Afar	19.3	3.0	47
Amhara	87.9	51.8	533
Oromiya	76.4	37.1	1,125
SNNP	69.8	35.5	576
Addis	79.9	74.4	98
Residence			
Rural	75.7	35.4	1,978
Urban	83.3	66.9	579
Wealth quintile			
Lowest quintile	66.0	24.2	515
Lower quintile	72.5	33.8	509
Middle quintile	78.4	36.6	510
Higher quintile	84.4	49.8	513
Highest quintile	85.9	68.4	510

ANC Provider Type

Definition: Women who reported seeing a professional healthcare provider (PHCP) other than a HEW were asked whom they saw for ANC. Respondents were probed to select all that applied from a listing including doctor, nurse/midwife, health officer, and “other skilled provider (cannot distinguish)”. The distribution of ANC provider type among all women is presented in Table 4.

Key findings: Overall, almost half of women received ANC from a health care professional (46.0%), compared to one in ten women who received ANC from a HEW only (11.9%). Nearly twenty percent (19.6%) of women received ANC from both care providers.

Patterns by background characteristics:

- **Age:** Across all age groups, about one in ten women reported receiving ANC from a HEW only. ANC from a professional health care provider ranged from 34.1% for women age 40-49 to 49.6% for women age 25-29.
- **Education:** The proportion of women receiving care from a HEW only was higher in the lower education groups (approximately 14%), the proportion of women receiving care from PHCPs only was higher for higher education groups (72.7% more than secondary education vs. 39.1% no education).
- **Parity:** Over half of nulliparous women (56.5%) and women with 1-2 children (51.1%) had received care exclusively from a PHCP. The proportion of women receiving care from only a HEW increased with increasing parity. Approximately one in five women across parities received care from both a PHCP and HEW.
- **Region:** Women living in Addis had the highest proportion of receiving ANC from a PHCP (69.3%), followed by Amhara (52.3%) and Oromiya (48.7%). The proportion receiving care from a HEW only was highest in SNNP (15.0%) and Tigray (14.8%).
- **Residence:** Among respondents living in rural areas, 39.3% received ANC from a PHCP, 14.3% received care from a HEW only, and 22.1% received care from both. In urban areas, 68.6% of women received ANC from a health professional, 3.7% from a HEW, and 11.0% received care from both.
- **Wealth:** Among women in the highest wealth quintile, almost three quarters (73.5%) received ANC exclusively from a professional health provider. Receipt of ANC from an HEW decreased with increasing wealth quintile.

Table 4. ANC Provider Type

Percent distribution respondents who received no ANC, ANC from a health extension worker (HEW) only, professional health care provider (PHCP) only, and both providers, among all women, by background characteristics, PMA Ethiopia 2019-2021 Cohort

Background characteristics	No ANC	HEW only	PHCP only ¹	Both	Number of women (weighted)
Overall	22.6	11.9	46.0	19.6	2,557
Age					
15-19	24.8	10.6	43.6	21.1	272
20-24	20.4	14.9	48.2	16.5	622
25-29	20.6	9.2	49.6	20.6	783
31-34	22.8	13.2	45.5	18.5	466
35-39	28.2	11.0	39.0	21.8	319
40-49	27.1	14.6	34.1	24.1	95
Education level					
No education	28.7	13.7	39.1	18.5	1,049
Primary	22.0	13.6	43.4	21.1	1,024
Secondary	10.4	6.7	62.1	20.8	299
More than secondary	11.2	1.3	72.7	14.8	184
Parity					
0 children	18.6	8.1	56.5	16.9	460
1-2 children	18.6	9.9	51.1	20.5	973
3-4 children	24.1	14.7	41.3	20.0	578
5+ children	31.4	15.9	32.9	19.8	546
Region					
Tigray	9.0	14.8	43.8	32.4	179
Afar	80.7	6.3	13.0	0.0	47
Amhara	12.1	9.6	52.3	26	533
Oromiya	23.6	11.7	48.7	16.0	1,125
SNNP	30.2	15.0	34.2	20.6	576
Addis	20.1	6.2	69.3	4.5	98
Residence					
Rural	24.3	14.3	39.3	22.1	1,978
Urban	16.7	3.7	68.6	11.0	579
Wealth quintile					
Lowest quintile	34.0	12.8	34.5	18.7	515
Lower quintile	27.5	17.9	30.6	24.1	509
Middle quintile	21.6	11.9	44.4	22.1	510
Higher quintile	15.6	13.1	46.9	24.4	513
Highest quintile	14.1	3.9	73.5	8.5	510

Note:
1. PHCP includes doctors, nurses/midwives, health officers, and other skilled providers (can't distinguish)

Number and Timing of ANC

Definition: Women who reported seeing a professional healthcare provider or an HEW were asked the number of times they saw each provider and how many months pregnant they were at the time of their first visit. Number of visits and timing of first ANC are presented in Table 5.

- **Number of ANC visits:** Two-thirds (66.9%) of women from urban regions completed four or more ANC visits. Women residing within rural areas were more evenly split across number of ANC visits: 0 visits: 24.3%, 1-2 visits: 40.3%; 4+ visits: 35.4%.
- **Number of months pregnant at time of first ANC visit:** Within urban areas, most women sought ANC early in their pregnancy, with 35.7% reporting seeking ANC within 0-3 months and 43.2% attending their first visit within 4-6 months. In rural areas, just under half of women sought ANC care within 4-6 months (46.4%).

Table 5. Number and Timing of ANC

Percent distribution of women who had 0, 1-3, and 4+ ANC, and timing at first ANC visits, among all women, by residence, PMA Ethiopia 2019-2021 Cohort			
	Urban	Rural	Total
Number of ANC visit			
0	16.7	24.3	22.6
1-3	16.4	40.3	34.9
4+	66.9	35.4	42.5
Total	100.0	100.0	100.0
Number of months pregnant at time of first ANC visit			
No ANC	16.7	24.3	22.6
0-3 months	35.7	16.4	20.8
4-6 months	43.2	46.4	45.6
7-9+ months	4.4	12.4	10.5
Don't know/missing	0.0	0.6	0.5
Total	100.0	100.0	100.0
Number of women (weighted)	579	1,978	2,557
Mean gestational age (in months) at first visit (among those with ANC)*	3.8	4.9	4.6
Number of women with ANC (weighted)*	475	1,464	1,939
Note:			
*Calculated among women with ANC and had no missing, DNK, and NR values on the timing of their first ANC visit			

Antenatal Care (ANC) Content

Nutrition

The proportions of all women who received general nutrition counseling and counseling on taking iron supplements and/or deworming medications at ANC are presented in Table 6. Results among women with ANC are presented in Appendix 1.

Definitions:

- **General nutritional counseling:** Women who reported having at least one ANC visit were asked if a healthcare worker or HEW talked with them about their nutrition or diet during ANC. Women who responded affirmatively were considered to have received counseling.
- **Iron supplement and deworming medication counseling:** Receipt of counseling on specific components of nutrition, such as food variety, iron supplementation, and deworming medication, was asked among the sub-sample of women who received any nutritional counseling.

Key findings:

- One-third of respondents received general nutrition counseling at ANC (33.3%).
- Few women received counseling on taking iron supplements (12.3%) and deworming medications (2.3%) at ANC.

Patterns by background characteristics:

- **Age:** Approximately one-third of women across age groups received general nutrition counseling, except women age 15-19 (19.9%). Highest proportions of women age 20-29 received iron and folate counseling and deworming counseling.
- **Education:** Women with the highest education levels reported the highest proportions of general nutrition counseling (more than secondary=49.6%), whereas women with the lowest education levels reported the lowest (26.4%). Similar trends were observed for iron and folate counseling by education level. Deworming counseling was universally low.
- **Parity:** The proportions of women who received general nutrition counseling, iron counseling, and deworming counseling were approximately evenly distributed.
- **Region:** In Addis and Tigray, over half of women received general nutrition counseling (51.3% and 53.9%, respectively); proportions of women receiving iron and deworming counseling were also highest. In Afar, 7.1% of women received general nutrition counseling, approximately one percent received iron counseling or deworming counseling.
- **Residence:** The prevalence of nutritional counseling for women living in urban areas was ten percentage points higher than in rural areas (41.5% and 30.9%, respectively). Iron counseling was more common in urban areas (urban:15.0%; rural: 11.4%), whereas deworming counseling was more prevalent in rural areas (urban: 17%; rural: 2.5%).
- **Wealth:** Proportions of women receiving general nutritional counseling and iron counseling increased with increasing wealth.

Table 6. Content of ANC - Nutritional Counseling (all women)

Percent distribution of respondents who received general nutrition counseling and counseling on taking iron/folate supplements and deworming medications, by background characteristics, PMA Ethiopia 2019-2021 Cohort				
Background characteristics	General nutrition counseling	Iron and folate counseling	Deworming medication counseling	Number of women (weighted)
Overall	33.3	12.3	2.3	2,557
Age				
15-19	19.9	5.3	0.5	272
20-24	35.9	15.5	1.5	622
25-29	35.2	13.2	2.7	783
31-34	36.0	10.8	3.5	466
35-39	31.2	12.4	1.9	319
40-49	31.9	10.3	5.1	95
Education level				
No education	26.4	9.2	2.8	1,049
Primary	33.0	11.5	1.5	1,024
Secondary	48.2	18.2	2.3	299
More than secondary	49.6	24.3	3.9	184
Parity				
0 children	32.5	12.3	2.2	460
1-2 children	37.5	14.7	1.9	973
3-4 children	31.5	10.0	2.3	578
5+ children	28.3	10.3	3.0	546
Region				
Tigray	53.9	23.0	10.7	179
Afar	7.1	1.2	0.9	47
Amhara	45.8	15.4	4.4	533
Oromiya	26.8	9.9	0.8	1,125
SNNP	26.9	8.8	1.1	576
Addis	51.3	28.4	1.4	98
Residence				
Rural	30.9	11.4	2.5	1,978
Urban	41.5	15.0	1.7	579
Wealth quintile				
Lowest quintile	25.4	7.5	2.5	515
Lower quintile	26.1	8.2	2.1	509
Middle quintile	33.5	9.9	1.7	510
Higher quintile	36.7	17.2	3.4	513
Highest quintile	44.7	18.6	1.8	510

Birth Preparedness and Complication Readiness Discussions

Definition: For women who received ANC, they were asked whether their providers discussed any of the following nine topics on birth preparedness and pregnancy danger signs:

- Place of delivery
- Delivery by a skilled birth attendant
- Arrangement of delivery transport
- Where to go when experiencing pregnancy danger signs
- Severe headaches with blurred vision as a danger sign
- High blood pressure as a danger sign
- Edema as a danger sign
- Convulsions as a danger sign
- Bleeding before delivery as a danger sign

The proportions of all respondents reporting having the various birth preparedness and complication readiness discussions with their ANC providers are presented in Table 7, with the denominator of women who received ANC presented in Appendix 2. Prose results are described only for Table 7 (among all women). In addition to using a binary variable to measure the coverage of each birth preparedness and complication readiness topic, a single binary variable was created to assess whether or not providers had counseled women on all nine discussion topics.

Key findings:

- Among all women, only 11.2% had all nine birth preparedness and complication readiness discussions with their providers at ANC.
- Place of delivery was most commonly discussed (52.3%) and convulsions were least commonly discussed (20.1%).

Patterns by background characteristics:

- **Age:** The proportion of women receiving discussion of all nine topics increased with increasing age group (17.8% among 40-49-year-olds vs. 4.2% among 15-19-year-olds).
- **Education:** One in five women with more than secondary education received discussion of all nine topics (17.1%), compared to 9.4% of women with no education.
- **Parity:** Birth preparedness discussions were similar by parity.
- **Region:** Respondents in Tigray reported the highest prevalence of having all nine birth and complication readiness discussions at ANC (31.7%), followed by Amhara (21.8%) and Addis (16.1%).
- **Residence:** About 9.8% and 15.9% of women in rural and urban areas, respectively, discussed all nine topics during ANC.
- **Wealth:** The proportion of women receiving discussion of all nine topics increased with increasing wealth quintile (16.2% highest wealth quintile vs. 6.1% lowest wealth quintile).

