

PMA Ethiopia Second Cohort Six-Week Postpartum Maternal and Newborn Health Technical Report, 2021-2023 Cohort



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PERFORMANCE MONITORING FOR ACTION


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PMA Ethiopia Cohort Two Six-Week Maternal and Newborn Health Technical Report, 2021-2023 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 November 2021 and November 2022. Among 2,297 eligible women, 2,072 completed the interview.

Key Findings:

- ANC:
 - Overall, more than three in four (81.2%) women received at least one ANC contact over the course of their pregnancy from any health care provider ; however, less than half (42.5%) had complete (4+) ANC.
 - Only 4.6% of women discussed all birth readiness and pregnancy complication topics with their ANC provider.
 - While more than two thirds of all women reported that their weight and blood pressure were taken at ANC (64.4% and 69.2%, respectively amongst all women), less than one in five (15.9%) received all five maternal assessments (with addition of urine, blood, and stool sample).
 - One in ten (10.9%) 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 (62.0%).
 - More than one-third of women reported experiencing complications during delivery (34.1%). The most common delivery complications, amongst all women, were severe bleeding (15.6%), followed by prolonged labor (12.8%).
- Postnatal Care (PNC):
 - Half of all women (57.9%) did not receive PNC after delivery; over one-third of women (40.4%) received PNC within 48 hours of delivery.
 - Among women who delivered in a health facility, over one third (42.1%) reported that their provider checked on their health after delivery.

- Among women who received PNC, half (54.9%) received counseling on child immunization; less than half (41.3%) received counseling on exclusive breastfeeding; one in five (20.1%) were counseled on infant feeding.
- Postpartum Family Planning:
 - 2.4% 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 (10.3%) women were using any modern contraception method except breastfeeding (LAM).
- Neonatal and Newborn Care:
 - Seven in ten (69.4%) live births born in a facility were weighed at birth. The vast majority (95.4%) of all live births were wrapped at birth; half (53.1%) were placed skin-to-skin with the mother's chest immediately after birth; more than three in four (82.1%) babies were breastfed within one hour of birth.
 - Nearly one in four (26.8%) and three in eight (37.2%) 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 2014 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 expands 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 second 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.

Methods

PMA Ethiopia features cross-sectional and longitudinal data collection in three large, predominantly agrarian regions (Oromia, Amhara, and SNNP), and one urban region (Addis Ababa) and annual cross-sectional data collection in the remaining regions with the exception of Tigray. Data collection in Tigray was suspended from November 2020 to November 2023 due to security concerns. The three data collection activities featured by PMA Ethiopia include:

- A longitudinal survey that follows eligible women at 6-week, 6-month, and one-year postpartum after screening and enrollment in panel regions.
- A national 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 second cohort's **6-week postpartum survey of the PMA Ethiopia panel**. Findings from the baseline survey 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 Amhara, Oromia, 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.

Original sample size calculations

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 with the desired 5% margin-of-error 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 81 EAs were needed to estimate mCPR with a 5% margin of error. Based on anticipated fertility across the original six panel regions, we estimated that we would enroll approximately 2,800 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 2020.¹

Updates in 2021

Data collection was undertaken in the original EAs selected for Cohort 1 in Addis, Amhara, and Oromia. With the creation of the Sidama region in 2020 from within the SNNP region, eight EAs were removed from the panel, as they were located in the new Sidama region. With the removal of Tigray, Afar, and the eight EAs in SNNP, the final EA sample size for the second cohort was 162 EAs.

Adjustments to the samples in Afar, Tigray, and SNNP do not affect regional estimates of the other regions, which are directly comparable across the two cohorts. The Ethiopian Statistical Services (formally Central Statistics Agency) provided updated population counts (measure of size) of the SNNP region to allow for post-estimation adjustment to the design weights,

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>

accounting for the reduced size of the SNNPR region and for minor changes to the urban and rural distribution within the region. Due largely to the exclusion of Tigray and Afar, however, national estimates between Cohort 1 and Cohort 2 are not directly comparable. Design weights, however, was used to generate representative estimates of the combined population of Addis, Amhara, Oromia, and the SNNP region as of 2021, which together represent approximately 68.5%² of the population of Ethiopia.

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 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.

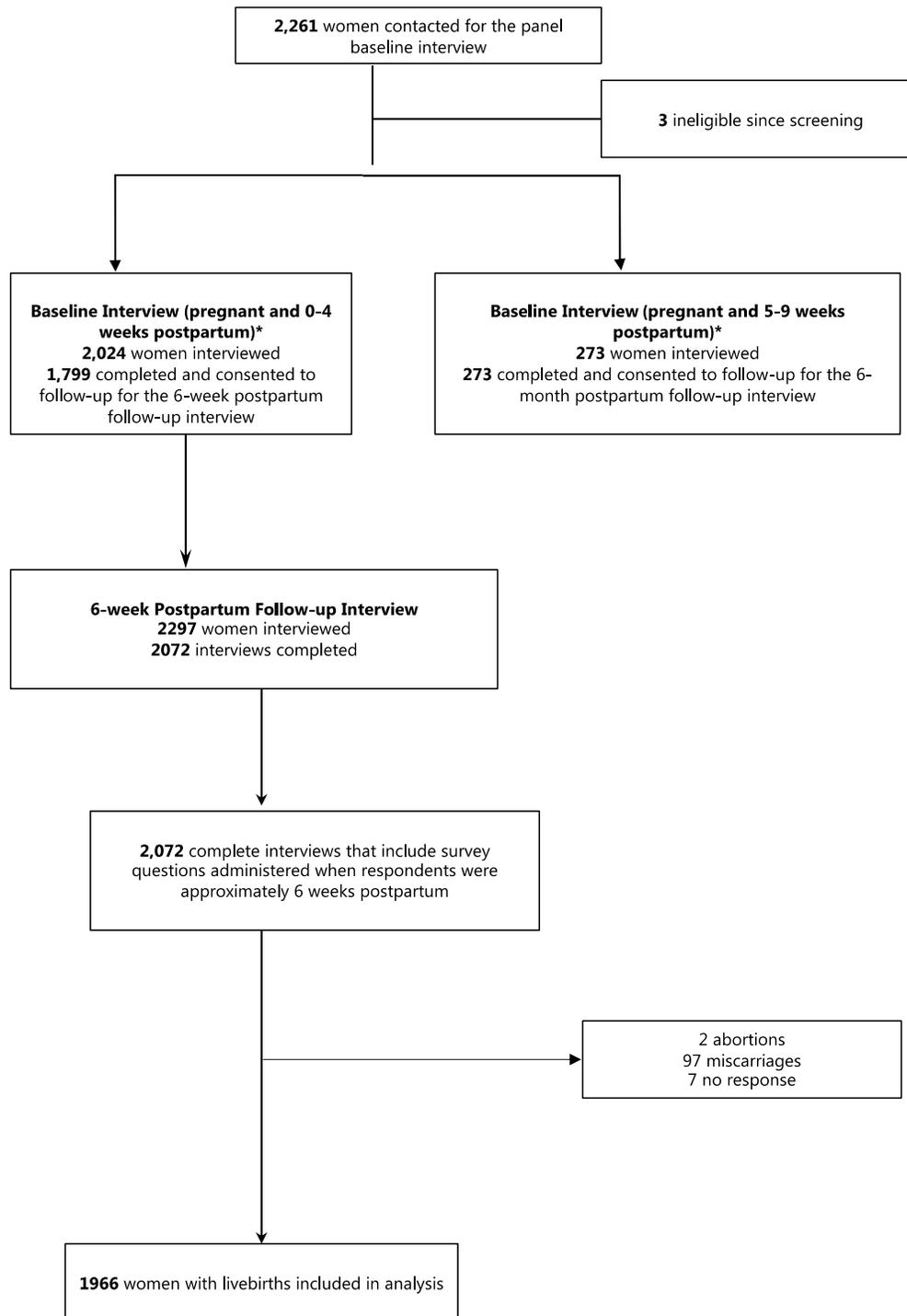
Survey Implementation and Participants

Training for data collection was implemented from September through October 2021 and data collection began with the census and household screenings in late October. Women eligible for the cohort were enrolled into the study and completed baseline interviews from October through November 2021. Six-week postpartum data collection occurred between November 2021 and November 2022. 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, 2,297 women completed the 6-week postpartum follow-up interview, of which 273 were interviewed during the baseline survey. Among the complete interviews, we excluded 2 women with abortion, 7 with missing birth outcome, and 97 with miscarriage from the analysis. The final analytic sample includes 1,966 women with live or stillbirths.

² <https://www.statsethiopia.gov.et/wp-content/uploads/2023/08/Population-of-Zones-and-Weredas-Projected-as-of-July-2023.pdf>

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.

**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.

Response Rate and Mean Time to Interview

Table 1 shows response rates from the six-week postpartum interview of the second PMA Ethiopia cohort. A total of 2,297 women were eligible for six-week postpartum interview, of which 2,072 women completed this interview (response rate 90.2%). The analytic sample is comprised of 1,966 women aged 15-49 who provided complete six-week postpartum survey data, either from enrollment or at six-week postpartum data collection.

Table 1. Six-Week Postpartum Follow-up Interview Response Rates

	Response rates		
	Total	Pregnant or 0-4 weeks postpartum	5-9 weeks postpartum
Number of eligible women	2,297	2,024	273
Number of eligible women who completed the interview	2,072	1,799	273
6-week interview response rate		90.2%	

Interpretation of Sampling Weights

In the PMA Ethiopia panel survey, the initial sample (first cohort) was designed to represent all pregnant or recently postpartum women ages 15-49 in the six regions (Addis, Afar, Amhara, Oromia, SNNP, Tigray) in which the survey was conducted. These six regions cover 75.8% of the Ethiopian population. However, due to security concerns and not to exceed study's budget, the panel survey was restricted to four available regions, reducing the overall number of enumeration areas, for the second cohort. Thus, the interpretation of the weights is slightly different: estimates of Cohort 1 were representative of women across the six regions, while estimates of Cohort 2 are representative of women across the four regions.

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 Ethiopian Statistical Service (ESS). 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 noted, post-stratification adjustments were made to the original SNNP probabilities to account for the differential population count between SNNP before and after the creation of the Sidama region.

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 four 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 (28.5%) of respondents were between the ages of 25-29 and 12.6% were aged 15-19 years.

Education: One in three (30.7%) of women had no education, and approximately half had ever attended primary school (46.0%). Approximately one in seven (15.1%) women attended secondary education. Fewer than one in ten (8.2%) women attained any education beyond secondary education (technical & vocational or higher education).

Parity: About one in six (16.3%) women were nulliparous at the baseline interview. More than a third of respondents (43.6%) had 1-2 children; about equal proportions had 3-4 (22.3%) or more than 5 children (17.8%).

