



# Ananya Baseline: Early Findings from Household Surveys

9 October 2012

Presentation to the Government of Bihar

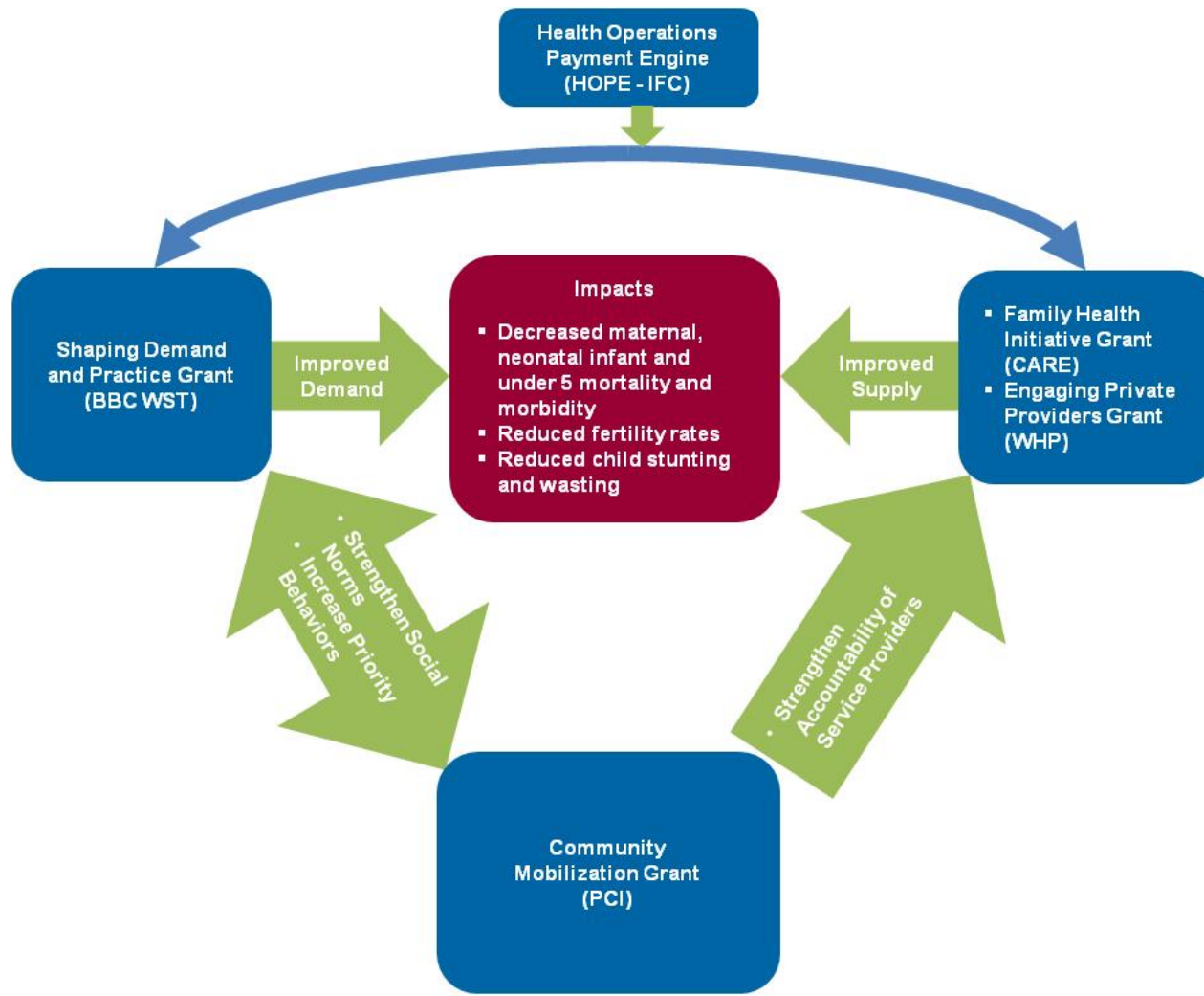


**MATHEMATICA**  
Policy Research



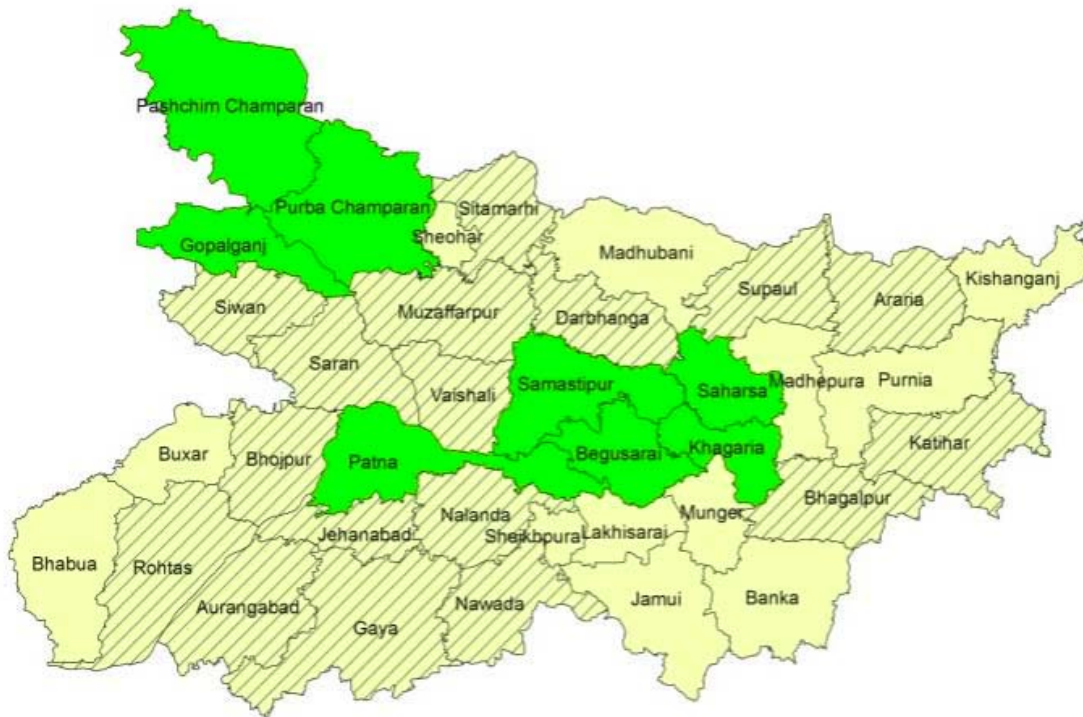


# Integrated Package of Demand and Supply Activities





# Ananya Districts and Scale-up Plan



## Districts of Bihar

 Eight focus districts, scale-up targeted by 2012

 Remaining districts, scale-up targeted by 2015

Note: BBC-WST and CARE grants will scale up throughout the state of Bihar by 2015. WHP plans to scale up to 25 districts by 2012; these include the 8 focus districts and the 17 districts marked with diagonal lines.



# Main Evaluation Components

Evaluation Component	Description
Assess program implementation and scale-up	<ul style="list-style-type: none"><li>• Document and assess implementation progress, successes and failures</li><li>• Understand and assess process by which scale up occurred</li></ul>
Measure the contribution of Ananya in improving health outcomes in Bihar	<ul style="list-style-type: none"><li>• Assess the contribution of Ananya in the 8 focus districts at midline using a set of comparison districts (2013)</li><li>• Measure overall contribution of Ananya across the state at endline, by assessing whether targeted changes were achieved (2015)</li></ul>
Measure effectiveness of select, high-impact innovations	<ul style="list-style-type: none"><li>• Rigorous evaluation of effectiveness of highly-innovative solutions in improving coverage</li></ul>
Estimate cost and cost-effectiveness	<ul style="list-style-type: none"><li>• Estimate overall costs and cost-effectiveness of Ananya and of innovative solutions to inform replication and scale up decisions</li></ul>



# Focus of Today's Presentation

- Goals and scope of the baseline data collection
  - Sample design and approach
- Preliminary descriptive findings from:
  - Household surveys
  - Frontline worker (ASHA, AWW and ANM) surveys
  - PHC facility and nurse/ANM surveys
- Seek input from Government officials and other stakeholders on areas of further interest for analysis



# Sample Design and Approach for Household Surveys



# Scope of Household Baseline Data Collection

- Baseline data used to update benchmarks and set targets