Table 7. Content of ANC - Birth Preparedness Discussion (all women)

Percent distribution of respondents who received counseling on each birth preparedness topic, including place of delivery, delivery by a skilled birth attendant, arrangement of delivery transport, where to go when experiencing pregnancy danger signs, severe headaches with blurred vision, high blood pressure, edema, convulsions, and bleeding before delivery as a danger sign, by background characteristics, PMA Ethiopia 2019-2021 Cohort

Background characteristics	Place of delivery	Skilled birth attendant	Delivery transport	Where to go when in danger	Severe headaches	High blood pressure	Edema	Convulsions	Bleeding before delivery	All 9 topics	Number of women (weighted)
Overall	52.3	50.4	40.2	31.1	29.4	26.7	27.3	20.1	29.8	11.2	2,557
Age											
15-19	43.8	41.5	28.9	19.7	21.2	16.3	14.4	12.6	17.6	4.2	272
20-24	50.3	49.5	41.1	31.0	29.4	26.1	27.3	19.7	28.7	11.1	622
25-29	53.5	52.1	41.4	33.4	32.1	29.2	29.8	22.0	33.4	10.9	783
30-34	58.0	53.7	43.8	32.2	31.8	30.3	29.9	20.9	33.3	13.1	466
35-39	53.5	51.9	40.2	33.1	27.7	25.6	28.5	21.6	28.3	13.0	319
40-49	47.8	45.3	39.7	32.1	24.4	26.3	26.8	20.7	28.8	17.8	95
Education											
Never attended	47.9	44.7	34.2	25.2	24.4	20.5	22.9	16.6	23.6	9.4	1,049
Primary	51.9	50.6	38.4	31.8	27.2	24.5	24.5	17.5	27.9	9.5	1,024
Secondary	61.3	61.7	54.7	43.2	43.3	42.3	41.7	32.3	45.2	19.3	299
More than secondary	64.9	63.0	61.3	40.7	47.2	49.5	44.3	34.8	50.5	17.1	184
Parity											
0	54.1	52.6	47.1	32.2	33.4	32.1	29.1	20.3	32.7	11.2	460
1-2	53.9	53.3	43.7	32.9	32.6	28.8	30.8	22.6	32.8	12.6	973
3-4	53.6	48.8	34.9	30.2	26.5	23.5	23.9	19.0	28.3	8.7	578
5+	46.5	44.9	34.0	27.7	23.2	21.8	23.1	16.7	23.5	11.2	546
Region											
Tigray	78.9	69.0	68.8	68.7	57.0	53.8	53.9	47.4	56.4	31.7	179
Afar	10.5	10.7	10.8	9.3	9.1	9.3	10.8	9.0	8.9	7.1	47
Amhara	71.7	71.3	63.3	42.0	46.8	45.0	45.1	35.5	48.4	21.8	533
Oromia	41.1	38.8	26.6	20.1	17.9	14.3	15.3	9.4	18.9	3.3	1,125
SNNP	52.3	50.6	35.0	30.8	25.2	23.2	24.0	16.4	23.5	9.8	576
Addis	47.1	52.7	63.0	40.5	50.4	50.2	46.4	37.1	51.3	16.1	98
Residence											
Rural	51.1	48.3	35.9	29.4	24.9	22.0	23.3	17.2	25.1	9.8	1,978
Urban	56.4	57.4	54.9	36.6	44.8	42.7	40.8	30.1	45.7	15.9	579
Wealth quintile											
Lowest	41.0	38.0	27.3	20.2	18.7	14.0	15.8	12.2	18.6	6.1	515
Lower	48.0	47.1	33.1	27.7	25.9	20.4	24.3	16.7	25.8	9.4	509
Middle	58.9	53.2	40.7	32.2	26.6	25.6	27.3	19.9	27.7	11.7	510
Higher	57.0	56.5	43.8	35.4	29.5	28.4	25.7	19.3	29.1	12.4	513
Highest	56.5	57.0	56.4	39.9	46.3	45.2	43.5	32.7	47.6	16.2	510

Maternal Assessment

Definition: Women who received ANC were asked whether they had any of the following assessments: weight measurement, blood pressure measurement, urine, blood, and stool sampling. The proportions of all respondents who reported receiving various maternal assessment at ANC are presented in Table 8, with results among women receiving ANC presented in Appendix 3.

Key findings: Less than one in five women completed all five assessments during ANC (17.9%). Overall, blood pressure was the most commonly measured item during ANC (65.3%). The majority of women had their weight (60.7%) and a blood sample taken (57.3%); nearly half of women gave a urine sample (42.4%); slightly over one in five gave a stool sample (22.7%).

Patterns by background characteristics:

- **Age:** Approximately one in five respondents age twenty and older received all five assessments. Among those age 15-19 years, however, only 13.3% received all assessments.
- **Education:** Women with more than secondary education (36.8%) had proportions of complete assessments about three times that of women who never attended school (13.6%).
- **Parity:** The proportion receiving each maternal assessment at ANC, except blood sample, was lower for higher parity women.
- **Region:** The overall percentages of women reporting having these assessments taken at ANC was the highest in Tigray, followed by Amhara and Addis Ababa, and the lowest in Afar.
- **Residence:** Roughly three in ten women (29.0%) in urban areas received all of the assessments at ANC, with the proportion of urban women receiving the service is twice as much as that of rural women.
- **Wealth:** In the highest wealth quintile, about one in three women (31.6%) received all assessments, compared to less than one in ten in the lowest wealth quintile (8.7%).

Table 8. Content of ANC - Maternal Assessment (all women)

Percent distribution of respondents who had their weight, blood pressure, urine, blood, and stool sample taken at ANC and the proportion of women who received all 5 maternal assessments, among all women, by background characteristics, PMA Ethiopia 2019-2021 Cohort

Background characteristics	Blood pressure taken	Weight taken	Urine sample taken	Blood sample taken	Stool sample taken	All 5 assessments	Number of women (weighted)
Overall	65.3	60.7	42.4	57.3	22.7	17.9	2,557
Age							
15-19	56.6	56.9	34.4	45.8	16.8	13.3	272
20-24	67.0	61.0	45.9	60.2	22.7	19.2	622
25-29	69.2	64.9	44.1	60.4	24.4	18.1	783
30-34	65.7	61.6	43.8	58.3	24.8	20.9	466
35-39	61.3	55.8	36.2	53.3	21.5	15.2	319
40-49	58.1	48.2	41.7	53.3	19.6	15.6	95
Education							
Never attended	57.0	51.2	34.2	48.8	18.1	13.6	1,049
Primary	64.6	60.8	41.0	54.8	21.4	16.5	1,024
Secondary	83.2	78.8	60.7	79.3	30.7	25.9	299
More than secondary	87.2	85.1	66.8	83.3	43.3	36.8	184
Parity							
0	73.4	71.4	48.7	63.2	27.1	23.0	460
1-2	69.7	64.7	47.3	64.9	24.2	19.0	973
3-4	60.8	54.4	40.3	53.6	21.9	16.8	578
5+	55.4	51.5	30.4	42.4	17.3	12.8	546
Region							
Tigray	84.6	87.9	70.8	80.0	38.5	34.6	179
Afar	15.2	14.0	11.6	12.9	9.2	6.8	47
Amhara	79.3	74.5	55.5	79.6	33.4	24.8	533
Oromia	61.7	54.0	34.4	47.9	16.6	12.8	1,125
SNNP	55.1	53.5	35.5	47.5	20.9	16.8	576
Addis	79.4	78.5	65.6	79.9	23.2	20.5	98
Residence							
Rural	61.1	55.3	36.5	50.9	19.2	14.7	1,978
Urban	79.7	79.5	62.3	79.0	34.8	29.0	579
Wealth quintile							
Lowest	53.2	50.8	26.3	43.0	12.4	8.7	515
Lower	54.6	49.5	32.9	45.0	16.5	11.6	509
Middle	63.9	58.9	34.6	55.2	19.9	14.8	510
Higher	71.6	62.8	50.3	62.0	27.8	22.8	513
Highest	83.3	81.8	67.9	81.2	37.0	31.6	510

Postpartum family planning (PPFP) Counseling

Definition: Respondents were asked whether any ANC provider talked with them about postpartum family planning during their ANC visits. Respondents were considered having received postpartum family planning counseling if they answered “yes” to this question. Results among all women are shown in Table 9, with results among ANC recipients in Appendix 4.

Key findings: The overall coverage of postpartum family planning counseling was low. Among all respondents, less than one in five (15.7%) reported that their provider discussed postpartum family planning during ANC.

Patterns by background characteristics:

- **Age:** Discussion of PPFP was highest among women of older age groups (16.8% women 40-49 and 19.5% women age 35-39). Less than one in ten (6.9%) women age 15-19 reported discussing PPFP during ANC.
- **Education:** 13.7% of women with no education and 19.1% of women with more than secondary education were counseled on family planning at ANC.
- **Parity:** Around 17% of multiparous women and 10.0% of nulliparous women reported receiving PPFP at ANC.
- **Region:** Women in Tigray and Afar had the highest and lowest reported prevalence of receiving PPFP counseling of one in five (22.3%) and one in twenty (3.5%).
- **Residence:** About 16.0% and 14.5% of women in rural and urban areas, respectively, received counseling on postpartum family planning during their ANC contacts.
- **Wealth:** The proportions of women who reported receiving PPFP counseling at ANC were close to the overall mean across wealth quintiles.

Table 9. Content of ANC - Postpartum Family Planning Counseling (all women)

Percent distribution of respondents who received postpartum family planning counseling at ANC, by background characteristics, PMA Ethiopia 2019-2021 Cohort		
Background characteristics	Percent	Number of women (weighted)
Overall	15.7	2,557
Age		
15-19	6.9	272
20-24	15.3	622
25-29	16.3	783
30-34	17.5	466
35-39	19.5	319
40-49	16.8	95
Education		
Never attended	13.7	1,049
Primary	16.5	1,024
Secondary	17.7	299
More than secondary	19.1	184
Parity		
0	10.0	460
1-2	16.6	973
3-4	16.7	578
5+	17.7	546
Region		
Tigray	22.3	179
Afar	3.5	47
Amhara	20.9	533
Oromia	11.2	1,125
SNNP	18.0	576
Addis	19.0	98
Residence		
Rural	16.0	1,978
Urban	14.5	579
Wealth quintile		
Lowest	14.9	515
Lower	14.4	509
Middle	17.0	510
Higher	17.6	513
Highest	14.5	510

Testing and Counseling for Sexually Transmitted Infections

Definition: Respondents who received ANC were asked whether they received HIV and syphilis testing as part of ANC. Among those who reported being tested, women were asked whether their provider discussed the result with them and/or provided counseling. The survey did not ask about test results. Table 10 provides the proportion of respondents who reported receiving sexually transmitted infection (STI) testing and/or counseling among all women, with Appendix 5 results among women who received ANC.

Key findings:

- Nearly half (47.8%) of respondents overall received HIV testing; a smaller proportion (15.1%) received syphilis testing.
- The majority of women who were tested reported receiving their results and discussing the results with their providers.

Patterns by background characteristics:

- **Age:** Women between the age of 20-29 had the highest proportion of receiving STI testing and/or counseling, as compared to other age groups.
- **Region:** The overall reported prevalence of STI testing and/or counseling was the highest among women living in Addis and the lowest among women from Afar.
- **Residence:** Nearly 60% and 20% of women in urban and rural areas, respectively, received HIV at ANC. Syphilis testing at ANC was reported by approximately 20% and 5% of women living in urban and rural areas, respectively.
- **Parity:** The prevalence of both HIV and syphilis testing was highest among nulliparous women: 38.5% of whom received HIV testing and 12.3% of whom received syphilis testing at ANC.
- **Education:** While two-thirds (67.8%) and one-third (30.1%) of women with more than secondary education received HIV and syphilis testing respectively, only one in six women with no education received HIV testing (18.0%); fewer than one in twenty received syphilis testing (4.7%).
- **Wealth:** The proportions of women who reported receiving HIV and syphilis testing and/or counseling was highest among women in the highest wealth quintile, with 60.2% of women receiving HIV testing and 20.7% receiving syphilis testing at ANC.