Region: Respondents were enrolled from four regions in Ethiopia. The largest proportion of respondents lived in Oromia (52.4%), followed by SNNP (22.4%) and Amhara (20.3%) regions, with the smallest proportion of women from Addis (4.9%).

Residence: The vast majority (74.6%) of women lived in rural areas, with slightly over one-quarter (25.4%) of respondents from urban areas.

Pregnancy Outcome: Stillbirths were rare (1.8%), with majority of pregnancies ending in live birth (98.2%).

Table 2. Background Characteristics of Respondents

Percent distribution of respondents by selected background characteristics and birth outcomes, PMA Ethiopia 2021-2023 Cohort			
Background characteristics	Weighted percent	Weighted N ¹	Unweighted N ¹
Age			
15-19	12.6	248	194
20-24	24.8	488	463
25-29	28.5	560	599
30-34	19.0	374	392
35-39	11.6	228	255
40-49	3.5	68	63
Education²			
No education	30.7	603	536
Primary	46.0	904	862
Secondary	15.1	297	334
More than secondary	8.2	162	234
Parity			
0	16.3	321	328
1-2	43.6	858	925
3-4	22.3	438	403
5+	17.8	349	310
Region			
Amhara	20.3	399	427
Oromia	52.4	1,030	702
SNNP	22.4	441	561
Addis	4.9	97	276
Residence			
Rural	74.6	1,467	1,144
Urban	25.4	499	822
Wealth quintile			
Lowest	19.7	388	313
Lower	19.9	391	307
Middle	19.5	383	315
Higher	20.3	400	380
Highest	20.6	404	651
Pregnancy outcome			
Live births	98.2	1,931	1,932
Stillbirths	1.8	35	34
Total	100.0	1,966	

Note:
1. Analysis excludes women with abortions and miscarriages (n =99)
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 (81.2%) 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 84.1% for women aged 31-34 and 69.4% for women aged 40-49. Four or more ANC visits was most common among women aged 25-29.
- **Education:** Roughly three-quarters of women with no education and those with primary education received any ANC (74.0% and 83.0%, respectively). Nearly nine in ten women with secondary education and more than secondary education received any ANC (86.4% and 88.6%, 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 (75.8%), slightly more than one-third of women with no education received complete ANC (33.8%).
- **Parity:** Across parity, over seventy percent of women received any ANC attended one visit. Complete ANC decreased with increasing parity. Over half (54.9%) of nulliparous women attended four or more visits, this dropped to approximately a third (31.6%) for women with five or more children.
- **Region:** Any reported ANC in this sample of women ranged from 73.3% in SNNP to 85.9% in Amhara. Complete ANC ranged from 34.6% in SNNP to 72.4% in Addis.
- **Residence:** Report of any ANC was similar by urban and rural residence (87.0% and 79.2%, respectively), however, complete ANC was approximately double for urban versus rural regions (66.2% vs. 37.2%, respectively).
- **Wealth:** The majority of women across wealth quintiles received any ANC (ranging from 76.2% in lowest quintile to 89.0% in highest quintile). Only one third of women in the lowest quintile received complete ANC (31.1%), whereas nearly seven in ten women in the highest quintile received complete ANC (69.4%).

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 2021-2023			
	Any ANC	4+ ANC	Number of women (weighted)
Overall	81.2	42.5	1,966
Age			
15-19	82.1	35.6	248
20-24	83.5	46.8	488
25-29	82.0	48.2	560
31-34	84.1	47.8	374
35-39	72.3	37.6	228
40-49*	69.4	35.7	68
Education level			
No education	74.0	33.8	603
Primary	83.0	42.3	904
Secondary	86.4	56.0	297
More than secondary	88.6	75.8	162
Parity			
0 children	86.3	54.9	321
1-2 children	83.6	50.2	858
3-4 children	79.7	36.0	438
5+ children	72.5	31.6	349
Region			
Amhara	85.9	49.4	399
Oromia	83.2	44.3	1,030
SNNP	73.3	34.6	441
Addis	76.5	72.4	97
Residence			
Rural	79.2	37.2	1,467
Urban	87.0	66.2	499
Wealth quintile			
Lowest quintile	76.2	31.1	388
Lower quintile	74.7	34.4	391
Middle quintile	80.6	36.1	383
Higher quintile	85.1	50.4	400
Highest quintile	89.0	69.4	404

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, over half of women received ANC from a health care professional (56.1%), compared to less than one in ten women who received ANC from a HEW only (9.0%). Nearly twenty percent (16.0%) of women received ANC from both care providers.

Patterns by background characteristics:

- **Age:** Across all age groups, about one in five women reported receiving ANC from a HEW only. ANC from a professional health care provider ranged from 48.0% for women age 40-49 to 58.2% for women age 25-29.
- **Education:** The proportion of women receiving care from a HEW only was higher in the lower education groups (approximately 13%), the proportion of women receiving care from PHCPs only was higher for higher education groups (85.9% more than secondary education vs. 41.7% no education).
- **Parity:** Over two thirds of nulliparous women (63.3%) and women with 1-2 children (61.6%) had received care exclusively from a PHCP. The proportion of women receiving care from only a HEW increased with increasing parity. Approximately one in six 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 (68.4%), followed by Amhara (59.0%) and Oromia (58.4%). The proportion receiving care from a HEW only was highest in SNNP (9.9%) and Oromia (8.2%).
- **Residence:** Among respondents living in rural areas, 48.8% received ANC from a PHCP, 11.0% received care from a HEW only, and 19.3% received care from both. In urban areas, 77.6% of women received ANC from a health professional, 3.0% from a HEW, and 6.3% received care from both.
- **Wealth:** Among women in the highest wealth quintile, almost three quarters (82.8%) 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 2021-2023 Cohort					
Background characteristics	No ANC	HEW only	PHCP only ¹	Both	Number of women (weighted)
Overall	18.9	9.0	56.1	16	1,996
Age					
15-19	17.9	11.4	51.9	18.9	248
20-24	16.9	8.5	58.2	16.4	488
25-29	18.0	8.9	59.7	13.4	560
31-34	15.9	10.1	56.1	17.9	374
35-39	27.7	7.2	50.1	15.1	228
40-49	30.6	5.1	48.0	16.3	68
Education level					
No education	26.0	12.9	41.7	19.5	603
Primary	17.2	9.0	56.0	17.7	904
Secondary	13.6	5.1	69.6	11.6	297
More than secondary	11.4	1.5	85.9	1.2	162
Parity					
0 children	13.7	7.1	63.3	15.9	321
1-2 children	16.4	7.4	61.6	14.7	859
3-4 children	20.8	11.3	51.8	16.2	436
5+ children	27.5	11.9	41.6	19.0	350
Region					
Amhara	14.1	11.0	59.0	15.8	399
Oromia	16.9	8.2	58.4	16.5	1,030
SNNP	26.7	9.9	45.5	17.8	441
Addis	23.5	5.7	68.4	2.4	97
Residence					
Rural	20.9	11.0	48.8	19.3	1,467
Urban	13.0	3.0	77.6	6.3	499
Wealth quintile					
Lowest quintile	24.2	12.7	42.7	20.4	388
Lower quintile	25.3	11.9	42.4	20.4	391
Middle quintile	19.4	10.5	49.4	20.7	383
Higher quintile	14.9	7.3	62.2	15.6	400
Highest quintile	11.0	2.9	82.8	3.4	404
Notes:					
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 (66.2%) 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: 20.8%, 1-2 visits: 42.1%; 4+ visits: 37.2%.
- **Number of months pregnant at time of first ANC visit:** Within urban areas, most women sought ANC early in their pregnancy, with 37.6% reporting seeking ANC within 0-3 months and 43.4% attending their first visit within 4-6 months. In rural areas, just over half of women sought ANC care within 4-6 months (53.7%).

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 2021-2023 Cohort			
	Urban	Rural	Total
Number of ANC visit			
0	13.0	20.8	18.8
1-3	20.8	42.1	36.7
4+	66.2	37.2	44.5
Total	100.0	100.0	100.0
Number of months pregnant at time of first ANC visit			
No ANC	13.0	20.8	18.8
0-3 months	37.6	14.6	20.4
4-6 months	43.4	53.7	51.1
7-9+ months	5.5	10.7	9.4
Don't know/missing	0.5	0.2	0.3
Total	100.0	100.0	100.0
Number of women (weighted)	499	1,467	1,996
Mean gestational age (in months) at first visit (among those with ANC)*			
	3.9	4.8	4.6
Number of women with ANC (weighted)*	434	1,162	1,597
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 (30.4%).
- Few women received counseling on taking iron supplements (13.0%) and deworming medications (2.2%) at ANC.

Patterns by background characteristics:

- **Age:** Approximately one-third of women across age groups received general nutrition counseling. Highest proportions of women aged 25-29 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=50.7%), whereas women with the lowest education levels reported the lowest (22.7%). 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, nearly half of women received general nutrition counseling (48.6%); proportions of women receiving iron counseling were also highest in Addis. In SNNP, 21.3% of women received general nutrition counseling, eight percent (8.3%) received general nutrition counseling, and approximately one percent (0.6%) received deworming counseling.
- **Residence:** The prevalence of nutritional counseling for women living in urban areas was almost twenty percentage points higher than in rural areas (43.5% and 26.0%, respectively). Iron counseling was more common in urban areas (urban:14.8%; rural: 12.4%), deworming counseling was also more prevalent in urban areas (urban: 3.9%; rural: 1.6%).
- **Wealth:** Proportions of women receiving all interventions 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 2021-2023 Cohort				
Background characteristics	General nutrition counseling	Iron and folate counseling	Deworming medication counseling	Number of women (weighted)
Overall	30.4	13.0	2.2*	1,966
Age				
15-19	26.6	11.3*	0.9*	248
20-24	32.2	12.8	2.4*	488
25-29	31.0	14.1	3.3*	560
31-34	32.7	13.7	1.5*	374
35-39	26.8	12.1*	1.3*	228
40-49	26.8*	11*	2.7*	68
Education level				
No education	22.7	9.2	1.5*	603
Primary	29.7	12.7	1.8*	904
Secondary	37.1	16.3	2.6*	297
More than secondary	50.7	23.1*	6.0*	162
Parity				
0 children	34.9	12.6	2.7*	321
1-2 children	33.3	14.0	2.5*	859
3-4 children	27.5	14.1	1.7*	436
5+ children	23.0	9.6*	1.5	350
Region				
Amhara	43.3	14.4	5.1*	399
Oromia	27.6	13.7	1.6*	1,030
SNNP	21.3	8.3*	0.6*	441
Addis	48.6*	21.8*	3.5*	97
Residence				
Rural	26.0	12.4	1.6*	1,467
Urban	43.5	14.8	3.9*	499
Wealth quintile				
Lowest quintile	22.2	6.5*	0.5*	388
Lower quintile	22.2	8.6*	0.6*	391
Middle quintile	26.5	11.1*	1.7*	383
Higher quintile	33.6	17.2	3.0*	400
Highest quintile	46.9	21.2	5.0*	404

* Indicates <25 observations.