- Representative sample of women in the state who had a live birth in the last 12 months
  - *Most* interventions focus on the window between the last trimester of pregnancy and when the child is one year old
- Eligible women identified through a household listing in sampled communities
- Survey covers the continuum of care, including interactions with FLWs
  - ANC, delivery and newborn care, child nutrition and immunization, hygiene and sanitation, and contraception





# Sampling Approach for Household Survey

## Primary sampling unit

- 9 blocks sampled on average per district (Range 4 to 17)
- 342 PSUs selected, with variation by size of district

## Secondary sampling unit

- Rural – Village (Census 2001)
- Urban – BL (NSSO 2007-10)
- Segmented large villages/combined small villages
- 772 rural SSUs and 245 urban SSUs

## Final stage

- List all women in the selected segment
- Survey those who had a live birth in the last 12 months
- Target 13,000 completed interviews





# Sample Size and Response Rates for Household Surveys

- Household listing
  - All residential households in 1,017 sampled SSUs eligible for listing
  - 116,784 eligible households (excluding 2,843 migrated)
  - 110,094 (94.3%) completed listing interview
  
- Household survey
  - Women who gave birth in the past 12 months were eligible
  - 14,706 eligible women identified from the listing
  - 13,069 (88.9%) completed interview
  - Overall response rate 83.8%; rural 86.8%, urban 75%



# Household Characteristics Are Similar to Other Surveys in Bihar

- 11% of sampled women live in urban areas
- 82% are Hindu, and 18% are Muslim
- 26% are SC/ST, and 64% are from OBC
- The median age of respondent is 25 years
  - The average age at marriage was 18 years
  - 31% have one child
  - 41% have three or more children
- 61% have no formal education
  - 11% of sampled women are income earners, and 14% use a bank account



# Mortality Rates



# The State-Wide Neonatal Mortality Rate Is 32 per 1,000 Live Births

Indicator	Bihar	
	Estimate	95% CI
Neonatal Mortality (deaths within the first 28 days of life per 1,000 live births)	32.2	27.6 – 36.8
Stillbirths (dead births per 1,000 pregnancies of 7 months or longer)	20.0	15.6 – 24.5
Perinatal Mortality (dead births and deaths within the first 7 days of life per 1,000 pregnancies of 7 months or longer)	45.5	39.7 – 51.3