Table 10. Content of ANC - HIV and Syphilis Testing (all women)

Percent distribution of respondents who received HIV and Syphilis testing, test results, and test counseling at ANC, among all women, by background characteristics, PMA Ethiopia 2019-2021 Cohort									
Background characteristics	HIV testing	Syphilis testing	Number of women (weighted)	HIV result ¹	HIV counseling ¹	Number of women with HIV test (weighted)	Syphilis result ²	Syphilis counseling ²	Number of women with Syphilis test (weighted)
Overall	47.8	15.1	2,557	77.3	63.7	1,407	83.8	72.4	422
Age									
15-19	33.9	10.6	272	74.2	63.7	106	(91.3)	(83.4)	32
20-24	50.2	16.9	622	76.4	62.0	360	82.2	65.7	115
25-29	50.7	17.0	783	79.5	63.6	457	88.3	74.1	146
30-34	50.1	13.4	466	80.7	67.1	269	79.3	74.8	68
35-39	45.8	13.2	319	74.8	61.3	168	(78.6)	(70.7)	46
40-49	43.3	14.0	95	(60.3)	(65.1)	48	*	*	15
Education									
Never attended	37.0	9.3	1,049	78.5	66.1	447	75.9	66.1	106
Primary	46.2	15.2	1,024	74.4	61.1	544	87.3	76.6	170
Secondary	69.7	19.2	299	77.3	62.8	240	81.6	74.2	63
More than secondary	83.2	40.8	184	83.2	66.6	176	88.7	70.3	82
Parity									
0	56.2	21.5	460	78.5	64.7	297	88.2	73.2	108
1-2	53.9	17.4	973	76.3	62.7	603	83.0	71.4	186
3-4	43.7	10.2	578	79.4	64.2	291	83.2	74.2	65
5+	34.5	10.6	546	75.7	64.3	216	(79.6)	(72.0)	64
Region									
Tigray	73.4	13.7	179	76.5	62.0	151	89.8	74.1	27
Afar	12.4	2.9	47	(96.8)	(96.9)	7	*	*	1
Amhara	71.0	21.6	533	82.7	61.8	436	89.7	73.3	126
Oromia	36.4	13.5	1,125	74.0	65.2	471	80.5	68.4	166
SNNP	38.3	11.5	576	72.7	60.0	254	76.0	75.7	73
Addis	79.1	26.7	98	81.4	75.5	89	91.1	79.4	29
Residence									
Rural	39.6	11.9	1,978	74.6	61.7	902	80.2	71.0	258
Urban	75.9	25.9	579	82.3	67.1	505	89.5	74.5	164
Wealth quintile									
Lowest	32.0	9.3	515	68.9	63.0	189	(88.6)	(87.9)	52
Lower	33.2	9.6	509	69.9	60.5	195	(79.3)	(71.5)	53
Middle	41.0	10.6	510	81.4	59.3	241	(74.4)	(56.9)	59
Higher	52.3	16.2	513	79.8	66.5	309	84.5	71.9	91
Highest	80.7	29.8	510	80.0	65.5	474	86.8	73.5	166
<p>Note:</p> <p>1. Denominator: among all women who received HIV testing</p> <p>2. Denominator: among all women who received Syphilis testing</p>									

Participation in 1-to-5 meeting

Definition: The 1-to-5 model is a government structure in Ethiopia in which five women participate in small group session with one woman leading the group to discuss issues related to health and well-being. Villages that have greater participation in 1-to-5 meetings are purported to have higher utilization of health services, including ANC. Respondents were asked whether they participated in a 1-to-5 meeting with a team leader during the current pregnancy to discuss general health service utilization and maternal health issues, including the importance of getting early and regular ANC services, delivery at health facilities, and vaccinating children.

Key findings: Roughly, 6.9% of women reported participating in a 1-to-5 meeting during their pregnancy. Additional details are presented in Table 11.

Patterns by background characteristics:

- **Age:** Those who were aged 25-29 and 15-19 had the highest and lowest proportion of attending a 1-to-5 meeting (8.2% and 3.6%, respectively).
- **Education:** 1-5 participation increased with increasing education levels.
- **Parity:** By parity, the largest proportion of women who participated in at least one 1-to-5 meeting during pregnancy had 3-4 children (8.5%), while 6.5% of nulliparous women attended these meetings.
- **Region:** While 13.6% women living in Amhara attended a 1-5 meeting, very few women in Addis (0.8%) and Afar (0.4%) did so.
- **Residence:** Among respondents in rural and urban areas, 7.3% and 5.7% reported participating in a 1-to-5 meeting at some point during their pregnancy.
- **Wealth:** 1-5 participation was lowest for the lowest and highest wealth quintiles (4.7% and 4.9%, respectively).

Table 11. One-to-five Meeting Participation

Percent distribution of women who participated in a one-to-five meeting during pregnancy, among all women, by background characteristics, PMA Ethiopia 2019-2021 Cohort					
Background characteristics	Yes	No, member but did not participate	No, not member	No response	Number of women (weighted)
Overall	6.9	10.4	82.6	0.1	2,557
Age					
15-19	3.6	7.5	88.9	0.0	272
20-24	6.2	7.9	85.9	0.0	622
25-29	8.2	10.4	81.5	0.0	783
31-34	7.1	8.4	84.1	0.4	466
35-39	7.7	17.6	74.8	0.0	319
40-49	8.1	21.5	70.4	0.0	95
Education level					
No education	6.1	10.8	82.9	0.2	1,049
Primary	6.9	10.5	82.6	0.0	1,024
Secondary	8.7	10.5	80.9	0.0	299
More than secondary	9.3	7.7	83.0	0.0	184
Parity					
0 children	6.5	5.7	87.8	0.0	460
1-2 children	6.9	9.6	83.4	0.0	973
3-4 children	8.5	12.0	79.5	0.0	578
5+ children	5.7	14.0	79.9	0.4	546
Region					
Tigray	12.0	33.5	54.5	0.0	179
Afar	0.4	3.0	96.6	0.0	47
Amhara	13.6	9.3	77.2	0.0	533
Oromiya	1.9	7.5	90.4	0.2	1,125
SNNP	10.6	11.5	78.0	0.0	576
Addis	0.8	5.3	93.9	0.0	98
Residence					
Rural	7.3	11.6	81.0	0.1	1,978
Urban	5.7	6.2	88.1	0.0	579
Wealth quintile					
Lowest quintile	4.7	11.1	84.2	0.0	515
Lower quintile	6.6	11.5	82.0	0.0	509
Middle quintile	8.7	11.3	79.6	0.4	510
Higher quintile	9.9	10.0	80.1	0.0	513
Highest quintile	4.9	8.2	86.9	0.0	510

Note: Row percentages presented.

Delivery Care

Place of Delivery

Definition: All women were asked where they gave birth. Responses included home, government hospital, government health center or lower (inclusive of health centers, health posts, and other public facilities), private sector, non-governmental organization (NGO) or other (inclusive of NGO/faith-based health facility and other facilities). A combined binary item was created to indicate if a woman delivered in any facility. Place of delivery results are presented in Table 12.

Key findings: Approximately half of women delivered in a facility (54.5%). Government hospital was the most common facility type in which women delivered (20.6%).

Patterns by background characteristics:

- **Age:** Facility deliveries were most common for women of younger age groups, with 62.8% of women ages 20-24 delivering in any facility. Comparatively, home deliveries were most common for women ages 40-49 (64.6%).
- **Education:** Almost all women with more than secondary education delivered in a facility (95.4%). The proportion of women delivering within a facility decreased with decreasing education levels, with only 38.3% of women with no education delivering in a facility.
- **Parity:** Over three-quarters (77.9%) of nulliparous women delivered within a facility, compared to approximately one-third (34.7%) of women with five or more children.
- **Region:** Nearly all women in Addis delivered within a facility (97.2%). Over half of women delivered in a facility in Tigray (72.8%), Amhara (57.9%), Oromiya (50.4%), and SNNP (49.4%), whereas the majority of women in Afar delivered at home (83.8%).
- **Residence:** Less than half of women in rural areas delivered within a facility (43.5%), compared to almost all women within urban areas (92.0%).
- **Wealth:** The proportion of women delivering within a facility increased with increasing wealth quintile.

Table 12. Place of Delivery

Percent distribution of women's place of delivery and the percentage of women who delivered at a health facility, among all women, by background characteristics and number of ANC visits, PMA Ethiopia 2019-2021 Cohort							
Background characteristics	Home	Government hospital	Government HC or lower ¹	Private sector	NGO and others ²	Percentage delivered in a health facility	Number of women (weighted)
Overall	44.8	20.6	32.2	1.2	1.3	54.5	2,557
Age							
15-19	42.1	16.9	40.1	0.3	0.7	57.5	272
20-24	36.4	24.8	36.6	0.7	1.5	62.8	622
25-29	43.8	23.0	30.1	1.8	1.3	55.9	783
31-34	50.7	18.3	28.6	1.5	1.0	48.6	466
35-39	51.7	15.2	30.3	1.2	1.6	46.8	319
40-49	64.6	12.4	21.4	0.0	1.6	33.8	95
Education level							
No education	60.8	10.4	27.5	0.2	1.2	38.3	1,049
Primary	43.3	20.7	34.7	0.2	1.0	56.0	1,024
Secondary	18.9	34.2	41.9	3.0	2.0	80.9	299
More than secondary	4.6	55.4	29.0	8.9	2.2	95.4	184
Parity							
0 children	21.8	36.8	38.5	1.9	0.9	77.9	460
1-2 children	37.7	22.2	36.8	1.6	1.7	61.5	973
3-4 children	57.3	15.1	26.1	0.9	0.6	42.6	578
5+ children	63.8	9.7	25.0	0.1	1.5	34.7	546
Region							
Tigray	26.2	30.9	41.3	0.2	1.5	72.8	179
Afar	83.8	4.9	10.0	0.0	1.2	16.2	47
Amhara	40.9	18.6	38.6	0.4	1.6	57.9	533
Oromiya	49.2	18.0	30.5	1.2	1.0	50.4	1,125
SNNP	49.9	20.1	28.5	0.3	1.2	49.4	576
Addis	2.0	51.3	31.8	12.0	2.8	97.2	98
Residence							
Rural	55.7	12.4	30.7	0.1	1.0	43.5	1,978
Urban	7.7	48.3	37.1	4.8	2.1	92.0	579
Wealth quintile							
Lowest quintile	71.0	8.2	20.2	0.0	0.7	28.5	515
Lower quintile	60.3	8.2	30.2	0.0	1.4	38.6	509
Middle quintile	49.1	14.9	34.4	0.2	1.3	50.0	510
Higher quintile	38.2	18.2	42.5	0.2	0.8	60.9	513
Highest quintile	5.3	53.4	33.7	5.5	2.1	94.6	510
Number of ANC visit							
0 visits	69.4	12.5	17.1	0.4	0.6	30.2	577
1-3 visits	52.2	15.8	30.7	0.2	1.1	47.0	892
4+ visits	25.7	28.8	41.4	2.4	1.7	73.5	1,088
Note:							
1. Government health center (HC) or lower include government health centers (n=807) and health posts (n=16).							
2. NGO and others include NGO/Faith-based health facilities (n=14) and other facilities, not specified (n=18).							

Skilled Birth Attendant

Definition: All women were asked who assisted with delivery. Based on responses, an additional indicator was created for skilled birth attendant, inclusive of doctors, health officers, nurses/midwives, and when a woman reported she was unable to identify the cadre of the attendant (skilled attendant (can't distinguish)). Results are presented in Table 13.

Key findings: Over half of women (54.5%) delivered with a skilled birth attendant. Delivery with a skilled birth attendant was more common for women who delivered in a hospital or private sector facility, were wealthy, and from urban regions.

Patterns by background characteristics:

- **Age:** Skilled birth attendance was most common for women of younger age groups, with 62.9% of women age 20-24 reporting delivery with a skilled birth attendant. Comparatively, approximately one in three women (33.8%) age 40-49 reported delivery by a skilled birth attendant.
- **Education:** Almost all women with more than secondary education reported delivery with a skilled birth attendant (95.4%). The proportion of women delivering with a skilled birth attendant decreased with decreasing education levels (lowest for women with no education at 38.1%).
- **Parity:** Over three-quarters (77.9%) of nulliparous women delivered with a skilled birth attendant, compared to approximately one in three (34.7%) women with five or more children.
- **Region:** Nearly all women in Addis delivered with a skilled birth attendant (97.6%). In Afar, three out of four women delivered with a traditional birth attendant (78.3%).
- **Residence:** Less than half of women in rural areas delivered with a skilled birth attendant (43.6%), where 28.7% delivered with a traditional birth attendant. Almost all women in urban areas delivered with a skilled birth attendant (92.1%).
- **Wealth:** The proportion of women delivering with a skilled birth attendant increased with increasing wealth quintile.
- **Number of ANC visits:** The proportion of women reporting delivery with a skilled birth attendant increased with number of ANC visits: 4+ visits: 73.6%; 1-3 visits: 47.0%, and 0 visits: 30.2%.
- **Delivery location:** All (100.0%) women who delivered in a hospital or private sector facility reported delivery with a skilled birth attendant.