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 4.6 % had all nine birth preparedness and complication readiness discussions with their providers at ANC.
- Place of delivery was most commonly discussed (43.7%) and convulsions were least commonly discussed (11.4%).

Patterns by background characteristics:

- **Age:** The proportion of women receiving discussion of all nine topics was highest among women 25-29 year old (6.4%) and lowest for those 40-49 year old (1.2%).
- **Education:** Nearly one in ten women with more than secondary education received discussion of all nine topics (9.1%), compared to 3.5% of women with no education.
- **Parity:** Birth preparedness discussions were similar among women who had between 1 and 4 children (4.6% for women with 1-2 children and 4.8% for those with 3-4) .
- **Region:** Respondents in Addis reported the highest prevalence of having all nine birth and complication readiness discussions at ANC (12.7%), followed by Amhara (7.8%) and Oromia (3.3%).
- **Residence:** About 3.4% and 8.0% 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 (8.6% highest wealth quintile vs. 2.3% 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 2021-2023 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	43.7	43.3	34.9	22.2	19.6	19.4	17.8	11.4	23.2	4.6	1,966
Age											
15-19	41.4	39.0	25.4	16.2	9.4*	7.5*	10.2*	5.3*	15.5*	2.8	248
20-24	43.1	43.3	35.5	21.0	18.8	18.3	17.2	11.1	24.2	4.3	488
25-29	41.8	41.6	36.2	23.1	23.8	25.1	22.1	14.7	26.3	6.4	560
30-34	51.0	51.0	42.2	24.9	22.3	22.0	19.2	13.3	25.5	3.6	374
35-39	41.8	39.7	31.7	24.2	17.2*	17.4*	15*	8.9*	19.6	5.1	228
40-49	38.6*	41.8*	24.1*	22.2*	20.6*	15.4*	16.6*	6.6*	18.7*	1.2	68
Education											
Never attended	42.9	38.7	27.4	20.5	15.1	13.3	12.7	8.6	17.3	3.5	603
Primary	43.9	44.0	34.7	20.6	18.4	18.4	17.2	9.8	21.4	4.2	904
Secondary	44.3	47.9	40.5	27.5	24.2	25.2	22.0	14.6*	27.6	5.4	297
More than secondary	44.6	47.5	53.4	27.4	34.3	36.8	32.3	25.2*	47.5	9.1	162
Parity											
0	55.0	54.2	43.6	26.5	22.9	22.9	24.6	16.1	29.1	7.1	321
1-2	41.6	41.7	36.4	22.3	20.9	20.5	18.9	11.9	26.5	4.6	859
3-4	43.9	43.3	33.9	20.5	18.9	20.5	16.2	11.6	20.9	4.8	436
5+	38.3	36.9	24.5	19.9	14.1*	11.9*	10.8*	5.6*	12.8*	2.0	350
Region											
Amhara	60.8	60.5	49.0	34.0	27.1	28.9	27.0	17.9	30.9	7.8	399
Oromia	41.1	38.7	29.3	18.7	16.2	14.6	14.0	8.6	18.5	3.3	1,030
SNNP	35.7	38.5	30.1	20.2	15.9	16.1	13.2	7.7*	21.1	3.0	441
Addis	37.5*	42.5*	58.2*	18.9*	41*	45.9*	41*	31.7*	52.0	12.7	97
Residence											
Rural	42.9	41.4	30.4	21.5	16.4	15.4	14.5	8.9	18.6	3.4	1,467
Urban	46.0	48.7	48.0	24.1	29.0	31.1	27.5	18.9	36.7	8.0	499
Wealth quintile											
Lowest	37.6	36.3	23.5	16.7	12.4	9.5	8.3*	5.1*	13.6	2.3	388
Lower	39.7	39.0	27.1	17.9	14.8	14.8	13.9	9.7*	17.2	4.5	391
Middle	49.0	45.2	38.8	23.6	19.5	17.8	18.8	10.4*	24.3	3.2	383
Higher	47.0	49.1	33.5	27.2	17.9	18.6	16.8	9.9*	21.7	4.1	400
Highest	45.3	46.5	51.1	25.0	32.8	35.6	30.6	21.6	38.8	8.6	404

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 (15.9%). Overall, blood pressure was the most commonly measured item during ANC (69.2%). The majority of women had their weight (64.4%) and a blood sample taken (62.6%); nearly half of women gave a urine sample (46.3%); slightly over one in five gave a stool sample (23.0%).

Patterns by background characteristics:

- **Age:** Approximately one in five respondents aged twenty five to thirty nine received all five assessments. Fewer women among the youngest and oldest women received all five assessment (15-19 years:14.6%, 20-24 years: 13.1%, 40-49 years: 14.1%).
- **Education:** Women with more than secondary education (21.7%) had proportions of complete assessments about seven percentage points than that of women who never attended school (14.9%).
- **Parity:** The proportion receiving each maternal assessment at ANC was lower for higher parity women.
- **Region:** The overall percentages of women reporting having these assessments taken at ANC was the highest in Amhara, followed by Addis and SNNP, and the lowest in Oromia.
- **Residence:** Roughly one in five women (22.5%) in urban areas received all of the assessments at ANC, with the proportion of urban women receiving the service is almost twice as much as that of rural women.
- **Wealth:** In the highest wealth quintile, about one in five women (23.2%) received all assessments, compared to one in ten in the lowest wealth quintile (11.7%).

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 2021-2023 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	69.2	64.4	46.3	62.6	23.0	15.9	1,966
Age							
15-19	65.6	59.0	44.9	58.6	25.0	14.6	248
20-24	73.9	67.5	51.2	67.5	20.0	13.1	488
25-29	68.3	64.2	45.0	61.3	23.4	17.3	560
30-34	71.5	68.1	46.5	65.2	24.0	16.5	374
35-39	63.6	59.6	43.0	57.0	23.5	19.0	228
40-49	60.5	58.8	38.0	57.0	25.1	14.1	68
Education							
Never attended	60.7	54.0	38.9	52.9	22.0	14.9	603
Primary	67.6	62.9	46.1	60.7	20.5	14.3	904
Secondary	82.0	78.3	54.7	75.9	28.5	19.5	297
More than secondary	85.4	85.5	60.2	84.7	29.5	21.7	162
Parity							
0	78.8	70.5	56.0	73.7	28.0	19.7	321
1-2	73.2	68.4	51.3	66.7	23.5	15.9	859
3-4	62.7	60.9	38.9	57.9	20.9	14.3	436
5+	58.3	53.1	34.7	48.0	19.5	14.4	350
Region							
Amhara	80.1	74.9	56.4	77.6	37.7	28.2	399
Oromia	68.6	62.6	44.1	60.2	19.2	11.5	1,030
SNNP	58.8	56.3	37.5	51.6	18.8	14.4	441
Addis	76.5	76.5	68.6	75.8	20.1	17.8	97
Residence							
Rural	64.1	58.8	40.7	56.0	20.9	13.6	1,467
Urban	84.0	80.8	62.9	82.0	29.1	22.5	499
Wealth quintile							
Lowest	57.8	54.4	38.8	47.1	16.4	11.7	388
Lower	61.3	55.3	37.5	53.3	19.5	11.0	391
Middle	65.2	58.4	39.9	58.8	20.9	16.3	383
Higher	74.4	70.3	47.3	68.4	27.5	17.0	400
Highest	86.3	82.4	67.4	84.2	30.1	23.2	404

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 one in ten (10.9%) reported that their provider discussed postpartum family planning during ANC.

Patterns by background characteristics:

- **Age:** Discussion of PPFP was highest among women between the ages of 25-29 (12.1%). By contrast, less than one in ten (7.1%) women aged 40-49 reported discussing PPFP during ANC.
- **Education:** 10.0% of women with no education and 8.1% of women with more than secondary education were counseled on family planning at ANC.
- **Parity:** Around 10.0% of nulliparous women reported receiving PPFP at ANC, while about 14% of women with 3-4 children reported receiving PPFP at ANC.
- **Region:** Women in Amhara and Oromia had the highest and lowest reported prevalence of receiving PPFP counseling of one in seven (14.8%) and less than one in twelve (7.6%).
- **Residence:** About 12.0% and 9.0% 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 2021-2023 Cohort		
Background characteristics	Percent	Number of women (weighted)
Overall	10.9	1,966
Age		
15-19	11.7	248
20-24	9.8	488
25-29	12.1	560
30-34	11.3	374
35-39	9.8	228
40-49	7.1	68
Education		
Never attended	10.0	603
Primary	12.2	904
Secondary	10.1	297
More than secondary	8.1	162
Parity		
0	9.8	321
1-2	10.6	859
3-4	13.5	436
5+	9.4	350
Region		
Amhara	14.8	399
Oromia	7.6	1,030
SNNP	14.1	441
Addis	14.6	97
Residence		
Rural	11.6	1,467
Urban	8.8	499
Wealth quintile		
Lowest	10.1	388
Lower	11.3	391
Middle	11.4	383
Higher	11.0	400
Highest	10.6	404

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 (46.7%) of respondents overall received HIV testing; a smaller proportion (13.6%) 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 25-34 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 SNNP.
- **Residence:** Over 70% and nearly 40% of women in urban and rural areas, respectively, received HIV testing and ANC. Syphilis testing at ANC was reported by approximately 20% and 10% of women living in urban and rural areas, respectively.
- **Parity:** The prevalence of syphilis testing was highest among nulliparous women: 16.3% of whom received syphilis testing at ANC. The prevalence of HIV testing was highest among women with 1-2 children with 52.9% of whom received HIV testing at ANC.
- **Education:** While three-quarters (76.9%) and one-fifth (23.5%) of women with more than secondary education received HIV and syphilis testing respectively, over a third of women with no education received HIV testing (38.0%); fewer than one in ten received syphilis testing (9.2%).
- **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 78.0% of women receiving HIV testing and 21.5% 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 2021-2023 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	46.7	13.6	1,966	70.0	64.7	918	76.5	77.3	267
Age									
15-19	34.7	11.4	248	64.4	52.2	86	77.9	77.3	28
20-24	46.8	14.1	488	75.3	65.8	229	74.6	71.9	69
25-29	50.3	13.9	560	72.1	70.9	282	75.6	76.2	78
30-34	50.7	13.9	374	64.3	65.3	190	78.2	81.1	52
35-39	44.1	13.1	228	70.1	62.2	100	74.5	84.5	30
40-49	45.3	14.7	68	61.9	39.4	30	88.9	80.6	11
Education									
Never attended	38.0	9.2	603	67.7	56.6	230	79.9	83.3	55
Primary	42.6	13.6	904	71.5	63.9	385	76.2	76.2	123
Secondary	60.0	17.1	297	71.6	71.5	179	80.7	80.2	51
More than secondary	76.9	23.5	162	67.2	72.4	125	66.7	68.0	38
Parity									
0	51.9	16.3	322	70.9	70.4	175	84.6	78.3	53
1-2	52.9	15.7	855	70.8	67.7	446	71.5	76.2	133
3-4	40.8	11.4	440	69.1	60.2	178	77.5	74.8	51
5+	34.0	8.7	350	67.2	51.6	119	82.2	83.9	30
Region									
Amhara	70.0	19.7	399	76.2	62.6	280	79.8	77.8	78
Oromia	39.9	12.3	1,030	63.8	71.1	411	72.8	74.9	126
SNNP	35.0	7.7	441	72.3	42.5	154	83.0	73.8	34
Addis	75.3	28.8	97	76.7	83.1	73	75.6	90.7	28
Residence									
Rural	37.7	11.0	1,467	66.8	58.7	552	77.9	76.2	162
Urban	73.1	21.1	499	74.9	73.6	365	74.2	78.9	106
Wealth quintile									
Lowest	28.3	7.8	388	67.4	47.9	110	86.5	79.8	31
Lower	37.4	10.7	391	68.8	56.4	146	68.7	74.6	42
Middle	37.5	11.3	383	79.9	58.1	144	82.3	78.5	43
Higher	50.6	16.1	400	67.9	66.7	202	76.5	73.4	64
Highest	78.0	21.5	404	68.4	76.0	316	73.8	79.8	87
<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>									

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 11.