# Antenatal Care, Delivery, and Immediate Newborn Care



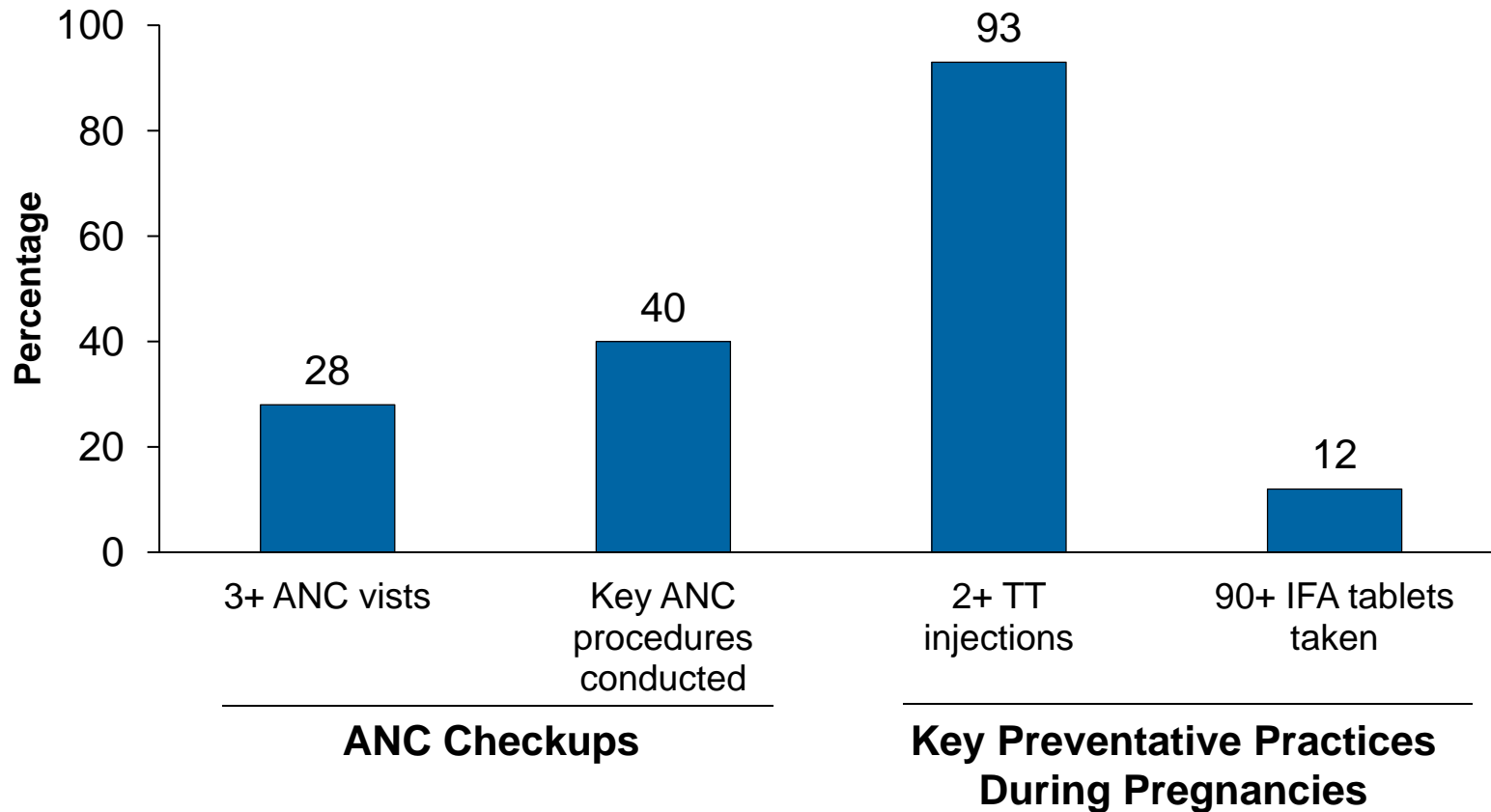
# Main Findings for Antenatal Care, Delivery, and Immediate Newborn Care

- There are gaps in care and practices across the entire continuum of care:
  - Many women do not receive adequate antenatal checkups
  - Although 62% of women deliver at facilities, care at facilities is not fully adequate
  - There are gaps in appropriate newborn care practices
  
- Interactions with FLWs are insufficient:
  - Fewer than half of women receive a home visit in the final trimester
  - FLWs attend half of facility deliveries, but only 10% of home deliveries
  - Only 20% of women report any postpartum home visits
  - Discussion of relevant topics with FLWs may be limited