Table 13. Skilled Birth Attendant

Percent distribution of women's birth attendant and the percentage of women who delivered with a skilled birth attendant, among all women, by background characteristics, number of ANC visits, and delivery location, PMA Ethiopia 2019-2021 Cohort											
Background characteristics, number of ANC, and delivery location	No one assisted	Doctor	Health officer	Nurse/Midwife	Skilled attendant can't distinguish	Health extension worker	Traditional birth attendant	Family member	Other	Skilled birth attendant ¹	Number of women (weighted)
Overall	4.0	10.4	0.6	24.2	19.3	0.3	15.9	22.9	2.3	54.5	2,557
Age											
15-19	0.5	7.5	0.7	27.6	21.7	0.0	22.1	19.7	0.2	57.5	272
20-24	2.6	13.5	1.5	29.1	18.8	0.2	13.3	19.6	1.4	62.9	622
25-29	3.9	12.2	0.3	24.5	18.9	0.0	15.4	22.5	2.2	56.0	783
31-34	5.8	8.2	0.3	21.2	19.0	0.6	16.4	24.6	3.7	48.8	466
35-39	6.6	6.8	0.2	21.5	18.3	0.0	14.2	29.1	3.3	46.8	319
40-49	6.5	5.2	0.0	4.0	24.6	2.7	23.8	27.8	5.4	33.8	95
Education level											
No education	7.5	2.9	0.7	15.3	19.3	0.5	20.4	30.1	3.4	38.1	1,049
Primary	2.3	11.2	0.5	24.6	20.1	0.0	16.5	23.3	1.5	56.4	1,024
Secondary	0.4	20.9	0.3	39.5	19.8	0.4	8.1	8.3	2.3	80.5	299
More than secondary	0.0	31.6	1.6	47.8	14.4	0.0	0.0	3.7	0.9	95.4	184
Parity											
0 children	0.1	18.3	1.6	33.5	24.4	0.0	11.7	9.9	0.4	77.9	460
1-2 children	3.4	12.6	0.7	29.4	19.1	0.1	12.9	20.3	1.4	61.9	973
3-4 children	6.0	6.7	0.1	17.2	18.2	0.5	20.2	27.0	4.0	42.3	578
5+ children	6.3	3.5	0.2	14.5	16.6	0.5	20.5	34.2	3.8	34.7	546
Region											
Tigray	2.6	11.2	0.0	50.3	11.3	0.0	4.8	13.3	6.5	72.8	179
Afar	0.0	3.5	0.4	4.1	8.1	0.0	78.3	5.5	0.0	16.2	47
Amhara	3.3	5.7	0.2	23.1	29.0	0.8	13.9	21.9	2.3	57.9	533
Oromiya	2.8	9.5	0.9	23.1	17.2	0.0	22.2	22.4	1.9	50.6	1,125
SNNP	8.6	9.5	0.7	19.6	19.4	0.4	6.6	32.8	2.4	49.2	576
Addis	0.4	52.3	1.1	32.3	11.9	0.0	0.5	1.5	0.0	97.6	98
Residence											
Rural	4.9	5.2	0.6	20.1	17.7	0.3	19.7	28.7	2.8	43.6	1,978
Urban	0.9	28.0	0.8	38.3	25.0	0.0	3.0	3.2	0.8	92.1	579
Wealth quintile											
Lowest quintile	10.6	3.3	1.0	11.6	12.3	0.5	24.3	30.2	6.3	28.2	515
Lower quintile	5.3	2.4	0.5	17.6	18.4	0.0	19.6	34.5	1.7	38.9	509
Middle quintile	2.4	6.1	0.0	18.9	25.2	0.2	17.3	28.2	1.5	50.2	510
Higher quintile	1.7	8.0	0.7	31.2	21.0	0.5	15.6	19.3	1.8	60.9	513
Highest quintile	0.1	32.1	0.9	41.8	19.9	0.0	2.7	2.3	0.3	94.7	510
Number of ANC visit											
0 visits	7.1	6.0	1.3	13.6	9.3	0.0	25.4	34.4	2.9	30.2	577
1-3 visits	4.9	5.3	0.2	21.0	20.5	0.4	19.4	26.3	2.0	47.0	892
4+ visits	1.7	16.9	0.6	32.5	23.7	0.2	8.1	14.1	2.3	73.6	1,088
Delivery location											
Home	8.7	0.0	0.0	0.0	0.0	0.3	35.4	50.3	5.2	0.0	1,146
Government hospital	0.0	37.4	1.2	25.4	36.0	0.0	0.0	0.0	0.0	100.0	525
Government HC or lower ²	0.0	4.8	1.1	57.9	35.8	0.3	0.0	0.0	0.0	99.7	823
Private sector	0.0	68.0	0.0	16.2	15.8	0.0	0.0	0.0	0.0	100.0	30
NGO	*	*	*	*	*	*	*	*	*	*	14
Other facilities, not specified	*	*	*	*	*	*	*	*	*	*	18

Note:

Figures are placed in parentheses when they are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on less than 25 unweighted cases and has been suppressed.

1. Skilled birth attendants include doctors, health officers, nurses/midwives, and skilled attendant (can't distinguish)

2. Government health center (HC) or lower include health centers and health posts.

Caesarean Section Delivery

Definition: All women who delivered within a facility were asked if they had a caesarean section (defined within the survey as cutting the belly to take the baby out). Results are presented among women with facility delivery and among all women (assuming that caesarean sections did not occur at home) in Table 14.

Key findings: Approximately 5.5% of all women and 10.0% of women delivering within facilities had a caesarean section.

Patterns by background characteristics:

- **Age:** Caesarean deliveries were most common for women age 25-29 (8.9%), compared to 3.3% of women age 35-39 and 2.0% of women age 40-49.
- **Education:** Caesarean delivery ranged widely by education level, from 17.4% among women with more than secondary education to 1.9% among women with no education.
- **Parity:** Caesarean delivery was highest for nulliparous (9.2%) and women with 1-2 children (7.7%).
- **Region:** One in four women (25.0%) within Addis reported caesarean delivery. Across all other regions, less than ten percent of women reported caesarean delivery.
- **Residence:** Approximately 2.7% of rural women and 15.0% of urban women reported caesarean delivery.
- **Wealth:** Caesarean deliveries were most prevalent among women of the highest wealth quintile (17.2%). Less than five percent of women from all other wealth quintiles reported caesarean delivery.
- **Number of ANC visits:** The proportion of women reporting caesarean delivery increased with number of ANC visits: 4+ visits: 8.7%; 1-3 visits: 3.6%, and 0 visits: 2.4%.

Table 14. Caesarean Section Delivery

Percent distribution of women who had a caesarean section (c-section) delivery among women with facility births and among all women, by background characteristics and number of ANC visits, PMA Ethiopia 2019-2021 Cohort				
Background characteristics and number of ANC	Among women with facility births	Number of women with facility births (weighted)	Among all women	Number of women (weighted)
Overall	10.0	1,576	5.5	2,557
Age				
15-19	6.2	177	3.6	272
20-24	7.7	443	4.8	622
25-29	15.9	495	8.9	783
31-34	7.9	256	3.8	466
35-39	7.0	169	3.3	319
40-49	(6.0)	36	2.0	95
Education level				
No education	5.0	455	1.9	1,049
Primary	9.2	648	5.1	1,024
Secondary	14.5	274	11.8	299
More than secondary	18.2	199	17.4	184
Parity				
0 children	11.8	406	9.2	460
1-2 children	12.4	677	7.7	973
3-4 children	7.4	278	3.2	578
5+ children	2.6	215	0.9	546
Region				
Tigray	9.8	147	7.1	179
Afar	(7.2)	9	1.2	47
Amhara	9.6	349	5.6	533
Oromiya	9.9	642	5.0	1,125
SNNP	5.8	322	2.9	576
Addis	25.7	107	25.0	98
Residence				
Rural	6.2	973	2.7	1,978
Urban	16.3	603	15.0	579
Wealth quintile				
Lowest quintile	3.3	166	0.9	515
Lower quintile	4.0	222	1.5	509
Middle quintile	8.5	289	4.2	510
Higher quintile	5.8	354	3.5	513
Highest quintile	18.2	546	17.2	510
Number of ANC visit				
0 visits	7.8	198	2.4	577
1-3 visits	7.6	474	3.6	892
4+ visits	11.8	904	8.7	1,088
Note: Figures are placed in parentheses when they are based on 25-49 unweighted cases.				

Delivery Complications

Definition: All women were asked if they experienced any problems during delivery. Problems included severe bleeding; leaking/rupture of the membrane and no labor pain for more than 24 hours; leaking/rupture of the membrane before nine months; malpresentation (the feet/hand came out first) or malposition (the baby lied transversely during pregnancy); prolonged labor greater than 12 hours; and convulsions or fits. Affirmative response to any complication was categorized into a variable for “any complication.” All complications were self-reported and were not confirmed via record review or formal diagnosis.

Key findings: Over two-thirds of women experienced a delivery complication (37.4%). Most prevalent delivery complications were severe bleeding (20.2%), followed by prolonged labor (16.2%).

Patterns by background characteristics:

- **Age:** Approximately four out of ten women across age categories experienced any delivery complication. Across age categories, severe bleeding was most common.
- **Education:** Approximately 40% of women across education levels experienced any delivery complication.
- **Parity:** Nulliparous women reported increased prevalence of delivery complication (43.2%). Nulliparous women (20.8%) and women with five or more children (22.3%) reported the highest proportions of severe bleeding.
- **Region:** Delivery complications were most common in Amhara (44.5%), followed by Tigray (43.7%). Women in Tigray reported the highest proportions of rupture of membrane and no labor pains for more than 24 hours (11.6%) and malposition/malpresentation (6.2%).
- **Residence:** Delivery complications were slightly higher in rural vs. urban areas (38.5% and 33.5%, respectively).
- **Wealth:** Roughly equal proportions of women across wealth quintiles reported delivery complications.
- **Number of ANC visits:** Convulsions or fits were highest among women with no ANC visits (16.6%), compared to women with 1-3 visits (10.7%) and four or more visits (10.9%).

Table 15. Delivery Complications

Percent distribution of women who self-reported delivery-related maternal health complications, including severe bleeding, rupture of membrane and no labor pains for >24 hours, rupture of membrane before 9 months, malposition/malpresentation, prolonged labor, convulsions/fits, and any complication among all women, by background characteristics and number of ANC visits, PMA Ethiopia 2019-2021 Cohort

Background characteristics and number of ANC	Severe bleeding	Rupture of membrane and no labor pains for >24 hours	Rupture of membrane before 9 months	Malposition/malpresentation	Prolonged labor (>12 hours)	Convulsions/fits	Any complication	Number of women (weighted)
Overall	20.2	5.2	2.4	4.2	16.2	12.1	37.4	2,557
Age								
15-19	17.2	4.7	2.2	4.2	17.9	14.0	35.5	272
20-24	23.0	5.3	2.0	4.3	20.7	9.6	41.7	622
25-29	18.3	5.6	2.5	3.9	13.9	12.5	34.8	783
31-34	20.3	6.1	3.4	4.4	16.9	13.5	39.2	466
35-39	20.5	4.5	0.4	4.7	12.0	11.7	34.8	319
40-49	24.0	0.7	5.2	2.8	11.5	14.4	36.1	95
Education level								
No education	19.8	4.7	2.5	3.6	13.9	12.8	34.3	1,049
Primary	23.3	5.6	2.6	4.2	17.6	12.9	41.1	1,024
Secondary	15.8	5.6	1.5	6.5	17.8	8.8	36.0	299
More than secondary	12.1	5.0	1.9	3.7	19.1	9.4	36.7	184
Parity								
0 children	20.8	7.5	3.0	5.0	24.5	10.7	43.2	460
1-2 children	18.8	4.7	2.6	4.2	15.6	12.3	36.2	973
3-4 children	19.9	4.6	1.5	4.3	12.3	12.1	35.4	578
5+ children	22.3	4.7	2.4	3.3	14.5	13.1	36.7	546
Region								
Tigray	20.8	11.6	3.5	6.2	19.8	14.1	43.7	179
Afar	9.2	3.2	3.3	2.1	11.0	5.2	19.2	47
Amhara	26.1	5.3	1.8	5.4	16.3	14.9	44.5	533
Oromiya	17.4	4.2	2.2	3.9	15.2	9.5	32.7	1,125
SNNP	21.9	5.1	2.9	3.2	16.1	15.6	39.5	576
Addis	13.9	4.8	1.8	4.2	23.5	6.4	38.0	98
Residence								
Rural	21.6	5.2	2.5	4.0	16.3	13.5	38.5	1,978
Urban	15.2	5.0	1.9	4.8	15.9	7.6	33.5	579
Wealth quintile								
Lowest quintile	23.7	3.2	1.3	3.3	12.7	12.9	38.0	515
Lower quintile	24.2	3.8	3.6	4.4	16.0	16.5	38.0	509
Middle quintile	19.2	7.6	2.8	3.7	17.4	11.4	36.4	510
Higher quintile	16.8	5.3	2.2	4.6	14.0	10.5	36.0	513
Highest quintile	17.0	5.9	2.0	5.0	21.0	9.4	38.6	510
Number of ANC visit								
0 visits	22.5	4.6	1.6	4.5	11.6	16.6	36.2	577
1-3 visits	19.4	4.8	3.3	3.5	15.3	10.7	34.9	892
4+ visits	19.6	5.8	2.0	4.6	19.4	10.9	40.1	1,088

Treatment of Delivery Complications

Definition: If women reported any delivery complication, they were asked where they sought care for the complication experienced during delivery. Responses were not mutually exclusive.

Key findings: One in five women did not seek any treatment for the complication they experienced during delivery (21.8%). For women who sought treatment, it was most commonly sought from a government health center or lower facility (37.2%).