Key findings: Approximately two-thirds of women delivered in a facility (62.3%). Government health center was the most common facility type in which women delivered

Patterns by background characteristics:

- **Age:** Facility deliveries were most common for women of younger age groups, with 66.8% of women ages 20-24 delivering in any facility. Comparatively, home deliveries were most common for women ages 40-49 (54.5%).
- **Education:** Almost all women with more than secondary education delivered in a facility (98.6%). The proportion of women delivering within a facility decreased with decreasing education levels, with only 41.2% of women with no education delivering in a facility.
- **Parity:** Over three-quarters (80.3%) of nulliparous women delivered within a facility, compared to approximately one-third (37.1%) of women with five or more children.
- **Region:** Nearly all women in Addis delivered within a facility (99.3%). Over half of women delivered in a facility in Amhara (72.0%), SNNP (58.6%), and Oromia (56.7%).
- **Residence:** Approximately half of women in rural areas delivered within a facility (52.0%), compared to almost all women within urban areas (92.9%).
- **Wealth:** The proportion of women delivering within a facility increased with increasing wealth quintile.

Table 11. 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 2021-2023 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	37.7	22.0	38	1.2	1.1	62.3	1965
Age							
15-19	34.3	16.1	48.3	0.0	1.3	65.7	248
20-24	33.2	23.7	41.3	0.6	1.2	66.8	488
25-29	37.2	24.5	35.8	1.3	1.2	62.8	560
31-34	39.9	18.9	38.3	2.2	0.7	60.2	374
35-39	43.5	23.6	29.9	1.7	1.3	56.5	228
40-49	54.5	23.4	20.8	1.4	0.0	45.5	68
Education level							
No education	58.8	10.1	30.2	0.2	0.7	41.2	603
Primary	37.8	18.6	42.3	0.5	0.7	62.2	904
Secondary	14.0	39.3	43.6	1.9	1.2	86.0	297
More than secondary	1.4	53.6	33.0	7.8	4.2	98.6	161
Parity							
0 children	19.7	33.8	44.3	1.5	0.7	80.3	322
1-2 children	28.3	26.1	42.1	1.7	1.8	71.7	854
3-4 children	49.0	15.1	34.7	1.1	0.2	51.1	439
5+ children	62.9	9.8	26.6	0.0	0.8	37.1	350
Region							
Amhara	28	25.3	44.4	0.9	1.5	72.0	399
Oromia	43.3	19.5	35.9	0.9	0.4	56.7	1029
SNNP	41.4	20.5	36.6	0.2	1.3	58.6	441
Addis	0.7	42.1	41.7	10.4	5.1	99.3	97
Residence							
Rural	48.0	13.5	37.6	0.2	0.6	52.0	1467
Urban	7.1	47	39.3	4.2	2.3	92.9	498
Wealth quintile							
Lowest quintile	66.8	9.3	23	0	0.9	33.2	388
Lower quintile	57.0	11.3	31	0	0.7	43.0	391
Middle quintile	42.4	10.7	46.2	0	0.8	57.6	383
Higher quintile	19.7	27.2	52	0.9	0.1	80.3	400
Highest quintile	4.2	50.3	37.7	5.0	2.8	95.8	404
Number of ANC visit							
0 visits	60.9	16.0	20.8	0.7	1.6	39.1	369
1-3 visits	45.4	15.3	38.3	0.4	0.6	54.6	721
4+ visits	21.5	30.0	45.1	2.1	1.2	78.5	874

Note:
1. Government health center (HC) or lower includes government health centers (n=755) and health posts (n=4).
2. NGO and others include NGO/Faith-based health facilities (n=23) and other facilities, not specified (n=9).

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 12.

Key findings: Over half of women (62.0 %) 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 66.3% of women aged 20-24 reporting delivery with a skilled birth attendant. Comparatively, less than half of women (45.5%) 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 (97.8%). The proportion of women delivering with a skilled birth attendant decreased with decreasing education levels (lowest for women with no education at 40.9%).
- **Parity:** Over three-quarters (80.2%) of nulliparous women delivered with a skilled birth attendant, compared to approximately one in three (36.8%) women with five or more children.
- **Region:** Nearly all women in Addis delivered with a skilled birth attendant (99.3%). In Oromia, one out of five women delivered with a traditional birth attendant (20.7%).
- **Residence:** Approximately half of women in rural areas delivered with a skilled birth attendant (51.3%), where 18.1% delivered with a traditional birth attendant. Almost all women in urban areas delivered with a skilled birth attendant (93.3%).
- **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: 78.2%; 1-3 visits: 54.2%, and 0 visits: 38.7%.
- **Delivery location:** All (100.0%) women who delivered in a hospital or private sector facility reported delivery with a skilled birth attendant.

Table 12. 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 2021-2023 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	3.4	12.9	0.5	21.3	27.2	0.1	14.2	18.5	1.7	62.0	1966
Age											
15-19	0.5	11.8	2	24.4	26.7	0	12.4	21.1	1.2	64.9	248
20-24	1.6	12.2	0.3	23.7	30.1	0	14.2	16.4	1.5	66.3	488
25-29	3.5	16.3	0.4	21	24.7	0.2	15.6	16.6	1.6	62.4	560
31-34	5.2	10.9	0.2	23.4	25.7	0.1	12	19.9	2.6	60.2	374
35-39	6.3	12.1	0.4	14.8	29.1	0	14.4	20.6	2	56.4	228
40-49	5.3	8.1	0	5.9	31.5	0	22.4	25.3	1.6	45.5	68
Education level											
No education	8.1	4.9	0	13.6	22.4	0.2	21	27.7	1.9	40.9	603
Primary	1.5	10.3	0.7	21	29.7	0.1	15.4	19.1	2.2	61.7	904
Secondary	1.2	21.9	0.9	29.6	33.6	0	4.9	6.9	1	86	297
More than secondary	0	41	0.8	36.2	19.7	0	0	2.2	0	97.8	162
Parity											
0 children	0	20	1.3	24.9	33.9	0	5.3	13	1.5	80.2	322
1-2 children	1.1	16.3	0.4	25.3	29	0.1	11.4	14.8	1.8	70.9	855
3-4 children	4.9	8.1	0.3	17.2	25.7	0.2	19.3	23	1.2	51.3	440
5+ children	10	4.4	0.3	13.5	18.7	0	23.2	27.1	2.6	36.8	350
Region											
Amhara	1.5	11.8	0.4	18.8	40.3	0.2	8.8	17.5	0.8	71.2	399
Oromia	2.8	11	0.2	24.3	21	0	20.7	17.5	2.4	56.6	1030
SNNP	7.1	8.7	1.4	17	31	0.1	7.3	25.8	1.4	58.1	441
Addis	0.4	57.7	0	19.1	22.5	0	0	0.3	0	99.3	97
Residence											
Rural	4.3	6.1	0.5	19.8	24.9	0.1	18.1	24.1	2	51.3	1467
Urban	0.6	32.9	0.6	25.6	34.2	0.1	2.9	2	0.9	93.3	499
Wealth quintile											
Lowest quintile	8	3.2	0.5	9.2	19.3	0	24.2	31.6	3.7	32.3	388
Lower quintile	6	4.6	0.2	14.3	22.9	0	21	28	3	42	391
Middle quintile	2.4	3.5	0.8	25.7	26.8	0.2	17.3	22.3	0.9	56.9	383
Higher quintile	0.6	15.3	0.5	30.6	33.9	0.1	7.4	10.4	0.9	80.4	400
Highest quintile	0.1	36.8	0.5	26.3	32.8	0	1.9	1.3	0.3	96.3	404
Number of ANC visit											
0 visits	6.7	9.8	0	10.4	18.4	0	19.9	32.1	2.6	38.7	369
1-3 visits	4.1	7.6	0.9	21.5	24.3	0	18	21.6	2.1	54.2	721
4+ visits	1.4	18.6	0.4	25.8	33.4	0.2	8.8	10.3	1.1	78.2	875
Delivery location											
Home	8.7	0	0	0.2	0.3	0.2	37.7	48.2	4.5	0.5	740
Government hospital	0	41.2	0.4	17.2	41.2	0	0	0	0	100	432
Government HC or lower ²	0	6.9	1.1	45	46.7	0	0	0.1	0.1	99.8	748
Private sector	0	75.2	0	11.9	12.9	0	0	0	0	100	24
NGO and other facilities	9.5	32.3	0	16.5	6.7	0	4.2	30.8	0	55.6	21

Note:
1. Skilled birth attendants include doctors, health officers, nurses/midwives, and skilled attendant.
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 13.

Key findings: Approximately 5.4% of all women and 8.7% of women delivering within facilities had a caesarean section.

Patterns by background characteristics:

- **Age:** Caesarean deliveries were most common for women aged 25-29 (7.0%), compared to 4.5% of women aged 20-24 and 2.9% of women aged 15-19 and 40-49.
- **Education:** Caesarean delivery ranged widely by education level, from 21.5% among women with more than secondary education to 2.3% among women with no education.
- **Parity:** Caesarean delivery was highest for women with 1-2 children (7.7%) and nulliparous women (7.1%).
- **Region:** One in four women (30.9%) within Addis reported caesarean delivery. Across all other regions, less than five percent of women reported caesarean delivery.
- **Residence:** Approximately 2.1% of rural women and 15.1% of urban women reported caesarean delivery.
- **Wealth:** Caesarean deliveries were most prevalent among women of the highest wealth quintile (17.8%). 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 generally increased with number of ANC visits: 4+ visits: 8.9%; and 0 visits: 3.3%. However, for women with ANC 1-2 visits this value was 2.2%.