# Many Women Do Not Receive Adequate Antenatal Care

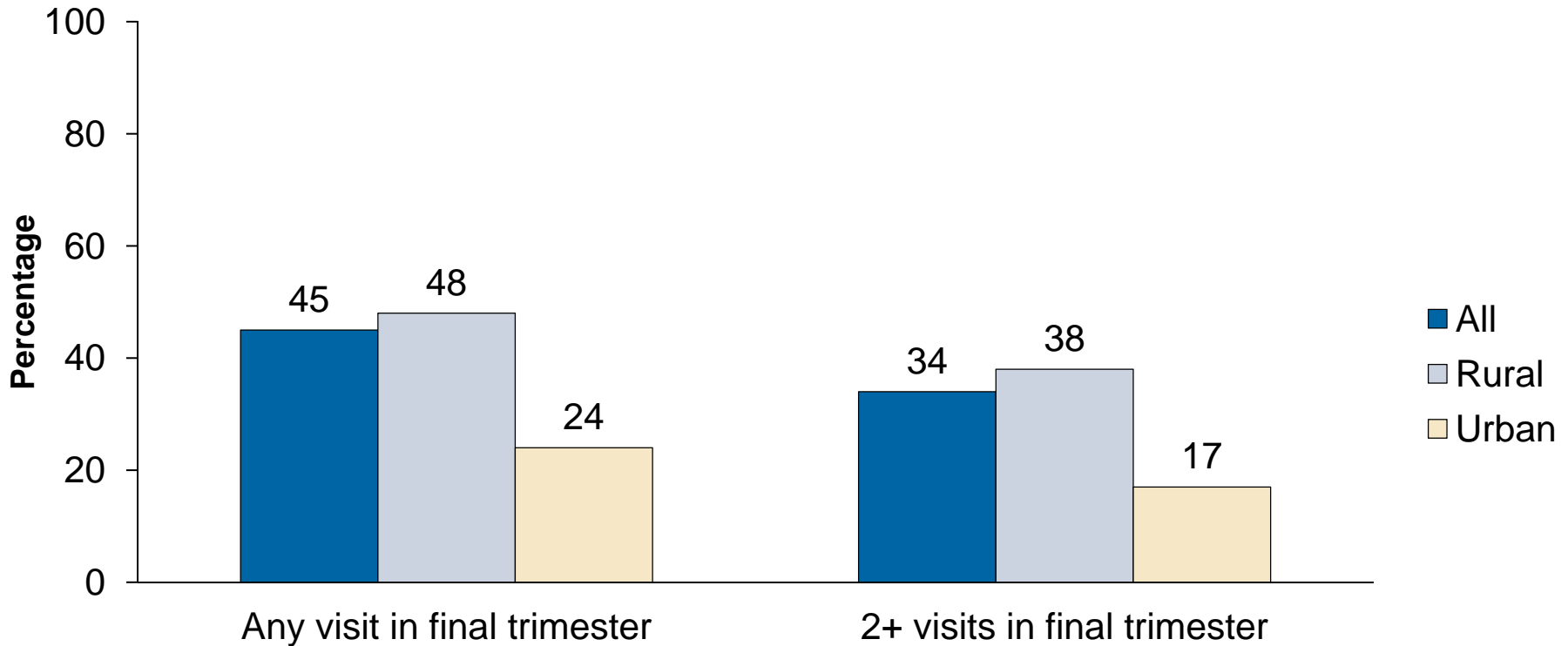


Note: Key ANC procedures are weight taken, BP measured, and abdomen checked at least once.

**N=13,069**



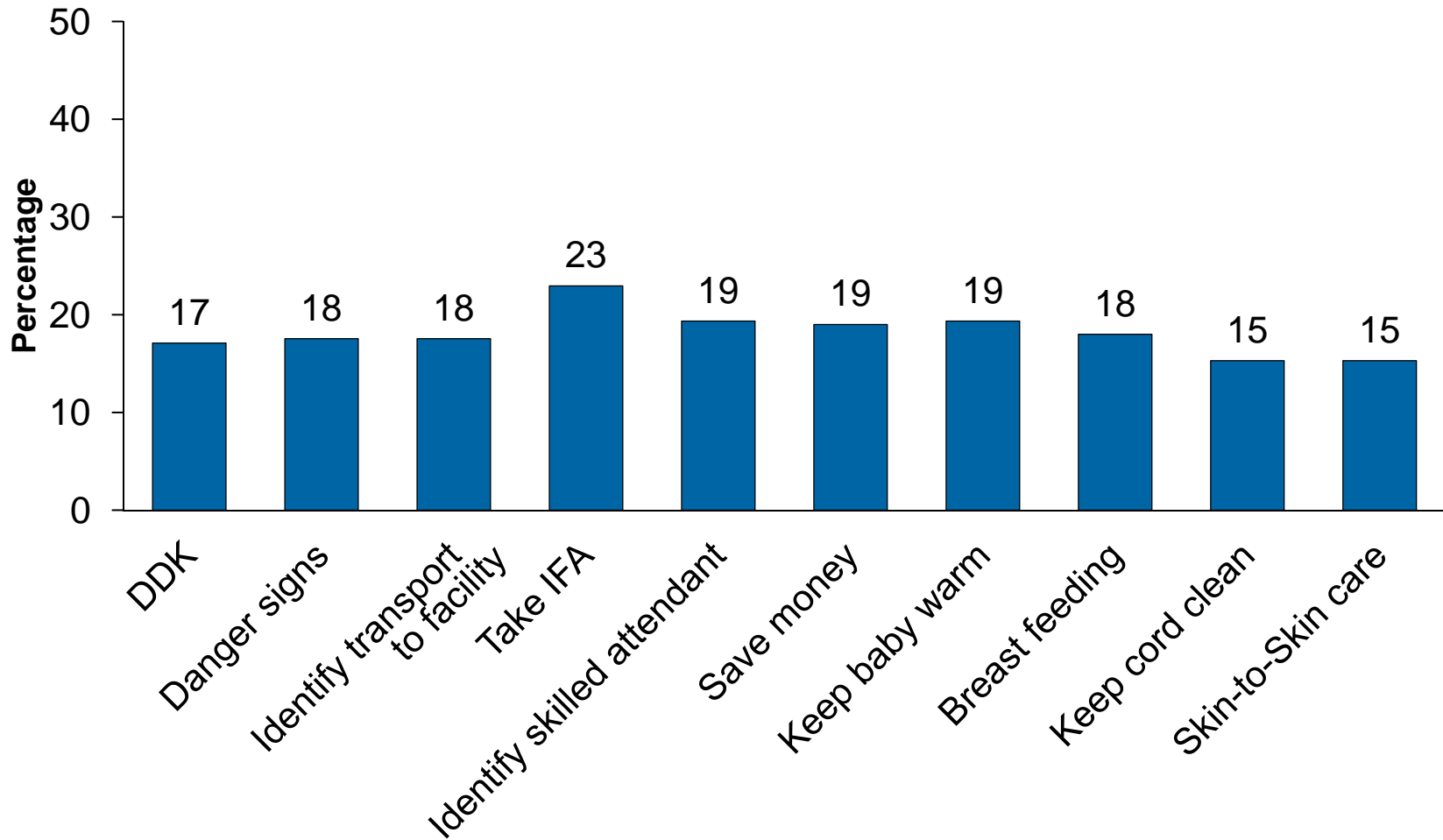
# Fewer Than Half the Households Report Receiving a Visit by a FLW in the Final Trimester