Patterns by background characteristics:

- **Age:** Not seeking treatment for a delivery complication was highest for women of oldest age groups (37.2% among women age 40-49). Comparatively, only 18.1% of women age 15-19 did not seek treatment for a delivery complication.
- **Education:** Treatment seeking widely varied by education—26.3% of women with no education and 24.0% of women with primary education did not seek treatment for a delivery complication, compared to 4.7% of women with more than secondary school.
- **Parity:** Treatment sought for delivery complications varied across parity. Not seeking treatment was most prevalent among women with five or more children (38.8%), whereas it was lowest among nulliparous women (8.1%).
- **Region:** Treatment sought for delivery complication was highest in Addis (no treatment sought:4.2%). Women in SNNP reported lowest levels of treatment seeking (27.2% did not seek treatment).
- **Residence:** Not seeking treatment for delivery complications was reported by 26.2% of women in rural areas and 4.3% of women in urban areas.
- **Wealth:** Not seeking treatment for delivery complications was approximately 30% for all women, except for women of highest quintiles.

Table 16. Treatment of Delivery Complications

Percent distribution of places where women sought care for any complications during delivery, among women with any delivery complications, by background characteristics, PMA Ethiopia 2019-2021 Cohort¹

Background characteristics	Home	Government hospital	Government HC or lower ²	Private, NGO and other ³	No treatment sought	Number of women (weighted)
Overall	13.8	28.0	37.2	2.4	21.8	937
Age						
15-19	21.3	16.6	45.7	0.3	18.1	95
20-24	13.1	31.7	41.6	1.7	14.7	254
25-29	8.8	35.2	32.4	3.9	24.5	267
31-34	18.2	27.3	30.3	3.2	24.0	179
35-39	13.2	14.3	46.0	1.6	26.6	109
40-49	(16.5)	(24.2)	(25.6)	(0.0)	(37.2)	34
Education level						
No education	20.1	18.0	36.6	1.7	26.3	353
Primary	13.2	26.7	37.7	1.0	24.0	412
Secondary	3.4	46.8	41.2	3.9	8.8	106
More than secondary	0.3	59.9	30.0	12.9	4.7	66
Parity						
0 children	8.7	45.6	41.6	2.7	8.1	194
1-2 children	15.8	27.6	36.7	3.1	18.6	345
3-4 children	18.8	23.0	34.8	2.7	23.9	201
5+ children	10.1	16.5	35.9	0.8	38.8	196
Region						
Tigray	6.9	32.9	45.7	1.4	16.0	76
Afar	(51.9)	(14.1)	(15.9)	(9.3)	(15.0)	9
Amhara	9.5	25.6	44.5	2.1	21.5	232
Oromiya	15.2	26.3	37.2	2.6	21.8	360
SNNP	19.0	26.3	27.7	2.1	27.2	223
Addis	0.0	64.5	35.4	5.6	4.2	36
Residence						
Rural	16.7	20.4	38.0	1.2	26.2	747
Urban	2.2	57.9	33.7	7.3	4.3	190
Wealth quintile						
Lowest quintile	24.2	12.6	32.9	0.4	31.7	192
Lower quintile	23.2	14.4	37.6	0.6	26.5	190
Middle quintile	11.5	27.0	37.7	1.1	26.3	182
Higher quintile	9.1	26.7	45.6	2.2	19.3	181
Highest quintile	0.7	59.1	32.6	7.6	5.3	193

Note:

Figures are placed in parentheses when they are based on 25-49 unweighted cases.

1. Respondents were able to select multiple options. Therefore, the row percentages do not add up to 100%.

2. Health center (HC) or lower includes health center, health post, and other public facilities.

3. Private, NGO and other include private hospital/clinic, other private medical sector, NGO/Faith-based health facility, traditional healer/medicine, pharmacy, and others (not specified)

Postnatal Care

Timing of Postnatal Care

Definition: All women were asked if and when they received postnatal care (PNC) by the time of their 6-week interview. Receiving PNC within 48 hours included having mother's health checked at the health facility within 48 hours or seeking/receiving PNC from PHCP or HEW within in two days of delivery. Further assessed categories included receipt of PNC more than 48 hours after birth and no PNC.

Key findings:

- Half (49.8%) of all women did not receive PNC after delivery
- Approximately one-third (35.2%) of women received PNC within 48 hours of delivery.

Patterns by background characteristics:

- **Education:** Roughly three out of five (61.6%) women with no education did not receive PNC, relative to one in seven (14.8%) women who attended more than secondary education. Only 22.6% of women with no education received PNC within 48 hours of delivery, compared to approximately 71.5% of women who attended more than secondary school. Approximately half (56.6%) of women with secondary education received PNC within 48 hours of delivery. Half (50.8%) of women who completed primary education received no PNC and 35.2% received PNC within 48 hours of delivery.
- **Residence:** Almost three in five (58.1%) women living in rural settings, compared to only one in five (21.8%) women living in urban settings, received no PNC. Approximately three in five (64.1%) women living in urban settings, compared to only 26.7% of women living in rural settings, received PNC within 48 hours of delivery.
- **Wealth:** More than six in ten (67.7%) women in the highest wealth quintile received PNC within 48 hours as compared to only 16.9% of women in the lowest wealth quintile receiving no PNC. More than seven in ten (71.3%) women in the lowest wealth quintile received no PNC after delivery. Less than one in five (18.7%) women in the highest wealth quintile received no PNC.

Table 17. Timing of Postnatal Care

The percent distribution of respondent who received postnatal care (PNC) within 48 hours of delivery, more than 48 hours after delivery and the proportion of women with no PNC by the time of their 6-week interview, among all women, by background characteristics, PMA Ethiopia 2019-2021 Cohort

Background characteristics	PNC ≤ 48 hours after delivery	PNC > 48 hours after delivery	No PNC	Number of women (weighted)
Overall	35.2	15.0	49.8	2,557
Age				
15-19	29.7	15.5	54.8	272
20-24	40.8	16.6	42.6	622
25-29	38.4	13.4	48.2	783
31-34	32.4	15.3	52.2	466
35-39	28.5	15.1	56.4	319
40-49	23.3	13.5	63.2	95
Education level				
No education	22.6	15.8	61.6	1,049
Primary	35.2	13.9	50.8	1,024
Secondary	56.6	16.4	27.0	299
More than secondary	71.5	13.7	14.8	184
Parity				
0 children	50.8	13.0	36.3	460
1-2 children	40.0	15.7	44.3	973
3-4 children	25.3	16.2	58.5	578
5+ children	23.9	14.2	61.9	546
Region				
Tigray	52.4	19.6	27.9	179
Afar	8.9	7.4	83.6	47
Amhara	35.6	20.0	44.3	533
Oromiya	33.0	11.7	55.2	1,125
SNNP	28.6	16.4	55.0	576
Addis	77.4	11.3	11.3	98
Residence				
Rural	26.7	15.2	58.1	1,978
Urban	64.1	14.1	21.8	579
Wealth quintile				
Lowest quintile	16.9	11.8	71.3	515
Lower quintile	20.7	14.9	64.4	509
Middle quintile	30.0	17.1	52.9	510
Higher quintile	40.7	17.5	41.8	513
Highest quintile	67.7	13.6	18.7	510

Postnatal Care Utilization

Definition: All women were asked if they were visited by HEW or another professional healthcare provider since delivery. They were also asked if they themselves sought care from a provider, or if the provider visited them after delivery. Women with facility births were asked if their health was checked after delivery while they were still in the facility and by whom. Possible response options were health extension workers (HEW), as well as professional health care providers (PHCPs), such as doctors, nurses/midwives, health officers, and other skilled providers who could not be distinguished.

Key findings: As shown in Table 18, out of all women, half (50.2%) reported receiving any PNC after delivery. More than six in ten (62.7%) women with facility births received PNC after delivery. Approximately one in five (19.5%) women sought care from a PHCP, as compared to only 7.2% seeking care from a HEW after delivery.

Patterns by background characteristics:

- **Education:** Roughly two in five (39.0%) of women with more than secondary education sought care from a health care professional after delivery. Only 15.3% of women with no education sought care from a health care professional after delivery. Less than one in ten (7.2%) of women with no education and 5.9% of women with more than secondary education sought care from a HEW after delivery.
- **Residence:** Similar trends in visits by a HEW were seen amongst women in rural and urban areas (8.5% and 7.2%, respectively). Only 3.4% of women living in urban settings sought care from a HEW after delivery as compared to 8.3% of women living in rural settings.
- **Wealth:** Among women in the highest wealth quintile, approximately eight in ten (81.3%) reported receiving PNC after delivery, while less than one in three (28.7%) women in the lowest wealth quintile reported receiving PNC after delivery. Among women in the lower two quintiles, roughly one in ten sought care from a health care professional and less than 7% sought care from a HEW after delivery.
- **Region:** The proportion of women with any PNC was the highest in Addis (88.7%) and lowest in Afar (16.4%). The reported percentages of women seeking care from a health care professional after delivery in this sample of women ranged from 7.4% in Afar to 51.6% in Addis.

Table 18. PNC Utilization

Percent distribution of respondents who reported receiving PNC after delivery among all women, and the proportion of women whose health was checked after delivery among women with facility delivery, PMA Ethiopia 2019-2021 Cohort

Background characteristics	Mother's health checked after delivery	Visited by an HEW after delivery	Sought care from an HEW after delivery	Sought care from an PHCP after delivery	Any PNC	Number of women (weighted)	Mother's health checked after delivery	Number of women with facility delivery (weighted)
Overall	34.2	8.2	7.2	19.5	50.2	2,557	62.7	1,576
Age								
15-19	29.3	6.4	8.8	15.1	45.2	272	51.0	177
20-24	40.6	8.3	7.3	20.1	57.4	622	64.7	443
25-29	36.5	8.3	6.2	21.8	51.8	783	65.3	495
31-34	30.9	7.6	7.0	21.4	47.8	466	63.7	256
35-39	28.2	9.3	8.9	16.0	43.6	319	60.3	169
40-49	22.1	11.1	6.3	11.9	36.8	95	(65.4)	36
Education level								
No education	20.5	7.3	7.2	15.3	38.4	1,049	53.6	455
Primary	33.9	8.1	6.8	18.3	49.2	1,024	60.6	648
Secondary	57.5	11.5	9.8	26.3	73.0	299	71.1	274
More than secondary	75.5	8.7	5.9	39.0	85.2	184	79.1	199
Parity								
0 children	50.5	8.2	6.4	24.0	63.8	460	64.8	406
1-2 children	39.4	7.6	8.2	21.3	55.6	973	64.1	677
3-4 children	23.6	10.1	7.6	16.9	41.5	578	55.5	278
5+ children	22.2	7.4	5.7	15.2	38.1	546	63.8	215
Region								
Tigray	49.9	19.8	23.7	25.4	72.1	179	68.6	147
Afar	8.4	2.1	1.7	7.4	16.4	47	(51.9)	9
Amhara	35.8	9.3	8.0	20.6	55.7	533	61.8	349
Oromiya	30.5	4.5	5.2	18.0	44.8	1,125	60.4	642
SNNP	29.7	11.8	5.9	15.1	45.0	576	60.1	322
Addis	77.8	5.4	6.8	51.6	88.7	98	80.0	107
Residence								
Rural	25.0	8.5	8.3	13.6	41.9	1,978	57.6	973
Urban	65.4	7.2	3.4	39.7	78.2	579	71.0	603
Wealth quintile								
Lowest quintile	15.1	4.5	6.4	12.0	28.7	515	53.0	166
Lower quintile	21.5	4.9	7.0	11.7	35.6	509	55.6	222
Middle quintile	28.1	11.0	9.3	14.9	47.1	510	56.2	289
Higher quintile	36.2	12.6	10.0	17.8	58.2	513	59.4	354
Highest quintile	70.2	8.0	3.5	41.1	81.3	510	74.2	546

Notes:
Figures are placed in parentheses when they are based on 25-49 unweighted cases.

Counseling at PNC

Definition: Women who delivered in a facility and received PNC were asked if they received postpartum family planning counseling during PNC. Women who received PNC outside the health facility were asked if they received exclusive breastfeeding, immunization, infant feeding, and infant growth counseling at PNC. For postpartum family planning counselling, we present two sets of estimates: one among women with facility births and another among women with any PNC by the 6-week interview. Counseling on exclusive breastfeeding, immunization, infant feeding, and infant growth were estimated among with who received PNC outside the health facility.

Key findings: As shown in Table 19, more than a quarter (27.5%) of women with facility delivery and more than one in three women (35.2%) with any PNC received postpartum family planning counseling at PNC. Roughly half (47.8%) of women with PNC outside the health facility received exclusive breastfeeding counseling and more than six in ten (60.3%) women received immunization counseling during PNC.