Table 11. 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 2021-2023 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	8.7	1386	5.4	1,966
Age				
15-19	4.4	184	2.9	248
20-24	6.7	369	4.5	488
25-29	11.2	398	7.0	560
31-34	10.0	255	6.0	374
35-39	10.5	146	5.9	228
40-49	6.4	35	2.9	68
Education level				
No education	5.7	281	2.3	603
Primary	5.3	635	3.3	904
Secondary	10.9	289	9.4	297
More than secondary	21.8	181	21.5	162
Parity				
0 children	8.9	293	7.1	322
1-2 children	10.7	693	7.7	855
3-4 children	6.1	254	3.1	440
5+ children	3.1	147	1.2	350
Region				
Amhara	6.8	325	4.9	399
Oromia	6.0	661	3.4	1030
SNNP	8.4	292	4.9	441
Addis	31.2	109	30.9	97
Residence				
Rural	4.1	862	2.1	1467
Urban	16.2	524	15.1	499
Wealth quintile				
Lowest quintile	1.5	146	0.5	388
Lower quintile	6.2	190	2.7	391
Middle quintile	2.2	250	1.3	383
Higher quintile	5.3	363	4.3	400
Highest quintile	18.6	438	17.8	404
Number of ANC visit				
0 visits	8.5	164	3.3	369
1-3 visits	4.1	445	2.2	721
4+ visits	11.4	777	8.9	875
Delivery location				
Home	x	x	0	740
Government hospital	19.4	489	19.4	432
Government HC or lower	1.2	845	1.2	748
Private sector	43.7	27	43.7	24
NGO and other facilities	16.6	24	16.6	21

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 (34.1 %). Most prevalent delivery complications were severe bleeding (15.6 %), followed by prolonged labor (12.8).

Patterns by background characteristics:

- **Age:** Approximately a third of women across age categories experienced any delivery complication. Across age categories, severe bleeding was most common.
- **Education:** Approximately 30% of women across education levels experienced any delivery complication.
- **Parity:** Nulliparous women reported increased prevalence of delivery complication (43.3%). Nulliparous women (16.1%) and women with five or more children (18.2%) reported the highest proportions of severe bleeding.
- **Region:** Delivery complications were most common in SNNP (36.9%), followed by Addis (31.9%). Women in SNNP reported the highest proportions of rupture of membrane and no labor pains for more than 24 hours (5.3%) and prolonged labor (15.2%).
- **Residence:** Delivery complications were slightly higher in urban vs. rural areas (35.8% 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 1-3 ANC visits (15.0%), compared to women with 0 visits (13.4%) and four or more visits (9.7%).

Table 14 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 (>12 hours), convulsions/fits, and any complication among all women, by background characteristics and number of ANC visits, PMA Ethiopia 2021-2023 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	15.6	4.1	2.3	3.9	12.8	12.3	34.1	1,966
Age								
15-19	15.2	3.7	2.8	2.3	16.8	12.3	38.1	248
20-24	16.7	4.7	2.6	3.9	15.6	13.7	39.0	488
25-29	13.1	3	1.2	4.2	11.7	10.9	29.7	560
31-34	15.9	4.3	1.5	4.9	9.1	11.4	30.9	374
35-39	15.6	4.6	4.7	3.8	13.2	14.9	33.1	228
40-49	27.5	8.9	3.7	3.3	5.1	11.2	40.4	68
Education level								
No education	17.1	3.8	2.4	3.7	9.8	14.1	33.2	603
Primary	14.9	3.6	2.1	2.4	12.8	12.2	33.1	904
Secondary	15.6	7.0	2.3	7.5	19.0	12.3	40.2	297
More than secondary	13.5	3.3	2.5	7.0	12.7	6.9	31.6	162
Parity								
0 children	16.1	6	2.8	5.1	21.4	15.0	43.3	322
1-2 children	14.9	3.2	1.6	4.5	12.8	10.0	33.1	855
3-4 children	14.3	4.6	2.9	3.0	9.9	13.8	31.6	440
5+ children	18.2	4.1	2.6	2.6	8.5	13.6	31	350
Region								
Amhara	20.7	6.0	2.4	6.4	13.3	12.1	39	399
Oromia	13.4	3.0	1.9	2.9	11.5	12.2	31.1	1030
SNNP	16.5	5.3	3.2	3.6	15.2	13.2	36.9	441
Addis	13.0	3.2	2.6	6.2	12.9	10.4	31.9	97
Residence								
Rural	16.3	3.9	2.3	2.9	11.7	13.2	33.5	1467
Urban	13.4	4.7	2.2	7.0	16.1	9.7	35.8	499
Wealth quintile								
Lowest quintile	16.8	4.1	2.3	3.2	10.4	15.0	34.2	388
Lower quintile	14.7	2.9	1.7	1.7	8.9	11.4	27.8	391
Middle quintile	15.4	4.1	2.3	4.1	9.9	11.3	31.7	383
Higher quintile	16.9	4.6	2.7	2.7	17.1	14.0	37.9	400
Highest quintile	14.1	4.9	2.4	7.9	17.3	9.9	38.4	404
Number of ANC visit								
0 visits	15	3.3	2.2	2.1	9.9	13.4	28.3	369
1-3 visits	18.2	5.2	2.9	2.3	12.6	15.0	37.3	721
4+ visits	13.6	3.6	1.8	6.1	14.2	9.7	33.8	875
Delivery location								
Home	13.2	1.6	1.9	1.5	3.9	12.6	26	740
Government hospital	17.1	10.1	2.4	9.5	25.9	12.8	47.5	432
Government HC or lower	17.2	3.3	2.6	2.9	14.0	11.9	34.1	748
Private sector	7.4	3.2	2.9	7.2	17.5	9.7	42.1	24
NGO and other facilities	21.5	0	0	8.6	7.4	9.6	31.9	21

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 (21.2%). For women who sought treatment, it was most commonly sought from a government health center or lower facility (39.7 %).

Patterns by background characteristics:

- **Age:** Not seeking treatment for a delivery complication was highest for women of oldest age groups (34.7% among women aged 40-49). Comparatively, only 18.0% of women aged 15-19 did not seek treatment for a delivery complication.
- **Education:** Treatment seeking widely varied by education—32.5% of women with no education and 20.8% of women with primary education did not seek treatment for a delivery complication, compared to 3.9% of women with secondary school.
- **Parity:** Treatment sought for delivery complications varied across parity. Not seeking treatment was most prevalent among women with five or more children (39.6%), whereas it was lowest among nulliparous women (11.9%).
- **Region:** Treatment sought for delivery complication was highest in Addis (no treatment sought: 4.9%). Women in SNNP reported lowest levels of treatment seeking (20.9% did not seek treatment).
- **Residence:** Not seeking treatment for delivery complications was reported by 26.5% of women in rural areas and 6.5% 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 15. 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 2021-2023 Cohort ¹						
Background characteristics	Home	Government hospital	Government HC or lower ²	Private, NGO and other ³	No treatment sought	Number of women (weighted)
Overall	8.9	29.6	39.7	3.1	21.2	681
Age						
15-19	10.3	21.3	52	1.6	18.0	96
20-24	7.6	32.2	38.7	1.4	21.0	194
25-29	12.1	30.2	36.9	3.7	19.4	169
31-34	7.8	31.4	39.4	5.2	21.6	117
35-39	5.3	31.5	37.1	4.6	23.9	77
40-49	7.2	24.4	30.3	3.4	34.7	28
Education level						
No education	11.8	18.9	37	2.1	32.5	204
Primary	10.7	23.1	45.5	2.3	20.8	304
Secondary	2.3	51.7	33.6	4.0	10.5	122
More than secondary	1.5	57.9	31.0	9.5	3.9	52
Parity						
0 children	4.6	34.5	48.6	1.2	11.9	142
1-2 children	9.9	35.7	37.9	4.9	14.5	288
3-4 children	9.9	22.2	39	2.9	29.6	141
5+ children	10.2	16.8	34	1.0	39.6	110
Region						
Amhara	4.8	32.7	50.9	3.0	12.6	159
Oromia	7.2	28.5	35.5	3.1	27	326
SNNP	17.8	25.2	37.4	1.8	20.9	165
Addis	0.0	49.4	40	10.6	4.9	31
Residence						
Rural	11.1	22.6	41.5	1.0	26.5	499
Urban	2.7	48.8	34.9	8.8	6.5	182
Wealth quintile						
Lowest quintile	20.9	16.4	29.7	0.7	35.1	135
Lower quintile	15.1	17.9	39.4	0.5	30.6	111
Middle quintile	4.3	17.9	53.1	0.0	27.7	123
Higher quintile	5.1	34.1	44.0	3.7	14.1	154
Highest quintile	1.5	53.9	34.0	8.7	4.5	158

Note:
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:

- Over half (57.9%) of all women did not receive PNC after delivery
- Approximately one-third (40.4%) of women received PNC within 48 hours of delivery.

Patterns by background characteristics:

- **Education:** Roughly three out of four (73.6%) women with no education did not receive PNC, relative to one in five (21.4%) women who attended more than secondary education. Only 24.4% of women with no education received PNC within 48 hours of delivery, compared to approximately 73.9% of women who attended more than secondary school. Approximately two thirds (60.9%) of women with secondary education received PNC within 48 hours of delivery. Three out of five (60.9%) of women who completed primary education received no PNC and 38.3% received PNC within 48 hours of delivery.
- **Residence:** Almost three in four (67.1%) women living in rural settings, compared to only one in three (31.1%) women living in urban settings, received no PNC. Approximately three in five (65.5%) women living in urban settings, compared to only 31.8% of women living in rural settings, received PNC within 48 hours of delivery.
- **Wealth:** More than seven in ten (71.5%) women in the highest wealth quintile received PNC within 48 hours as compared to only 19.6% of women in the lowest wealth quintile received PNC within 48 hours. More than eight in ten (80.0%) women in the lowest wealth quintile received no PNC after delivery. Less than one in four (24.3%) women in the highest wealth quintile received no PNC.