N=13,069



# Discussion of Many Pregnancy and Delivery Topics Through FLW Final-Trimester Home Visits Is Limited

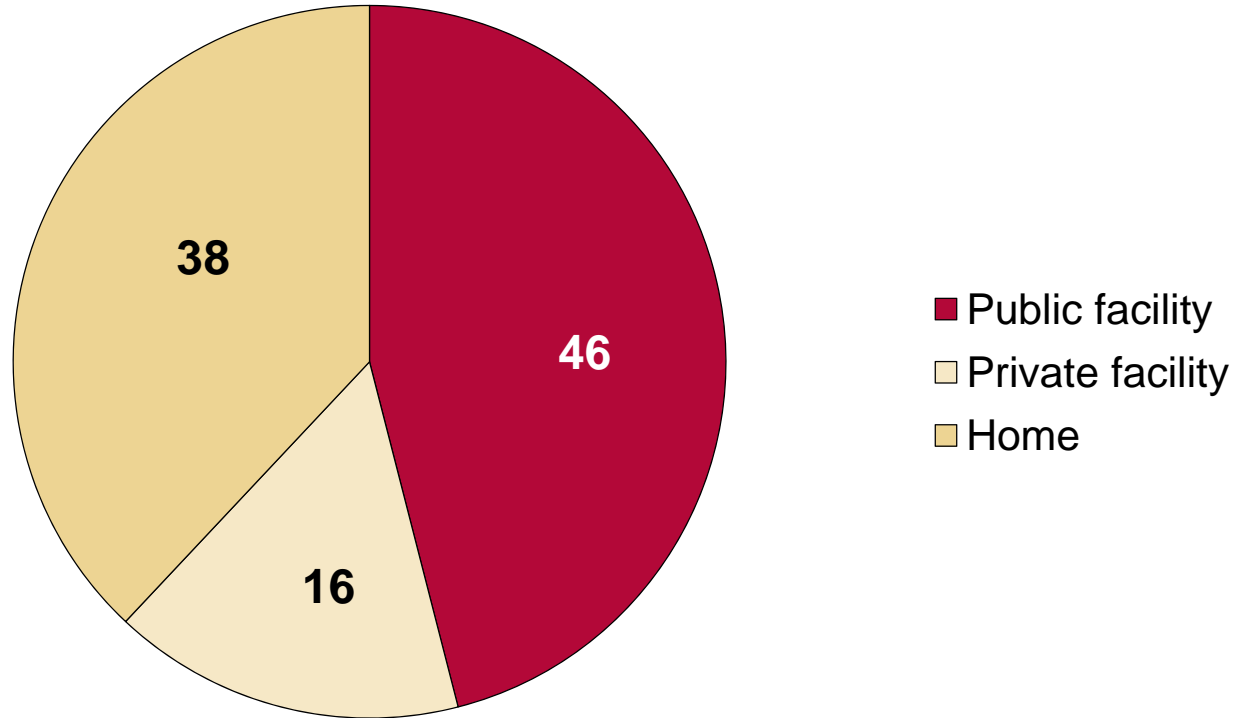


N=13,069



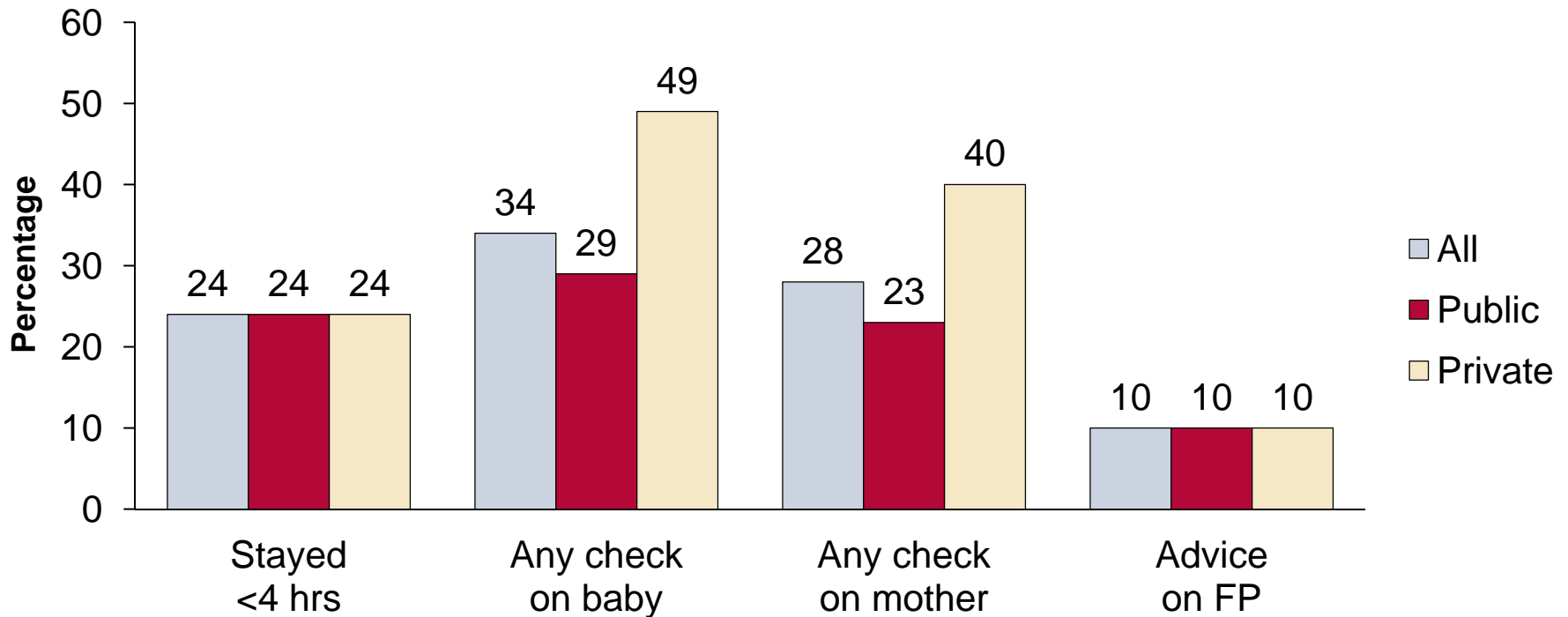
# Over Half of Women Deliver at Facilities, Most of Which Are Public Facilities

All Women (N=13,069)





# Most Women Who Deliver at a Facility Have Short Stays and Are Discharged with Minimal Follow-up

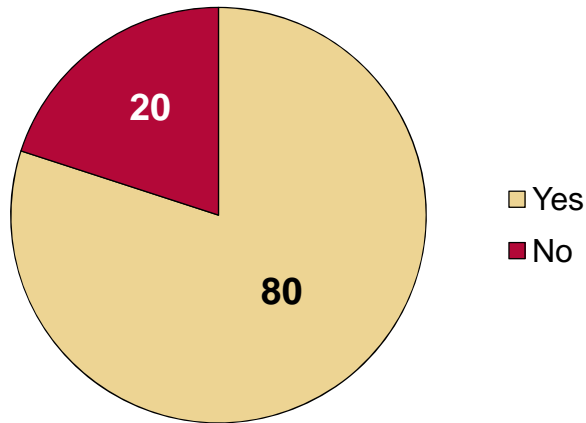