Patterns by background characteristics:

- **Education:** Among women with any PNC, receipt of postpartum family planning counseling ranged from less than one-third (29.0%) among women with no education to almost two out of five among women with primary education (39.2%). About three in ten (30.6%) women with more than secondary education received infant growth counseling as compared to only 16% of women of no education.
- **Region:** The reported percentages of women receiving postpartum family planning at PNC among women who delivered in a facility ranged from 26.4% in Amhara to 40.6% in Addis.
- **Age:** Fewer than one in ten (6.4%) women aged 40-49 received infant feeding counseling, while at least one in four in all other age groups received infant feeding counseling at PNC (25.6%-37.8%). A similar trend is seen for all other counseling types, with women aged 40-49 receiving the least amount of counseling at PNC.
- The proportion of women receiving counseling at PNC were relatively similar across other demographic characteristics.

Table 19. Counseling at PNC

Percent distribution of respondents who reported receiving postpartum family planning counseling at PNC among women with facility delivery who had PNC, and the proportion of women who reported receiving exclusive breastfeeding, immunization, infant feeding, and infant growth counseling at PNC among women who reported PNC outside the health facility, by background characteristics, PMA Ethiopia 2019-2021 Cohort

Background characteristics	Postpartum family planning	Number of women with facility delivery	Postpartum family planning	Number of women with any PNC (weighted) ¹	Exclusive breastfeeding	Immunization	Infant feeding	Infant growth	Number of women (weighted) ²
Overall	27.5	1,576	35.2	1,435	47.8	60.3	30.4	21.0	907
Age									
15-19	22.1	177	34.0	138	45.7	51.2	28.7	16.3	87
20-24	28.2	443	34.1	400	45.8	57.4	25.6	20.2	237
25-29	28.5	495	35.9	454	47.0	60.8	30.7	22.0	292
31-34	27.0	256	34.0	249	53.8	67.2	37.8	23.5	164
35-39	28.7	169	42.0	156	54.0	67.3	36.4	24.3	101
40-49	(27.2)	36	(23.5)	39	*	*	*	*	26
Education level									
No education	24.1	455	29.0	451	41.3	57.3	24.1	16.0	306
Primary	30.0	648	39.2	563	50.8	61.2	31.7	22.2	346
Secondary	28.3	274	38.9	245	49.8	62.2	34.6	21.5	148
More than secondary	25.5	199	33.5	176	53.7	63.0	38.5	30.6	107
Parity									
0 children	21.2	406	33.1	328	50.9	58.3	32.8	24.5	187
1-2 children	31.3	677	36.8	606	47.4	60.0	28.7	19.9	381
3-4 children	27.7	278	37.5	268	50.1	63.5	33.5	24.6	192
5+ children	26.9	215	31.5	233	41.7	59.2	27.7	14.8	147
Region									
Tigray	32.2	147	43.8	144	55.5	69.7	37.4	22.9	111
Afar	(5.0)	9	(15.1)	9	(54.4)	(62.1)	(42.6)	(38.8)	5
Amhara	20.3	349	28.3	332	49.3	60.1	31.7	23.3	207
Oromiya	26.4	642	30.9	563	39.6	53.9	20.4	16.3	331
SNNP	31.3	322	42.6	290	48.0	60.2	37.4	23.4	184
Addis	40.6	107	51.2	97	69.1	76.7	43.5	26.0	68
Residence									
Rural	27.4	973	35.0	928	46.3	59.6	30.4	19.5	601
Urban	27.5	603	35.6	507	50.6	61.7	30.5	23.9	306
Wealth quintile									
Lowest quintile	21.5	166	33.2	165	40.2	60.4	28.3	17.1	115
Lower quintile	30.3	222	34.9	203	48.8	56.8	36.0	19.5	122
Middle quintile	28.9	289	35.4	269	46.6	67.9	31.1	20.6	174
Higher quintile	26.3	354	34.5	334	45.5	53.5	24.3	18.9	212
Highest quintile	28.1	546	36.5	464	52.8	62.1	32.9	25.0	284

Note:
 Figures are placed in parentheses when they are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on less than 25 unweighted cases and has been suppressed.
 1. Women who received any PNC by the time of their 6-week interview. This includes PNC at delivery and/or from HEW/PHCP at a later point.
 2. Women who had PNC after leaving the facility/home birth

Postpartum Family Planning (PPFP) Use

Definition: Women who delivered in a facility were asked if they received any modern contraceptive methods immediately after delivery. All women were asked if they were using any modern contraception other than the Lactational Amenorrhea Method (LAM) at the time of their 6-week interview (6 weeks postpartum). Delays in data collection due to COVID-19 resulted in some women being interviewed more than 8 weeks postpartum. For the purposes of assessing postpartum family planning utilization at approximately 6 weeks postpartum, only women who were eight weeks or less postpartum at the time of the 6-week interview are included in the 6-week postpartum PFP calculation.

Key findings: As shown in Table 20, a very low proportion – 2.9% of women received modern contraceptive methods immediately after delivery and less than one in ten (9.1%) women were using any modern contraception other than the Lactational Amenorrhea Method (LAM) at the time of their 6-week interview (6 weeks postpartum).

Patterns by background characteristics:

- **Age:** Approximately 6% of women aged 40-49 received any modern contraceptive method immediately after birth, as compared to only 2.6% of women aged 15-19 reporting receiving any modern contraceptive method immediately after birth. 12.4% of women aged 20-24 versus only 3.1% of women aged 40-49 were using any modern contraception other than LAM at the time of their 6-week interview.
- **Education:** Receipt of immediate postpartum family planning counseling ranged from 0.9% amongst women with more than secondary education to 4.2% amongst women with no education. At 6 weeks postpartum, 5.1% of women with no education and 17.0% of women with secondary education reported using any modern contraception other than LAM.
- **Parity:** Around 4% of multiparous women and 2% of nulliparous women reported receiving any modern contraception method immediately after birth. About 13% of nulliparous women versus only 2.7% of women with five or more previous births reported using any modern contraception other than LAM at the time of their 6-week interview.
- **Region:** Women receiving immediate postpartum family planning ranged from 0.3% in Amhara to 7.3% in Tigray. The reported percentages of women using a form of modern contraception at 6 weeks postpartum ranged from 0.6% in Afar to 25.6% in Addis.
- **Residence:** 17.5% of women living in urban settings and only 6.7% of women living in rural settings reported using a form of modern contraception at 6 weeks postpartum.
- **Wealth:** About one in five (18.9%) of women in the highest wealth quintile as compared to only 1.9% of women in the lowest wealth quintile reported using any modern contraception other than LAM at the time of their 6-week interview.

Table 20. Postpartum Family Planning Use

Percent distribution of women who received any modern contraceptive methods after delivery among women who delivered at a health facility, and the proportion of women using any modern contraception other than Lactational Amenorrhea Method (LAM) by the time of their 6-week interview among all women, PMA Ethiopia 2019-2021 Cohort

Background characteristics and facility type	Immediate PFPF	Number of women with facility delivery (weighted)	PFPF at 6 weeks	Number of women (weighted) ¹
Overall	2.9	1,576	9.1	1,732
Age				
15-19	2.6	177	8.3	192
20-24	2.9	443	12.4	420
25-29	2.5	495	10.5	524
31-34	3.1	256	7.8	298
35-39	3.4	169	4.3	224
40-49	(5.7)	36	(3.1)	74
Education level				
No education	4.4	455	5.1	701
Primary	2.8	648	10.3	709
Secondary	2.3	274	17.0	200
More than secondary	0.9	199	12.5	122
Parity				
0 children	2.4	406	13.2	275
1-2 children	2.0	677	11.2	678
3-4 children	4.8	278	8.9	395
5+ children	4.0	215	2.7	384
Region				
Tigray	7.4	147	11.1	125
Afar	(5.0)	9	(0.6)	29
Amhara	0.4	349	5.6	364
Oromiya	1.2	642	7.4	748
SNNP	7.0	322	12.9	402
Addis	2.4	107	25.6	65
Residence				
Rural	3.3	973	6.7	1,335
Urban	2.2	603	17.5	397
Wealth quintile				
Lowest quintile	1.8	166	1.9	346
Lower quintile	3.2	222	7.2	352
Middle quintile	5.9	289	10.2	331
Higher quintile	2.3	354	7.7	360
Highest quintile	1.9	546	18.9	343
Facility type				
Public hospital	4.8	595	-	-
Public health center or lower	1.8	931	-	-
Other ²	0.8	50	-	-

Note:
 Figures are placed in parentheses when they are based on 25-49 unweighted cases.
 1. Due to COVID-19, 825 women were interviewed 9 weeks or more postpartum. To calculate the proportion of women using PFPF by approximately 6-weeks, women that were 9 or more weeks postpartum at the time of the interview were excluded.
 2. Other included private, NGO/faith-based, and "other" facilities.

Neonatal and Newborn Care

Immediate Neonatal Care

Definition: Women who delivered at a health facility were asked whether their baby was weighed at birth. All women with live births, regardless of delivery location, were asked whether their baby was wrapped at birth, wrapped within five minutes of birth, cried/breathed normally at birth, placed skin-to-skin with the mother's chest, and breastfed within one hour of birth.

Key findings: As shown in Table 21, three-quarters of facility live births (74.5%) were weighed at birth. The vast majority of all live births were wrapped at birth (94.2%), and two in three were wrapped within 5 minutes of birth (65.4%). Less than half (45.4%) of all live births were placed skin-to-skin with the mother's chest immediately after birth. More than three in four (78.9%) live births were breastfed within 1 hour of birth.

Patterns by background characteristics:

- **Residence:** More than eight in ten (84.8%) facility births in urban areas versus less than seven in ten (68.2%) facility birth in rural areas were weighed at birth. While almost three-quarters (73.3%) of all live births were placed skin-to-skin with the mother's chest immediately after birth in urban areas, less than two in five (37.2%) babies had skin-to-skin contact immediately after birth in rural areas.
- **Education:** The proportion of babies who were wrapped at birth, wrapped within five minutes of birth, cried/breathed normally at birth, and breastfed within the first hour of birth was similar across mothers' education levels. However, more than seven in ten births (72.9%) to mothers who attended more than secondary education versus only one in three births (34.4%) to mothers with no education were placed skin-to-skin on with the mother's chest immediately after birth.
- **Parity:** The proportion of infants receiving these selected types of immediate neonatal care did not differ substantially by parity, except skin-to-skin contact. More than six in ten (62.2%) babies from nulliparous women had immediate skin-to-skin contact with their mother, compared to only three in ten (30.8%) babies from women with five or more children.

Table 21. Immediate Neonatal Care

Percent distribution of infants who were weighed at birth among facility births, and the proportion of infants who were wrapped at birth, wrapped within 5 minutes of birth, cried normally at birth, placed skin-to-skin with mothers immediately after birth, and breastfed within 1 hour of birth among all live birth, by mother's background characteristics, PMA Ethiopia 2019-2021 Cohort

Background characteristics	Infants weighed at birth ¹	Number of infants born in health facility (weighted)	Infants wrapped at birth	Infants wrapped within 5 minutes of birth	Infants who cried/breathed normally at birth	Infants placed immediately skin-to-skin with mother's chest	Infants breastfed within 1 hr of birth	Number of live births (weighted)
Overall	74.5	1,612	94.2	65.4	96.9	45.4	78.9	2,565
Age								
15-19	64.4	181	92.1	65.2	97.8	49.6	79.0	268
20-24	77.2	445	94.6	66.1	97.4	53.3	81.8	622
25-29	76.1	510	93.7	66.3	95.9	44.8	78.3	787
31-34	76.1	267	95.3	62.4	96.5	41.7	78.1	477
35-39	74.5	172	95.2	66.3	98.2	35.8	75.9	322
40-49	58.9	36	92.5	64.7	94.9	38.6	78.4	90
Education level								
No education	67.4	464	95.0	65.9	97.6	34.4	78.2	1,054
Primary	70.7	666	93.5	63.6	96.3	45.3	77.7	1,021
Secondary	83.5	280	94.5	66.7	97.4	67.6	85.5	302
More than secondary	90.8	202	93.2	69.9	95.3	72.9	78.7	187
Parity								
0 children	79.0	411	91.9	64.8	96.3	62.2	77.1	459
1-2 children	74.9	694	94.6	66.9	96.3	50.6	80.4	980
3-4 children	71.6	283	94.1	64.9	97.4	37.3	77.7	578
5+ children	68.8	224	95.6	63.7	97.7	30.8	79.1	548
Region								
Tigray	81.5	150	78.5	49.0	96.7	59.4	73.4	179
Afar	(75.0)	10	89.6	66.8	95.0	23.6	63.9	48
Amhara	72.2	354	95.2	61.0	95.7	48.7	72.9	531
Oromiya	73.2	656	96.1	70.5	97.4	42.8	82.6	1,131
SNNP	71.8	333	94.6	62.4	97.3	40.3	80.4	577
Addis	88.8	109	95.7	76.7	95.4	73.1	78.1	99
Residence								
Rural	68.2	998	93.9	64.3	96.9	37.2	78.0	1,981
Urban	84.8	614	95.2	69.0	96.6	73.3	82.0	584
Wealth quintile								
Lowest quintile	66.8	170	93.2	64.0	98.3	28.2	77.4	515
Lower quintile	67.1	228	95.0	65.4	97.3	34.3	78.7	517
Middle quintile	64.0	299	93.1	60.5	95.9	37.3	79.0	508
Higher quintile	72.3	362	95.8	68.1	97.9	55.2	79.8	516
Highest quintile	87.1	553	93.8	68.8	94.9	72.5	79.7	510

Note:
 Figures are placed in parentheses when they are based on 25-49 unweighted cases.
 1. Denominator: Babies born in a health facility

Care of Umbilical Cord

Definition: All women with live births were asked what instrument was used to cut the baby's umbilical cord. Possible response options included surgical blade, razor blade, bamboo strips, scissors, other, and "do not know". Among births whose cord was cut using a surgical blade, razor blade, or scissors, women reported whether the instrument was boiled before use, including if they did not know. The distribution of instruments used and whether the instrument was boiled before use are presented in Table 22 and Table 23.