Table 12. 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 2021-2023 Cohort

Background characteristics	PNC <= 48 hours after delivery	PNC > 48 hours after delivery	No PNC	Number of women (weighted)
Overall	40.4	1.7	57.9	1966
Age				
15-19	40.4	1.0	58.5	248
20-24	43.1	1.8	55.1	488
25-29	37.4	1.9	60.7	560
31-34	42.8	1.5	55.8	374
35-39	40.7	2.7	56.7	228
40-49	30.5	0.0	69.5	68
Education level				
No education	24.4	2.0	73.6	603
Primary	38.3	0.9	60.9	904
Secondary	60.9	1.9	37.2	297
More than secondary	73.9	4.7	21.4	162
Parity				
0 children	54.5	1.7	43.8	322
1-2 children	46.0	2.4	51.6	855
3-4 children	33.8	1.0	65.2	440
5+ children	21.8	0.9	77.3	350
Region				
Amhara	40.5	2.8	56.8	399
Oromia	40.0	1.5	58.5	1030
SNNP	30.9	0.8	68.4	441
Addis	87.1	3.0	9.9	97
Residence				
Rural	31.8	1.1	67.1	1467
Urban	65.5	3.4	31.1	499
Wealth quintile				
Lowest quintile	19.6	0.5	80.0	388
Lower quintile	22.3	0.9	76.7	391
Middle quintile	35.3	0.4	64.3	383
Higher quintile	51.6	2.2	46.2	400
Highest quintile	71.5	4.3	24.3	404
Delivery location				
Home	0.0	0.0	100	740
Government hospital	69.7	5.5	24.9	432
Government HC or lower	61.8	1.0	37.3	748
Private sector	96.7	3.3	0.0	24
NGO and other facilities	32.4	7.5	60.2	21

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 17, out of all women, over half (54.0%) reported receiving any PNC after delivery. More than six in ten (67.5%) women with facility births received PNC after delivery. Approximately one in five (20.1%) women sought care from a PHCP, as compared to only 2.9% seeking care from a HEW after delivery.

Patterns by background characteristics:

- **Education:** Roughly two in five (37.9%) 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 thirty (2.8%) of women with no education and 0.7% 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 (5.9% and 3.9% respectively). Only 2.0% of women living in urban settings sought care from a HEW after delivery as compared to 3.2% of women living in rural settings.
- **Wealth:** Among women in the highest wealth quintile, approximately seven in ten (81.4%) reported receiving PNC after delivery, while more than one in three (35.7%) 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 9% sought care from a HEW after delivery.
- **Region:** The proportion of women with any PNC was the highest in Addis (93.3%) and lowest in SNNP (43.9%). The reported percentages of women seeking care from a health care professional after delivery in this sample of women ranged from 13.0% in SNNP to 45.6% in Addis.

Table 13. 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 2021-2023 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 among women with facility birth	Number of women with facility delivery among women with facility birth (weighted)
Overall	42.1	5.4	2.9	20.1	54.0	1966	67.5	1386
Age								
15-19	41.5	2.8	3.2	17.6	50.2	248	63.1	184
20-24	44.9	4.1	3.4	20.9	57.6	488	67.2	369
25-29	39.3	4.9	3.1	22.3	51.4	560	62.5	398
31-34	44.2	6.6	2.7	21	56.1	374	73.5	255
35-39	43.3	8.3	1.8	16.6	56.2	228	76.7	146
40-49	30.5	11.3	1.0	12.0	42.6	68	66.9	35
Education level								
No education	26.4	7.0	2.8	15.3	41.5	603	64.1	281
Primary	39.1	4.8	3.5	19.4	52.1	904	63.0	635
Secondary	62.8	5.5	2.4	22.5	68.6	297	73.0	289
More than secondary	78.6	2.9	0.7	37.9	84.1	162	79.7	181
Parity								
0 children	56.2	1.7	3.1	23.8	62.5	322	69.9	293
1-2 children	48.4	5.0	2.6	22.4	60.0	855	67.5	693
3-4 children	34.8	5.4	3.6	17.7	47.3	440	68.0	254
5+ children	22.7	9.7	2.5	14.0	40.5	350	61.2	147
Region								
Amhara	43.2	9.3	2.3	20.3	60.0	399	60.0	325
Oromia	41.5	2.6	3.1	20.7	52.3	1030	73.2	661
SNNP	31.6	8.5	3.1	13.0	43.9	441	54.0	292
Addis	90.1	5.4	2.3	45.6	93.3	97	90.7	109
Residence								
Rural	32.9	5.9	3.2	15.9	45.9	1467	63.4	862
Urban	68.9	3.9	2.0	32.6	77.7	499	74.2	524
Wealth quintile								
Lowest quintile	20.0	7.5	4.0	12.0	35.7	388	60.4	146
Lower quintile	23.3	5.1	4.2	13.0	37.1	391	54.1	190
Middle quintile	35.7	6.5	2.0	15.4	46.6	383	62.0	250
Higher quintile	53.8	5.6	3.2	25.1	67.3	400	67.0	363
Highest quintile	75.7	2.5	1.0	34.3	81.4	404	79.1	438
Delivery location								
Home	0.0	5.3	3.5	10.0	17.9	740	NA	NA
Government hospital	75.1	5.2	2.3	28.0	80.7	432	75.1	489
Government HC or lower	62.7	5.7	2.7	24.5	72.8	748	62.7	845
Private sector	100	2.9	3.3	49.1	100.0	24	100.0	27
NGO and other facilities	39.8	5.7	0.0	19.6	50.5	21	39.8	24

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 18, more than a quarter (26.6%) of women with any PNC received postpartum family planning counseling at PNC. Roughly half (54.9%) of women received immunization counseling and more than four in ten (41.3%) women received counseling on exclusive breastfeeding during PNC.

Patterns by background characteristics:

- **Education:** Among women with any PNC, receipt of postpartum family planning counseling the proportion was relatively similar across education levels. However, there was more variability by education for the other component of counseling. About two thirds (67.8%) women with more than secondary education received immunization counseling as compared to 50.1% 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 21.0% in Amhara to 54.3% in Addis.
- **Age:** Fewer than one in ten (8.1%) women aged 40-49 received infant feeding counseling, while at least one in seven in all other age groups received infant feeding counseling at PNC (14.3%-30.1%).
- The proportion of women receiving counseling at PNC were relatively similar across other demographic characteristics.

Table 14. Counseling at PNC

Percent distribution of respondents who reported receiving postpartum family planning counseling at PNC and the proportion of women who reported receiving exclusive breastfeeding, immunization, infant feeding, and infant growth counseling at PNC, by background characteristics, PMA Ethiopia 2021-2023 Cohort

Background characteristics	Postpartum family planning	Exclusive breastfeeding	Immunization	Infant feeding	Infant growth	Number of women with any PNC (weighted) ¹
Overall	26.6	41.3	54.9	20.1	12.3	1,182
Age						
15-19	21.0	40.0	56.2	30.2	20.0	139
20-24	25.0	34.3	45.9	14.3	9.7	313
25-29	31.5	44.8	55.8	20.6	12.7	321
31-34	28.6	47.0	61.9	24.8	13.7	234
35-39	20.4	40.2	62.1	15.5	7.8	143
40-49	31.3	34.4	41.5	8.1	8.1	32
Education level						
No education	26.6	43.9	50.1	15.6	6.8	279
Primary	26.8	37.6	56.7	22.8	15.3	524
Secondary	25.7	37.4	47.8	16.0	9.7	227
More than secondary	27.8	54.3	67.8	24.7	16.5	152
Parity						
0 children	24.0	39.8	51.7	26.9	19.5	228
1-2 children	28.5	42.3	58.2	19.7	10.4	564
3-4 children	28.6	40.5	57.6	22.2	13.1	232
5+ children	21.1	41.2	45.5	11.1	9.4	158
Region						
Amhara	21.0	49.7	59.3	26.3	16.3	266
Oromia	23.0	34.0	50.8	15.6	8.2	601
SNNP	30.8	40.0	52.0	19.5	15.0	215
Addis	54.3	62.8	72.0	29.9	19.4	101
Residence						
Rural	24.1	36.9	52.5	17.6	11.5	750
Urban	31.1	49.6	59.4	24.7	13.9	432
Wealth quintile						
Lowest quintile	25.3	33.7	49.7	10.0	8.8	154
Lower quintile	23.2	40.6	49.5	20.9	8.1	162
Middle quintile	24.6	35.3	55.7	27.5	13.0	199
Higher quintile	24.2	38.6	52.8	15.8	14.3	300
Highest quintile	31.8	51.5	62.2	24.8	14.4	367

Notes:
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.

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).

Key findings: As shown in Table 19, a very low proportion – 2.4% of women received modern contraceptive methods immediately after delivery and one in ten (10.3%) 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:** Women aged 40-49 reported not receiving any modern contraceptive method immediately after birth, as compared to only 2.7% of women aged 15-19 reporting receiving any modern contraceptive method immediately after birth. 10.7% of women aged 20-24 versus only 7.6% 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 3.3% amongst women with more than secondary education to 3.2% amongst women with no education. At 6 weeks postpartum, 4.6% of women with no education and 14.7% of women with secondary education reported using any modern contraception other than LAM.
- **Parity:** Around 3% of multiparous women and 2% of nulliparous women reported receiving any modern contraception method immediately after birth. About 13% of nulliparous women versus only 4.6% 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 0.2% in Amhara to 8.6% in Addis. The reported percentages of women using a form of modern contraception at 6 weeks postpartum ranged from 8.2% in Amhara to 25.9% in Addis.
- **Residence:** 18.6% of women living in urban settings and only 7.4% of women living in rural settings reported using a form of modern contraception at 6 weeks postpartum.
- **Wealth:** About one in five (18.2%) of women in the highest wealth quintile as compared to only 4.5% of women in the lowest wealth quintile reported using any modern contraception other than LAM at the time of their 6-week interview.

Table 19. 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 2021-2023 Cohort

Background characteristics and facility type	Immediate PFP	Number of women with facility delivery (weighted)	PFP within 9 weeks	Number of women (weighted) ¹
Overall	2.4	1386	10.3	1958
Age				
15-19	2.7	184	12.7	246
20-24	2.4	369	10.7	485
25-29	2.0	398	12.8	558
31-34	1.8	255	6.8	374
35-39	5.3	146	6.9	226
40-49	0	35	7.6	68
Education level				
No education	3.2	281	4.6	602
Primary	2.3	635	11.9	897
Secondary	1.5	289	14.7	297
More than secondary	3.3	181	14.0	162
Parity				
0 children	1.9	293	13.0	319
1-2 children	2.9	693	11.9	852
3-4 children	1.7	254	9.6	437
5+ children	2.5	147	4.6	350
Region				
Amhara	0.2	325	8.2	398
Oromia	2.8	661	9.8	1023
SNNP	1.8	292	9.7	441
Addis	8.6	109	25.9	96
Residence				
Rural	2.0	862	7.4	1460
Urban	3.2	524	18.6	498
Wealth quintile				
Lowest quintile	3.2	146	4.5	387
Lower quintile	1.3	190	7.1	390
Middle quintile	1.4	250	8.5	381
Higher quintile	1.8	363	12.6	396
Highest quintile	3.8	438	18.2	404
Delivery location				
Home	NA	NA	4.5	740
Government hospital	1.3	489	14.0	430
Government HC or lower	3.0	845	13.8	742
Private sector	4.6	51	11.7	45

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 20, seven out of ten of facility live births (69.4%) were weighed at birth. The vast majority of all live births were wrapped at birth (95.4%), and seven out of ten were wrapped within 5 minutes of birth (71.2%). Approximately half (53.1%) of all live births were placed skin-to-skin with the mother's chest immediately after birth. More than three in four (82.1%) live births were breastfed within 1 hour of birth.