Among Women Delivering at a Facility  
(N=8,150)

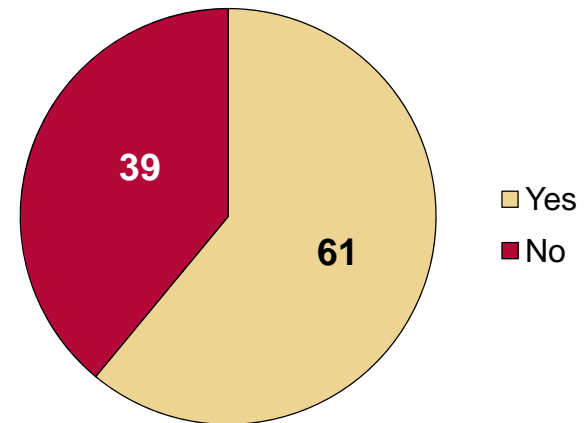


# Most Women Are Aware of JSY Incentives, but Many Do Not Receive Them

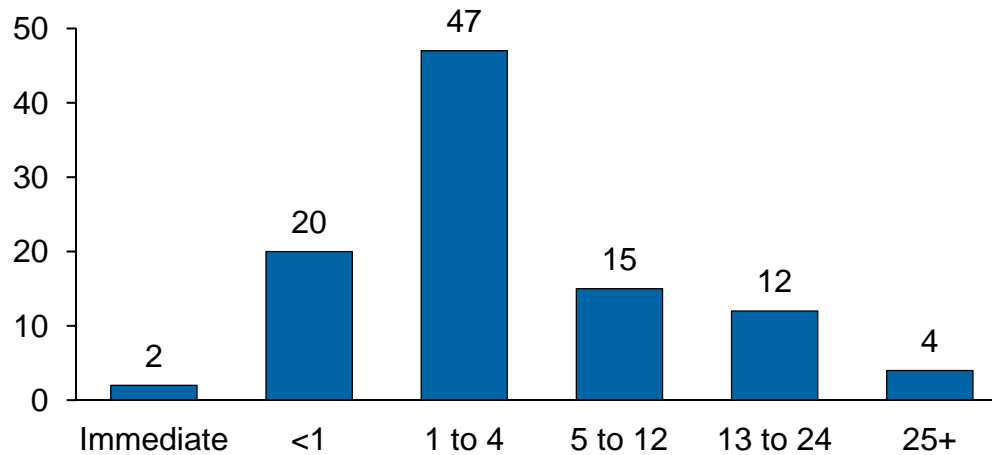
Aware of Incentives  
(N=13,069)



Received Incentives (Among those with Public Facility Delivery, N=5,942)



Time to Payment (weeks)