Key findings:

- Overall, a razor blade was the most commonly used instrument to cut the umbilical cord (43.5%), followed by scissors (31.7%), and "do not know" (14.7%).
- 37.0% of surgical blades, razor blades, or scissors were new and did not need to be boiled. More than one-fifth (23.4%) of babies' cords were cut using a boiled surgical blade, razor blade, or scissors.

Patterns by background characteristics:

- **Residence:** The most commonly used instrument to cut the cord was razor blade for births in rural areas (54.2%) and scissors for births in urban areas (45.5%). For rural and urban areas, respectively, roughly one in six (17.5%) and one in ten (11.2%) baby's cords were cut using an instrument that was not boiled before use (among surgical blade, razor blade, or scissors).
- **Parity:** While scissors were the most commonly used instrument for cutting the baby's cord for first-time mothers (44.7%), a razor blade was more common for women who had three or more previous births (>50.0%). More than one in five (23.1%) nulliparous women versus 6% of women with 5 or more children reported they did not know what instrument was used to cut the cord.
- **Education:** Over half of babies' cord was cut using a razor blade among women with no education (58.2%) and using scissors among women with more than secondary education (53.0%). Almost one-third of women (28.8%) with secondary or more education versus less than 10% of women with no education did not know what instrument was used to cut the cord.
- **Wealth:** Razor blade was used for the majority of births in the lower two wealth quintiles (>60.0%); scissors were common among births in the highest two wealth quintiles (~40.0%). More than one in three (35.9%) babies in the highest wealth quintile had an unidentified/unknown instrument for cutting the cord.

Table 22. Care of the Umbilical Cord - Instrument Used

Percent distribution of the instrument used to cut the umbilical cord among all live births, by mother's background characteristics, PMA Ethiopia 2019-2021 Cohort							
Background characteristics	Surgical blade	Razor blade	Bamboo strips	Scissors	Others	Do not know	Number of live births (weighted)
Overall	8.6	43.5	0.3	31.7	1.3	14.7	2,565
Age							
15-19	11.1	41.6	0.1	36.6	1.3	9.4	268
20-24	10.3	35.2	0.4	34.6	1.5	18.0	622
25-29	7.5	42.1	0.1	31.4	1.2	17.6	787
31-34	8.2	48.2	0.0	29.6	1.3	12.6	477
35-39	7.5	51.2	1.1	29.1	0.9	10.1	322
40-49	4.7	65.2	0.0	18.2	1.4	10.5	90
Education level							
No education	6.9	58.2	0.4	22.7	2.4	9.4	1,054
Primary	8.0	43.0	0.3	34.3	0.5	13.8	1,021
Secondary	13.3	17.8	0.0	40.8	0.3	27.7	302
More than secondary	13.4	4.5	0.0	53.0	0.3	28.8	187
Parity							
0 children	10.3	21.5	0.0	44.7	0.4	23.1	459
1-2 children	10.3	36.4	0.4	34.3	1.2	17.4	980
3-4 children	7.3	54.7	0.0	24.4	1.7	11.9	578
5+ children	5.6	62.7	0.6	23.6	1.6	5.9	548
Region							
Tigray	3.8	27.6	0.0	46.9	0.0	21.7	179
Afar	4.7	34.8	0.5	12.5	43.0	4.4	48
Amhara	13.9	39.7	0.0	25.6	0.2	20.6	531
Oromiya	8.4	49.1	0.5	30.0	0.1	11.8	1,131
SNNP	6.0	48.7	0.2	37.3	1.6	6.1	577
Addis	7.4	1.6	0.0	31.4	0.4	59.2	99
Residence							
Rural	7.8	54.2	0.3	27.6	1.5	8.6	1,981
Urban	11.3	6.9	0.2	45.5	0.5	35.6	584
Wealth quintile							
Lowest quintile	8.2	66.1	0.1	17.6	3.9	4.3	515
Lower quintile	6.5	60.1	0.0	24.2	0.4	8.8	517
Middle quintile	7.7	48.3	0.5	32.3	1.5	9.8	508
Higher quintile	8.2	37.8	0.7	38.0	0.2	15.1	516
Highest quintile	12.5	4.7	0.2	46.3	0.4	35.9	510

Table 23. Care of the Umbilical Cord - Instrument Boiled

Percent distribution of whether the instrument used to cut the cord was boiled before use, by background characteristics, among live births whose cord was cut using surgical blade, razor blade or scissors, PMA Ethiopia 2019-2021 Cohort					
Background characteristics	Yes	No	New blade/ no need to boil	Do not know	Number of live births (weighted) ¹
Overall	23.4	16.4	37.0	23.2	1,936
Age					
15-19	16.8	17.8	36.3	29.0	216
20-24	20.5	15.6	33.5	30.4	449
25-29	26.7	15.9	35.8	21.6	575
31-34	22.6	15.9	41.4	20.1	370
35-39	23.1	20.3	38.3	18.3	255
40-49	40.2	9.3	44.0	6.5	72
Education level					
No education	19.7	18.0	43.0	19.3	835
Primary	25.8	16.8	33.3	24.1	785
Secondary	25.9	9.8	34.7	29.6	196
More than secondary	28.7	13.8	23.7	33.7	120
Parity					
0 children	18.9	14.8	31.6	34.7	316
1-2 children	21.6	14.9	36.4	27.1	716
3-4 children	26.9	16.2	40.5	16.4	450
5+ children	25.9	20.1	38.3	15.7	454
Region					
Tigray	18.4	6.6	37.7	37.2	126
Afar	5.3	31.7	44.5	18.5	23
Amhara	10.4	15.6	53.1	20.8	379
Oromiya	27.2	19.3	26.3	27.1	893
SNNP	29.9	14.5	44.8	10.9	479
Addis	6.5	2.0	23.2	68.3	36
Residence					
Rural	24.5	17.5	38.5	19.6	1,600
Urban	18.3	11.2	30.1	40.4	336
Wealth quintile					
Lowest quintile	24.5	15.3	46.1	14.1	426
Lower quintile	24.3	18.3	41.3	16.1	423
Middle quintile	24.9	20.6	29.8	24.7	404
Higher quintile	20.5	15.3	36.7	27.6	391
Highest quintile	22.3	10.9	28.0	38.8	292

Note:

1. Among infants whose cord was cut using surgical blade, razor blade or scissors only. Bamboo strips, others and unknown instruments were excluded.

Infant Vaccination

Definition: All women with live births were asked whether their newborns received any vaccination by the time they were approximately 6-weeks postpartum. The proportion of infants who received BCG (bacilli Calmette-Guerin vaccine for tuberculosis) and polio vaccinations is presented in Table 24.

Key findings: Nearly two in five (37.3%) and half (48.7%) of all live births received BCG and polio vaccinations by 6 weeks, respectively.

Patterns by background characteristics:

- **Residence:** Seven in ten live births (69.5%) in urban areas versus less than three in ten (27.8%) live births in rural areas received the BCG vaccine by 6 weeks. For polio vaccination, three-quarters (75.2%) of urban live births and two in five (40.9%) rural live births received it by 6 weeks.
- **Parity:** Nearly half (48.1%) and three in five (59.3%) index babies received BCG and polio vaccination by 6 weeks, respectively. For infants with 5 or more siblings, about one in five (22.6%) received BCG vaccination; one in three (34.5%) received polio vaccination by 6 weeks.
- **Education:** Among live births whose mothers had no education, one-quarter received BCG vaccination (26.8%); two in five received polio vaccination by 6 weeks (39.5%). More than seven in ten babies of mothers with more than secondary education had BCG (71.5%) and polio (78.0%) vaccination by 6 weeks.

Table 24. Infant Vaccination

Percent distribution of live births who received BCG vaccination and oral polio vaccination by the time of their mothers' 6-week interviews, among all live births, PMA Ethiopia 2019-2021 Cohort			
Background characteristics	BCG Vaccination	Oral polio vaccination	Number of live births (weighted)
Overall	37.3	48.7	2,565
Age			
15-19	29.2	40.8	268
20-24	39.0	52.0	622
25-29	42.4	53.6	787
31-34	36.7	48.4	477
35-39	33.7	42.0	322
40-49	21.9	33.4	90
Education level			
No education	26.8	39.5	1,054
Primary	35.0	47.5	1,021
Secondary	60.8	66.9	302
More than secondary	71.5	78.0	187
Parity			
0 children	48.1	59.3	459
1-2 children	43.2	54.6	980
3-4 children	32.8	43.8	578
5+ children	22.6	34.5	548
Region			
Tigray	54.4	51.6	179
Afar	21.3	26.1	48
Amhara	38.6	48.9	531
Oromiya	32.5	47.4	1,131
SNNP	32.2	44.2	577
Addis	92.5	95.0	99
Residence			
Rural	27.8	40.9	1,981
Urban	69.5	75.2	584
Wealth quintile			
Lowest quintile	19.1	33.1	515
Lower quintile	24.3	33.1	517
Middle quintile	33.2	48.5	508
Higher quintile	38.1	49.9	516
Highest quintile	72.2	79.4	510

Exclusive Breastfeeding

Definition: At the 6-week postpartum follow-up interview, women with infants who were still living were asked to identify any liquid or foods that were fed to the infant in the past 24 hours. Table 25 shows the proportion of infants still living who were fed with breastmilk only in the past 24 hours. Due to COVID-19, 825 women were interviewed at 9 weeks or more postpartum. To calculate the proportion of babies exclusively breastfed by approximately 6-weeks, babies that were 9 or more weeks postpartum at the time of the interview were excluded.

Key findings: More than three-quarters (76.4%) of infants were exclusively breastfed by the mother's 6-week postpartum follow-up interview.

Patterns by background characteristics:

- **Residence:** Approximately three in four – 77.2% and 74.0% – of infants in rural and urban areas were exclusively breastfed at approximately 6 weeks postpartum, respectively.
- **Region:** Just over half (53.0%) of infants in Afar and almost nine in ten infants (89.3%) infants in Tigray were exclusively breastfed by the mother's 6-week postpartum interview.
- The proportion of infants who were fed with breastmilk exclusively were relatively similar across other demographic characteristics.

Table 25. Exclusive Breastfeeding

Percent distribution of live births who were exclusively breastfed within the last 24 hours, among infants who were less than 9 weeks old and still alive at the time of the interview, PMA Ethiopia 2019-2021 Cohort

Background characteristics	Percent	Number of infants still alive (weighted)
Overall	76.4	1,695
Age		
15-19	73.4	185
20-24	77.1	420
25-29	75.9	516
31-34	77.5	289
35-39	79.1	218
40-49	71.6	69
Education level		
No education	80.1	682
Primary	72.1	691
Secondary	78.6	200
More than secondary	76.6	122
Parity		
0 children	72.9	263
1-2 children	75.8	673
3-4 children	80.3	387
5+ children	75.9	372
Region		
Tigray	89.3	122
Afar	53.0	28
Amhara	84.9	353
Oromiya	75.8	736
SNNP	70.3	389
Addis	59.3	65
Residence		
Rural	77.2	1,300
Urban	74.0	395
Wealth quintile		
Lowest quintile	76.8	337
Lower quintile	74.1	346
Middle quintile	79.2	318
Higher quintile	80.0	355
Highest quintile	72.1	338

Note: Due to COVID-19, 825 women were interviewed 9 weeks or more postpartum. To calculate the proportion of babies exclusively breastfed by approximately 6-weeks, babies that were 9 or more weeks postpartum at the time of the interview were excluded.