Patterns by background characteristics:

- **Residence:** More than eight in ten (80.4%) facility births in urban areas versus more than six in ten (62.6%) facility birth in rural areas were weighed at birth. While almost three-quarters (72.6%) of all live births were placed skin-to-skin with the mother's chest immediately after birth in urban areas, less than half (46.4%) babies had skin-to-skin contact immediately after birth in rural areas.
- **Education:** The proportion of babies who were wrapped at 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 (74.0%) to mothers who attended more than secondary education versus only one in three births (37.4%) 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 (66.8%) babies from nulliparous women had immediate skin-to-skin contact with their mother, compared to about three in ten (34.3%) babies from women with five or more children.

Table 20. 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 2021-2023 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	69.4	4152	95.4	71.2	96.3	53.1	82.1	1959
Age								
15-19	58.3	546	94.6	72	95.8	61.5	84.4	248
20-24	68.2	1099	96.2	69.9	96.1	56.2	84.0	487
25-29	71.5	1197	95.5	71.7	96.2	52.6	81.5	565
31-34	73.2	769	94.5	72.8	97.6	49.3	82.8	373
35-39	72.3	436	97.1	71.8	95.2	48.3	75.5	221
40-49	74.8	106	91.1	61.0	97.7	39.1	84.0	66
Education level								
No education	62.9	844	94.5	72.7	96.8	37.4	80.4	594
Primary	64.3	1898	95.0	67.7	97.2	54.2	83.8	903
Secondary	77.1	869	97.8	73.6	94.0	69.0	83.8	296
More than secondary	84.9	541	96.4	80.1	94.5	74.0	76.8	166
Parity								
0 children	66.5	877	95.5	68.2	94.2	66.8	79.9	322
1-2 children	73.4	2067	94.8	71.8	96.3	59.1	82.6	858
3-4 children	62.6	769	95.4	72.4	96.7	45.8	84.3	434
5+ children	67.8	439	96.8	70.7	97.9	34.3	80.4	345
Region								
Amhara	71.0	971	96.9	72.3	97.4	63.1	73.3	398
Oromia	65.4	1984	96.2	74.6	95.9	51.3	86.4	1027
SNNP	67.1	871	92.3	62.7	96.5	44.7	80.2	437
Addis	94.8	327	94.9	68.1	96.5	68.3	81.6	96
Residence								
Rural	62.6	2575	95.2	71.0	96.4	46.4	82.5	1459
Urban	80.4	1577	96.2	71.7	96.1	72.6	81.2	500
Wealth quintile								
Lowest quintile	67.8	427	94.9	69.8	98.4	32.4	80.8	376
Lower quintile	60.6	567	95.2	69.7	97.6	42.1	82.2	396
Middle quintile	58.7	745	93.7	74.4	93.5	45.5	82.2	380
Higher quintile	65	1095	97.2	71.5	97.1	69.4	85.0	400
Highest quintile	83.4	1319	96.0	70.4	95.1	73.8	80.4	407

Note:
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 21 and Table 22.

Key findings:

- Overall, a razor blade was the most commonly used instrument to cut the umbilical cord (97.8 %), followed by scissors (0.9%), and "do not know" (0.1%).
- 46.8% of surgical blades, razor blades, or scissors were new and did not need to be boiled. More than one-fourth (27.3%) 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 and urban areas (98.2% and 90.4%, respectively). For rural and urban areas, roughly one in four (urban: 24.6%, rural: 25.4%) were cut using an instrument that was not boiled before use (among surgical blade, razor blade, or scissors).
- **Parity:** Proportions of women who reported a razor blade as the instrument used to cut the umbilical cord were similar regardless of parity, ranging from 97.2% to 100%.
- **Education:** Similarly, very little variation by education level is observed in instrument used to cut the cord. Proportion ranges from 95.2% to 100%. By contrast almost half (49.2%) of women with more than secondary education reported that the instrument was boiled versus 22.5% for women with no education.
- **Wealth:** Razor blade was used for the majority of births across all wealth quintiles.

Table 15. Care of the Umbilical Cord - Instrument Used

Percent distribution of instrument used to cut the umbilical cord amongst live births at home, by mother's background characteristics, PMA Ethiopia 2021-2023 Cohort							
Background characteristics	Surgical blade	Razor blade	Bamboo strips	Scissors	Others	Do not know	Number of live home births (weighted)
Overall	0.4	97.8	0.7	0.9	0.1	0.1	583
Age							
15-19	0	97.8	0	1.2	1	0	68
20-24	0	99.6	0	0.4	0	0	130
25-29	0	97.7	0.9	1.1	0	0.3	166
31-34	1.3	96.6	1.2	0.9	0	0	115
35-39	1	96.2	1.8	1	0	0	74
40-49	0	100	0	0	0	0	29
Education level							
No education	0.8	98.7	0.5	0	0	0	275
Primary	0	97.3	1	1.5	0.2	0	271
Secondary	0	95.2	0	3.1	0	1.6	34
More than secondary	0	100	0	0	0	0	4
Parity							
0 children	0	100	0	0	0	0	51
1-2 children	0	98.2	0	1.2	0.3	0.3	195
3-4 children	0.9	97.4	0.8	0.8	0	0	168
5+ children	0.4	97.2	1.6	0.7	0	0	169
Region							
Amhara	0.9	98.6	0	0.5	0	0	88
Oromia	0.4	97.5	1.2	0.5	0.2	0.2	350
SNNP	0	98.2	0	1.8	0	0	145
Addis	0	100	0	0	0	0	0
Residence							
Rural	0.4	98.2	0.7	0.6	0	0	555
Urban	0	90.4	0	5.3	2.3	2	28
Wealth quintile							
Lowest quintile	0	98.6	0.7	0.7	0	0	200
Lower quintile	0.8	98	0.8	0.4	0	0	180
Middle quintile	0.6	97.3	1.1	1.1	0	0	129
Higher quintile	0	98.1	0	0.8	1.1	0	61
Highest quintile	0	88.7	0	7.2	0	4.1	14
Note: 1. Denominator: Live births at home.							

Table 22. 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, amongst live births at home whose cord was cut using surgical blade, razor blade or scissors, PMA Ethiopia 2021-2023 Cohort					
Background characteristics	Yes	No	New blade/ no need to boil	Do not know	Number of live home births (weighted) ¹
Overall	27.3	25.4	46.8	0.6	578
Age					
15-19	21.1	37.5	41.4	0	68
20-24	29.4	29.4	41.2	0	130
25-29	24.2	20.8	53.8	1.2	164
31-34	34.0	23.7	41.8	0.5	114
35-39	31.0	12.5	55.5	1	73
40-49	13.8	43.5	42.7	0	29
Education level					
No education	22.5	28.8	48.5	0.3	273
Primary	31.3	21.6	46.2	0.9	267
Secondary	32.4	27.8	39.7	0	33
More than secondary	49.2	22.4	28.4	0	4
Parity					
0 children	25.7	24.7	49.7	0	51
1-2 children	24.1	26.7	48.6	0.7	194
3-4 children	26.0	22.5	50.7	0.7	166
5+ children	32.8	26.9	39.8	0.4	167
Region					
Amhara	8.5	18	72.7	0.9	88
Oromia	34.3	34.9	30.3	0.5	345
SNNP	22.2	7.0	70.3	0.5	145
Addis	0	100	0	0	0
Residence					
Rural	27.5	25.4	46.6	0.5	551
Urban	23.5	24.6	50.0	1.9	27
Wealth quintile					
Lowest quintile	27.7	26.8	44.9	0.6	198
Lower quintile	27.6	24.5	47.1	0.8	178
Middle quintile	23.9	25.9	50.1	0	128
Higher quintile	30.5	22.8	46.7	0	60
Highest quintile	36.3	21.4	38.3	4.0	13
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 23.

Key findings: Nearly one in four (26.8%) and a third (37.2%) of all live births received BCG and polio vaccinations by 6 weeks, respectively.

Patterns by background characteristics:

- **Residence:** Over half of live births (57.3%) in urban areas versus one in six (16.3%) live births in rural areas received the BCG vaccine by 6 weeks. For polio vaccination, three in five (58.2%) of urban live births and one-third (30.0%) rural live births received it by 6 weeks.
- **Parity:** Nearly a third (35.0%) and four in ten (38.8%) index babies received BCG and polio vaccination by 6 weeks, respectively. For infants with 5 or more siblings, about one in ten (12.9%) received BCG vaccination; a quarter (25.9%) received polio vaccination by 6 weeks.
- **Education:** Among live births whose mothers had no education, 16.2% received BCG vaccination; 28.5% received polio vaccination by 6 weeks. More than half babies of mothers with more than secondary education had BCG (56.5%) and polio (58.7%) vaccination by 6 weeks.

Table 23. 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 2021-2023 Cohort			
Background characteristics	BCG Vaccination	Oral polio vaccination	Number of live births (weighted)
Overall	26.8	37.2	1959
Age			
15-19	21.7	29.5	248
20-24	27.8	40.6	487
25-29	31.2	40.4	565
31-34	29.4	39.4	373
35-39	17.9	31.1	221
40-49	15.2	20.8	66
Education level			
No education	16.2	28.5	594
Primary	23.9	36.3	903
Secondary	40.1	45.1	296
More than secondary	56.5	58.7	166
Parity			
0 children	35.0	38.8	322
1-2 children	33.0	43.4	858
3-4 children	19.6	32.6	434
5+ children	12.9	25.9	345
Region			
Amhara	24.0	35.8	398
Oromia	22.9	33.5	1027
SNNP	23.3	36.6	437
Addis	96.3	85.2	96
Residence			
Rural	16.3	30.0	1459
Urban	57.3	58.2	500
Wealth quintile			
Lowest quintile	10.0	23.1	376
Lower quintile	12.9	26.8	396
Middle quintile	16.4	30.8	380
Higher quintile	29.4	42.1	400
Highest quintile	62.9	61.3	407

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 24 shows the proportion of infants still living who were fed with breastmilk only in the past 24 hours.

Key findings: More than three-quarters (75.6%) of infants were exclusively breastfed by the mother's 6-week postpartum follow-up interview.