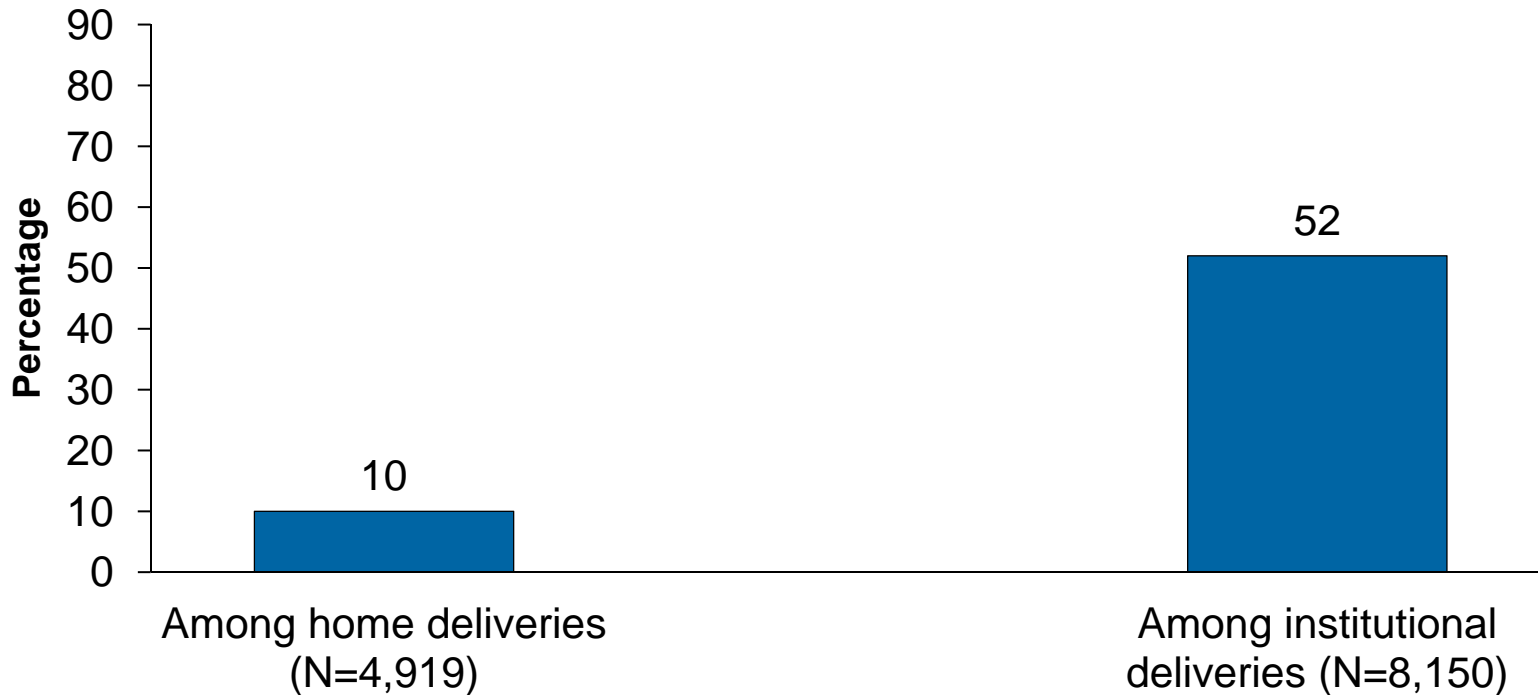






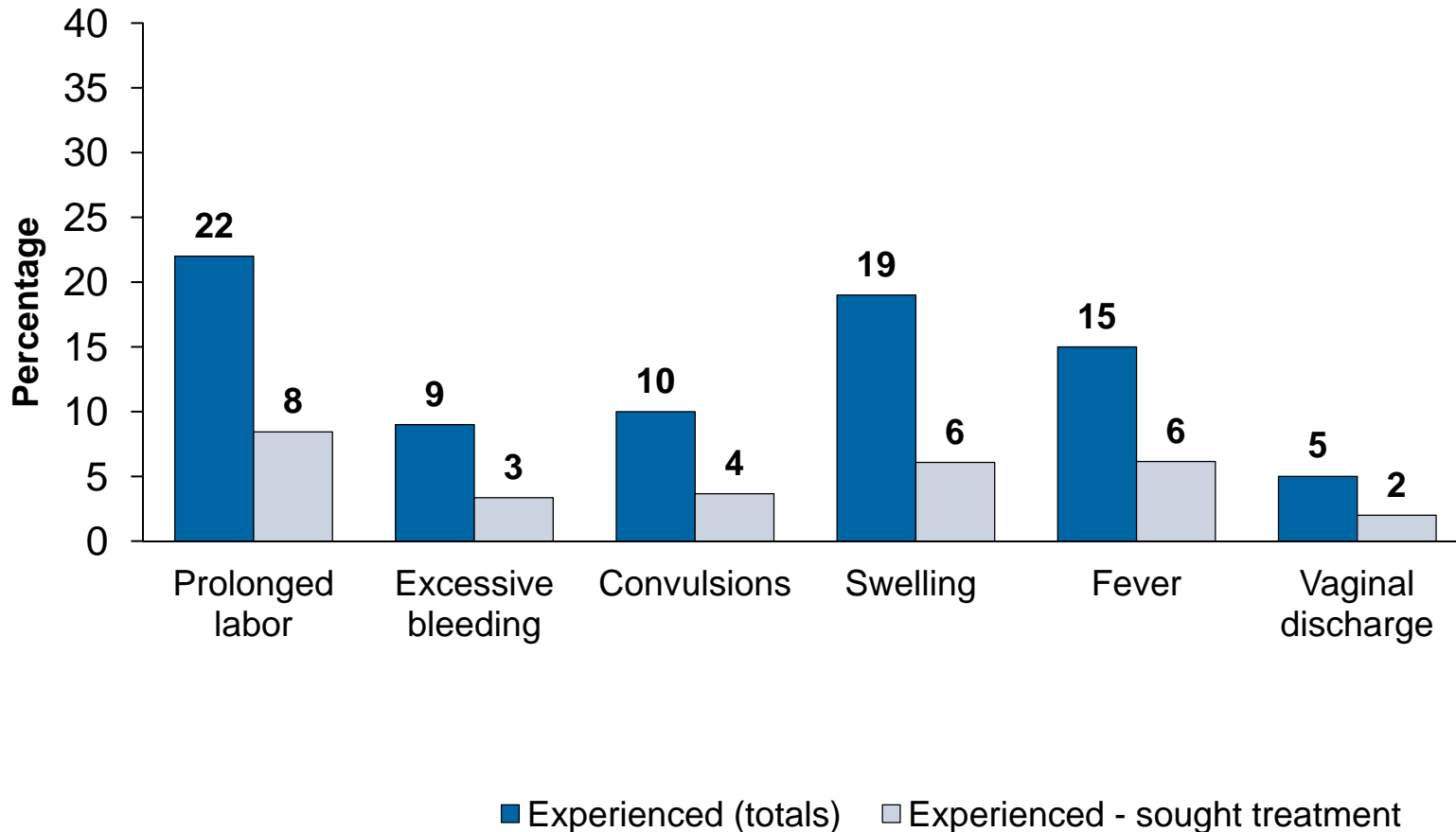
# Households Report Low Rates of ASHA Attendance at Deliveries, Especially at Home Deliveries