Appendix

Appendix 1. Content of ANC - Nutritional Counseling (ANC recipients)

Percent distribution of women with ANC who received general nutrition counseling and counseling on taking iron/folate supplements and deworming medications, by background characteristics, PMA Ethiopia 2019-2021 Cohort

Background characteristics	General nutrition counseling	Iron and folate counseling	Deworming medication counseling	Number of women (weighted)
Overall	43.0	15.8	3.0	1,949
Age				
15-19	26.5	7.0	0.7	201
20-24	45.1	19.4	1.9	488
25-29	44.3	16.6	3.4	612
31-34	46.7	14.0	4.5	354
35-39	43.4	17.3	2.6	225
40-49	43.8	14.2	7.0	68
Education level				
No education	37.1	12.8	3.9	737
Primary	42.3	14.8	1.9	787
Secondary	53.7	20.3	2.6	264
More than secondary	55.9	27.3	4.4	161
Parity				
0 children	40.0	15.1	2.8	369
1-2 children	46.1	18.0	2.4	780
3-4 children	41.4	13.2	3.1	432
5+ children	41.3	15.0	4.4	369
Region				
Tigray	59.3	25.3	11.7	160
Afar	(36.7)	(6.3)	(4.5)	9
Amhara	52.1	17.5	5.0	462
Oromiya	35.1	12.9	1.0	846
SNNP	38.6	12.7	1.5	395
Addis	64.2	35.5	1.8	77
Residence				
Rural	40.8	15.1	3.3	1,474
Urban	49.8	18.0	2.0	475
Wealth quintile				
Lowest quintile	38.5	11.3	3.8	335
Lower quintile	36.0	11.3	2.9	363
Middle quintile	42.8	12.6	2.2	394
Higher quintile	43.5	20.3	4.0	426
Highest quintile	52.1	21.6	2.1	431

Note:
Figures are placed in parentheses when they are based on 25-49 unweighted cases.

Appendix 2. Content of ANC - Birth Preparedness Discussion (ANC recipients)

Percent distribution of women with ANC who received counseling on each birth preparedness topic, including place of delivery, delivery by a skilled birth attendant, arrangement of delivery transport, where to go when experiencing pregnancy danger signs, severe headaches with blurred vision, high blood pressure, edema, convulsions, and bleeding before delivery as a danger sign, by background characteristics, PMA Ethiopia 2019-2021 Cohort

Background characteristics	Place of delivery	Skilled birth attendant	Delivery transport	Where to go when in danger	Severe headaches	High blood pressure	Edema	Convulsions	Bleeding before delivery	All 9 topics	Number of women (weighted)
Overall	67.5	65.0	51.9	40.1	37.9	34.5	35.2	25.9	38.4	14.4	1,949
Age											
15-19	58.3	55.2	38.5	26.2	28.3	21.7	19.1	16.7	23.4	5.6	201
20-24	63.1	62.2	51.6	38.9	36.8	32.7	34.3	24.7	36.0	13.9	488
25-29	67.2	65.4	52.1	42.0	40.3	36.7	37.3	27.6	42.0	13.7	612
30-34	75.1	69.6	56.7	41.7	41.2	39.3	38.7	27.1	43.2	17.0	354
35-39	74.3	72.1	55.9	46.1	38.5	35.7	39.7	30.0	39.4	18.1	225
40-49	65.6	62.1	54.5	44.0	33.6	36.1	36.8	28.4	39.5	24.5	68
Education											
Never attended	67.1	62.6	47.9	35.3	34.2	28.7	32.1	23.3	33.0	13.2	737
Primary	66.5	64.8	49.2	40.7	34.8	31.4	31.4	22.4	35.7	12.2	787
Secondary	68.4	68.8	61.0	48.2	48.3	47.2	46.6	36.1	50.4	21.5	264
More than secondary	72.6	70.5	68.5	45.8	52.7	55.3	49.4	38.7	56.4	19.2	161
Parity											
0	66.5	64.6	57.8	39.6	41.1	39.4	35.7	25.0	40.2	13.8	369
1-2	66.0	65.3	53.5	40.4	40.0	35.3	37.7	27.7	40.1	15.4	780
3-4	70.6	64.3	45.9	39.7	34.9	31.0	31.5	25.0	37.2	11.5	432
5+	67.8	65.3	49.6	40.4	33.9	31.8	33.7	24.4	34.3	16.3	369
Region											
Tigray	86.5	75.7	75.6	75.5	62.6	59.2	59.3	52.1	62.0	34.8	160
Afar	(52.1)	(53.3)	(53.8)	(46.0)	(45.0)	(46.2)	(53.9)	(44.6)	(44.1)	(34.9)	9
Amhara	81.4	80.9	71.9	47.8	53.0	51.0	51.1	40.2	54.9	24.7	462
Oromia	53.7	50.7	34.8	26.3	23.4	18.7	20.1	12.3	24.7	4.3	846
SNNP	74.9	72.6	50.2	44.2	36.1	33.2	34.4	23.5	33.7	14.0	395
Addis	58.4	65.5	78.9	50.7	63.1	62.8	58.1	46.4	64.2	20.2	77
Residence											
Rural	67.5	63.8	47.4	38.9	32.8	29.1	30.8	22.7	33.1	12.9	1,474
Urban	67.4	68.6	65.8	43.9	53.6	51.1	48.8	35.9	54.7	19.1	475
Wealth quintile											
Lowest	62.1	57.5	41.3	30.5	28.3	21.2	23.9	18.4	28.2	9.2	335
Lower	66.2	65.0	45.6	38.2	35.7	28.1	33.5	23.0	35.6	13.0	363
Middle	75.1	67.9	51.9	41.1	33.9	32.7	34.8	25.4	35.4	14.9	394
Higher	67.6	67.0	51.9	41.9	35.0	33.7	30.5	22.9	34.5	14.7	426
Highest	65.4	66.0	65.4	46.4	53.7	52.4	50.4	37.8	55.2	18.9	431

Notes: Figures are placed in parentheses when they are based on 25-49 unweighted cases.

Appendix 3. Content of ANC - Maternal Assessment (ANC recipients)

Percent distribution of women with ANC who had their weight, blood pressure, urine, blood, and stool sample taken at ANC and the proportion of women who received all 5 maternal assessments, among women with ANC, by background characteristics, PMA Ethiopia 2019-2021 Cohort

Background characteristic	Blood pressure taken	Weight taken	Urine sample taken	Blood sample taken	Stool sample taken	All 5 assessments	Number of women (weighted)
Overall	84.3	78.4	54.7	73.9	29.3	23.1	1,949
Age							
15-19	75.3	75.7	45.8	60.9	22.3	17.6	201
20-24	84.2	76.6	57.6	75.6	28.5	24.1	488
25-29	87.0	81.6	55.5	75.9	30.6	22.8	612
30-34	85.0	79.8	56.8	75.5	32.1	27.0	354
35-39	85.2	77.5	50.2	74.0	29.9	21.1	225
40-49	79.8	66.2	57.2	73.1	26.9	21.4	68
Education							
Never attended	79.8	71.8	47.9	68.3	25.3	19.1	737
Primary	82.8	77.9	52.5	70.2	27.4	21.2	787
Secondary	92.9	87.9	67.8	88.5	34.2	28.9	264
More than secondary	97.8	95.3	75.3	93.3	48.3	41.4	161
Parity							
0	90.2	87.7	59.8	77.6	33.3	28.3	369
1-2	85.5	79.4	58.1	79.7	29.6	23.3	780
3-4	80.0	71.6	53.1	70.6	28.8	22.1	432
5+	80.7	75.0	44.2	61.7	25.2	18.7	369
Region							
Tigray	92.9	96.5	77.7	87.8	42.2	37.9	160
Afar	(79.0)	(72.6)	(59.8)	(66.7)	(47.8)	(35.3)	9
Amhara	90.0	84.6	63.1	90.3	37.9	28.2	462
Oromia	80.7	70.7	45.0	62.7	21.7	16.7	846
SNNP	79.0	76.7	50.9	68.2	30.0	24.1	395
Addis	98.9	97.8	81.7	99.5	29.0	25.6	77
Residence							
Rural	80.7	73.0	48.3	67.2	25.3	19.4	1,474
Urban	95.4	95.2	74.7	94.6	41.6	34.8	475
Wealth quintile							
Lowest	80.6	77.0	39.8	65.1	18.8	13.2	335
Lower	75.3	68.2	45.3	62.1	22.7	16.1	363
Middle	81.5	75.1	44.1	70.4	25.4	18.9	394
Higher	84.9	74.5	59.6	73.5	32.9	27.0	426
Highest	96.6	94.9	78.9	94.2	42.9	36.7	431

Notes: Figures are placed in parentheses when they are based on 25-49 unweighted cases.

Appendix 4. Content of ANC - Family Planning Counseling (ANC recipients)

Percent distribution of women with ANC who received postpartum family planning counseling at ANC, by background characteristics, PMA Ethiopia 2019-2021 Cohort		
Background characteristics	Percent	Number of women (weighted)
Overall	20.3	1,949
Age		
15-19	9.1	201
20-24	19.2	488
25-29	20.5	612
30-34	22.6	354
35-39	27.2	225
40-49	23.1	68
Education		
Never attended	19.3	737
Primary	21.1	787
Secondary	19.8	264
More than secondary	21.5	161
Parity		
0	12.3	369
1-2	20.4	780
3-4	22.0	432
5+	25.8	369
Region		
Tigray	24.5	160
Afar	(18.0)	9
Amhara	23.7	462
Oromia	14.6	846
SNNP	25.8	395
Addis	23.7	77
Residence		
Rural	21.2	1,474
Urban	17.4	475
Wealth quintile		
Lowest	22.5	335
Lower	19.9	363
Middle	21.7	394
Higher	20.9	426
Highest	16.9	431

Notes: Figures are placed in parentheses when they are based on 25-49 unweighted cases.

Appendix 5. Content of ANC - STI Testing (ANC recipients)

Percent distribution of women with ANC who received HIV and Syphilis testing, test results, and test counseling at ANC, by background characteristics, PMA Ethiopia 2019-2021 Cohort

Background characteristics	HIV testing	Syphilis testing	Number of women (weighted)	HIV result ¹	HIV counseling ¹	Number of women with HIV test (weighted)	Syphilis result ²	Syphilis counseling ²	Number of women with Syphilis test (weighted)
Overall	61.7	19.5	1,949	77.3	63.7	1,407	83.8	72.4	422
Age									
15-19	45.1	14.2	201	74.2	63.7	106	(91.3)	(83.4)	32
20-24	63.1	21.3	488	76.4	62.0	360	82.2	65.7	115
25-29	63.8	21.4	612	79.5	63.6	457	88.3	74.1	146
30-34	64.9	17.3	354	80.7	67.1	269	79.3	74.8	68
35-39	63.8	18.4	225	74.8	61.3	168	(78.6)	(70.7)	46
40-49	59.5	19.2	68	(60.3)	(65.1)	48	*	*	15
Education									
Never attended	51.9	13.0	737	78.5	66.1	447	75.9	66.1	106
Primary	59.2	19.5	787	74.4	61.1	544	87.3	76.6	170
Secondary	77.7	21.4	264	77.3	62.8	240	81.6	74.2	63
More than secondary	93.2	46.0	161	83.2	66.6	176	88.7	70.3	82
Parity									
0	69.0	26.4	369	78.5	64.7	297	88.2	73.2	108
1-2	66.1	21.4	780	76.3	62.7	603	83.0	71.4	186
3-4	57.6	13.5	432	79.4	64.2	291	83.2	74.2	65
5+	50.2	15.5	369	75.7	64.3	216	(79.6)	(72.0)	64
Region									
Tigray	80.6	15.0	160	76.5	62.0	151	89.8	74.1	27
Afar	64.3	15	9	(96.8)	(96.9)	7	*	*	1
Amhara	80.8	24.6	462	82.7	61.8	436	89.7	73.3	126
Oromia	47.6	17.7	846	74.0	65.2	471	80.5	68.4	166
SNNP	54.9	16.5	395	72.7	60.0	254	76.0	75.7	73
Addis	99.0	33.4	77	81.4	75.5	89	91.1	79.4	29
Residence									
Rural	52.4	15.7	1,474	74.6	61.7	902	80.2	71.0	258
Urban	90.9	31.1	475	82.3	67.1	505	89.5	74.5	164
Wealth quintile									
Lowest	48.4	14.0	335	68.9	63.0	189	(88.6)	(87.9)	52
Lower	45.8	13.2	363	69.9	60.5	195	(79.3)	(71.5)	53
Middle	52.3	13.6	394	81.4	59.3	241	(74.4)	(56.9)	59
Higher	62.0	19.1	426	79.8	66.5	309	84.5	71.9	91
Highest	93.9	34.7	431	80.0	65.5	474	86.8	73.5	166

Note:

Figures are placed in parentheses when they are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on less than 25 unweighted cases and has been suppressed.

1. Denominator: ANC recipients who received HIV testing

2. Denominator: ANC recipients who received Syphilis testing