Patterns by background characteristics:

- **Residence:** Approximately three in four rural (77.0%) and urban (71.6%) infants in rural and urban areas were exclusively breastfed at approximately 6 weeks postpartum, respectively.
- **Region:** Over half (59.6%) of infants in Addis and eight in ten infants (85.1%) infants in Amhara 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 24. 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 2021-2023 Cohort		
Background characteristics	Percent	Number of infants still alive (weighted)
Overall	75.6	1894
Age		
15-19	77.5	238
20-24	78.0	472
25-29	72.2	544
31-34	76.2	366
35-39	74.6	212
40-49	80.5	63
Education level		
No education	78.8	573
Primary	75.9	877
Secondary	72.4	283
More than secondary	68.4	162
Parity		
0 children	75.9	302
1-2 children	73.4	837
3-4 children	78.1	421
5+ children	77.9	334
Region		
Amhara	85.1	386
Oromia	76.4	984
SNNP	68.8	430
Addis	59.6	94
Residence		
Rural	77.0	1407
Urban	71.6	487
Wealth quintile		
Lowest quintile	76.6	360
Lower quintile	78.7	382
Middle quintile	81.1	365
Higher quintile	74.0	390
Highest quintile	68.3	396

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 2021-2023 Cohort				
Background characteristics	General nutrition counseling	Iron and folate counseling	Deworming medication counseling	Number of women (weighted)
Overall	37.5	16.0	2.7*	1,597
Age				
15-19	32.4	13.8	1.1	203
20-24	38.5	15.3	2.8	408
25-29	37.7	17.3	4.1	459
31-34	39.0	16.2	1.8	315
35-39	37.1	16.7	1.8	165
40-49	38.6	15.9	3.9	47
Education level				
No education	30.7	12.4	2.1	447
Primary	35.8	15.3	2.2	750
Secondary	42.9	18.9	3.0	257
More than secondary	57.2	26.0	6.8	143
Parity				
0 children	40.4	14.6	3.1	277
1-2 children	39.8	16.8	3.0	718
3-4 children	34.5	17.7	2.1	348
5+ children	31.7	13.3	2.0	254
Region				
Amhara	50.4	16.7	5.9	343
Oromia	33.2	16.4	1.9	857
SNNP	29.1	11.3*	0.9	323
Addis	63.6	28.4	4.6	74
Residence				
Rural	32.8	15.7	2.0	1,163
Urban	50.0	17.0	4.5	434
Wealth quintile				
Lowest quintile	29.1	8.6	0.7	296
Lower quintile	29.6	11.5	0.9	292
Middle quintile	32.9	13.8	2.1	308
Higher quintile	39.4	20.2	3.5	340
Highest quintile	52.7	23.9	5.6	360

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 2021-2023 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	53.8	53.3	43.0	27.3	24.1	23.9	21.9	14.1	29.6	5.6	1,597
Age											
15-19	50.5	47.5	30.9	19.7	11.4	9.1	12.5	6.5	18.9	3.4	203
20-24	51.6	51.8	42.6	25.2	22.5	22.0	20.6	13.3	29.0	5.2	408
25-29	50.9	50.7	44.2	28.2	29.0	30.6	26.9	18.0	32.0	7.9	459
30-34	60.7	60.7	50.2	29.6	26.6	26.1	22.8	15.8	30.3	4.3	315
35-39	57.8	54.8	43.8	33.5	23.7*	24.0	20.8	12.3	27.1	7.0	165
40-49	55.6	60.3	34.7	32.0	29.6	22.2	23.9	9.6	27.0	1.7	47
Education											
Never attended	57.9	52.3	36.9	27.7	20.4	18.0	17.2	11.6	23.4	4.8	447
Primary	52.9	53.0	41.9	24.8	22.2	22.2	20.7	11.8	25.8	5.1	750
Secondary	51.3	55.4	46.9	31.8	28.1	29.1	25.4	16.9	32.0	6.2	257
More than secondary	50.3	53.7	60.3	31.0	38.8	41.5	36.4	28.5	53.6	10.2	143
Parity											
0	63.7	62.8	50.5	30.8	26.6	26.6	28.5	18.7	33.7	8.2	277
1-2	49.7	49.9	43.5	26.7	25.0	24.6	22.7	14.2	31.7	5.5	718
3-4	55.1	54.3	42.5	25.7	23.7	25.7	20.3	14.6	26.2	6.0	348
5+	52.8	50.9	33.8	27.4	19.4	16.5	14.9	7.8	17.6	2.8	254
Region											
Amhara	70.8	70.5	57.1	39.6	31.6	33.6	31.4	20.9	35.9	9.0	343
Oromia	49.4	46.5	35.1	22.5	19.5	17.5	16.8	10.3	22.2	3.9	857
SNNP	48.7	52.5	41.1	27.5	21.7	22.0	18.0	10.6	28.8	4.1	323
Addis	49.0	55.6	76.0	24.7	53.6	60.0	53.5	41.4	67.9	16.6	74
Residence											
Rural	54.1	52.2	38.4	27.1	20.7	19.4	18.3	11.2	23.5	4.3	1,163
Urban	52.9	56.0	55.2	27.7	33.3	35.8	31.6	21.8	42.2	9.2	434
Wealth quintile											
Lowest	49.3	47.6	30.8	21.9	16.3	12.4*	10.9*	6.7*	17.8	3.0	296
Lower	53.1	52.2	36.2	24.0	19.8	19.8	18.6	13*	23.0	6.1	292
Middle	60.8	56.1	48.1	29.3	24.2	22.1	23.3	12.9*	30.1	4.0	308
Higher	55.2	57.7	39.3	32.0	21.1	21.9	19.8	11.7	25.5	4.8	340
Highest	50.8	52.2	57.4	28.1	36.8	39.9	34.4	24.2	43.6	9.6	360

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 2021-2023 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	85.1	79.2	57.0	77.0	28.2	19.5	1,597
Age							
15-19	79.9	71.9	54.7	71.4	30.5	17.8	203
20-24	88.5	80.8	61.4	80.8	23.9	15.7	408
25-29	83.3	78.2	54.9	74.8	28.6	21.2	459
30-34	84.8	80.7	55.0	77.2	28.2	19.3	315
35-39	87.9	82.4	59.4	78.8	32.5	26.3	165
40-49	87.1	84.7	54.7	82.1	36.2	20.4	47
Education							
Never attended	82.0	72.9	52.5	71.4	29.8	20.1	447
Primary	81.5	75.8	55.6	73.2	24.8	17.2	750
Secondary	94.5	90.3	62.9	87.4	32.6	22.2	257
More than secondary	96.4	96.6	68.0	95.6	33.3	24.5	143
Parity							
0	91.4	81.7	64.9	85.4	32.5	22.9	277
1-2	87.4	81.7	61.2	79.7	28.0	18.8	718
3-4	78.7	76.5	48.8	72.7	26.2	17.9	348
5+	80.4	73.2	47.8	66.2	26.9	19.8	254
Region							
Amhara	93.0	86.9	65.4	90.1	43.7	32.6	343
Oromia	82.4	75.2	53	72.4	23.1	13.9	857
SNNP	80.3	76.8	51.2	70.4	25.7	19.6	323
Addis	100.0	100.0	89.6	99.0	26.3	23.3	74
Residence							
Rural	80.8	74.1	51.3	70.6	26.2	17.1	1,163
Urban	96.5	92.8	72.3	94.2	33.4	25.9	434
Wealth quintile							
Lowest	75.8	71.3	50.9	61.8	21.5	15.3	296
Lower	82.0	74.0	50.2	71.4	26.1	14.7	292
Middle	80.6	72.2	49.2	72.7	25.6	19.9	308
Higher	87.4	82.7	55.6	80.4	32.3	20.0	340
Highest	96.9	92.6	75.7	94.6	33.8	26.0	360

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 2021-2023 Cohort		
Background characteristics	Percent	Number of women (weighted)
Overall	13.4	1,597
Age		
15-19	14.2	203
20-24	11.7	408
25-29	14.7	459
30-34	13.4	315
35-39	13.6	165
40-49	10.2	47
Education		
Never attended	13.5	447
Primary	14.7	750
Secondary	11.7	257
More than secondary	9.2	143
Parity		
0	11.4	277
1-2	12.6	718
3-4	16.9	348
5+	12.9	254
Region		
Amhara	17.2	343
Oromia	9.2	857
SNNP	19.2	323
Addis	19.1	74
Residence		
Rural	14.6	1,163
Urban	10.1	434
Wealth quintile		
Lowest	13.2	296
Lower	15.2	292
Middle	14.1	308
Higher	12.9	340
Highest	11.9	360

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 2021-2023 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	57.4	16.7	1,597	70.0	64.7	916	76.5	77.3	267
Age									
15-19	42.3	13.9	203	64.4	52.2	86	77.9	77.3	28
20-24	56.1	16.9	408	75.3	65.8	229	74.6	71.9	70
25-29	61.4	16.9	459	72.1	70.9	282	75.6	76.2	78
30-34	59.9	16.6	315	64.3	65.3	189	78.2	81.1	52
35-39	60.9	18.1	165	70.1	62.2	100	74.5	84.5	29
40-49	65.2	21.2	47	61.9	39.4	31	88.9	80.6	11
Education									
Never attended	51.3	12.4	447	67.7	56.6	229	79.9	83.3	55
Primary	51.3	16.4	750	71.5	63.9	385	76.2	76.2	123
Secondary	69.1	19.8	257	71.6	71.5	178	80.7	80.2	51
More than secondary	86.8	26.5	143	67.2	72.4	125	66.7	68.0	39
Parity									
0	60.0	18.8	279	70.9	70.4	174	84.6	78.3	53
1-2	63.2	18.8	713	70.8	67.7	446	71.5	76.2	133
3-4	51.1	14.3	351	69.1	60.2	178	77.5	74.8	50
5+	46.9	12.0	254	67.2	51.6	119	82.2	83.9	30
Region									
Amhara	81.3	23.0	343	76.2	62.6	279	79.8	77.8	79
Oromia	47.9	14.8	857	63.8	71.1	411	72.8	74.9	127
SNNP	47.7	10.5	323	72.3	42.5	155	83.0	73.8	34
Addis	98.4	37.6	74	76.7	83.1	73	75.6	90.7	28
Residence									
Rural	47.4	13.9	1,163	66.8	58.7	552	77.9	76.2	162
Urban	84	24.3	434	74.9	73.6	365	74.2	78.9	106
Wealth quintile									
Lowest	37.1	10.2	296	67.4	47.9	110	86.5	79.8	31
Lower	50.1	14.4	292	68.8	56.4	147	68.7	74.6	42
Middle	46.2	14.1	308	79.9	58.1	143	82.3	78.5	44
Higher	59.4	18.9	340	67.9	66.7	202	76.5	73.4	65
Highest	87.6	24.2	360	68.4	76.0	315	73.8	79.8	88

Note:

1. Denominator: among all women who received HIV testing

2. Denominator: among all women who received Syphilis testing