## ASHA Attended Delivery – Household Reports





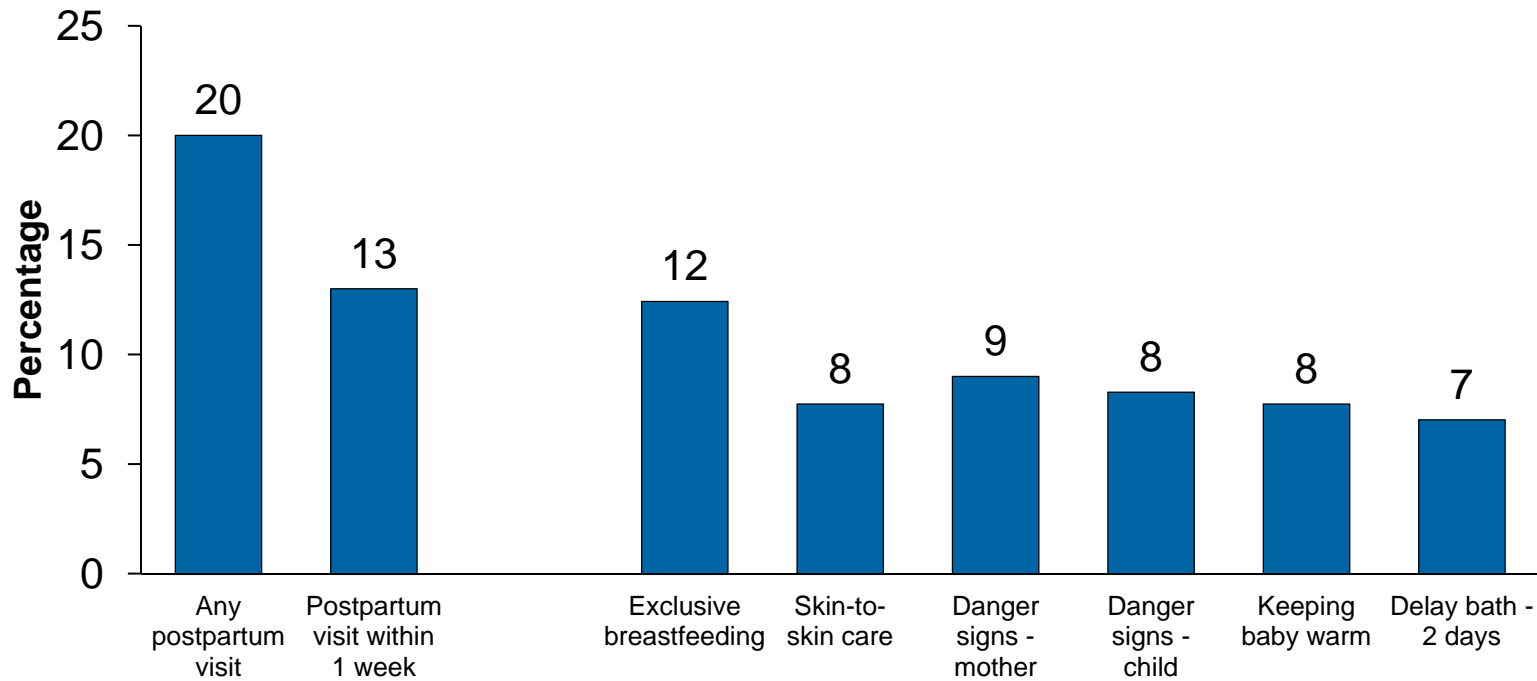
# Many Women Do Not Seek Treatment for Maternal Danger Signs



**N=13,069**



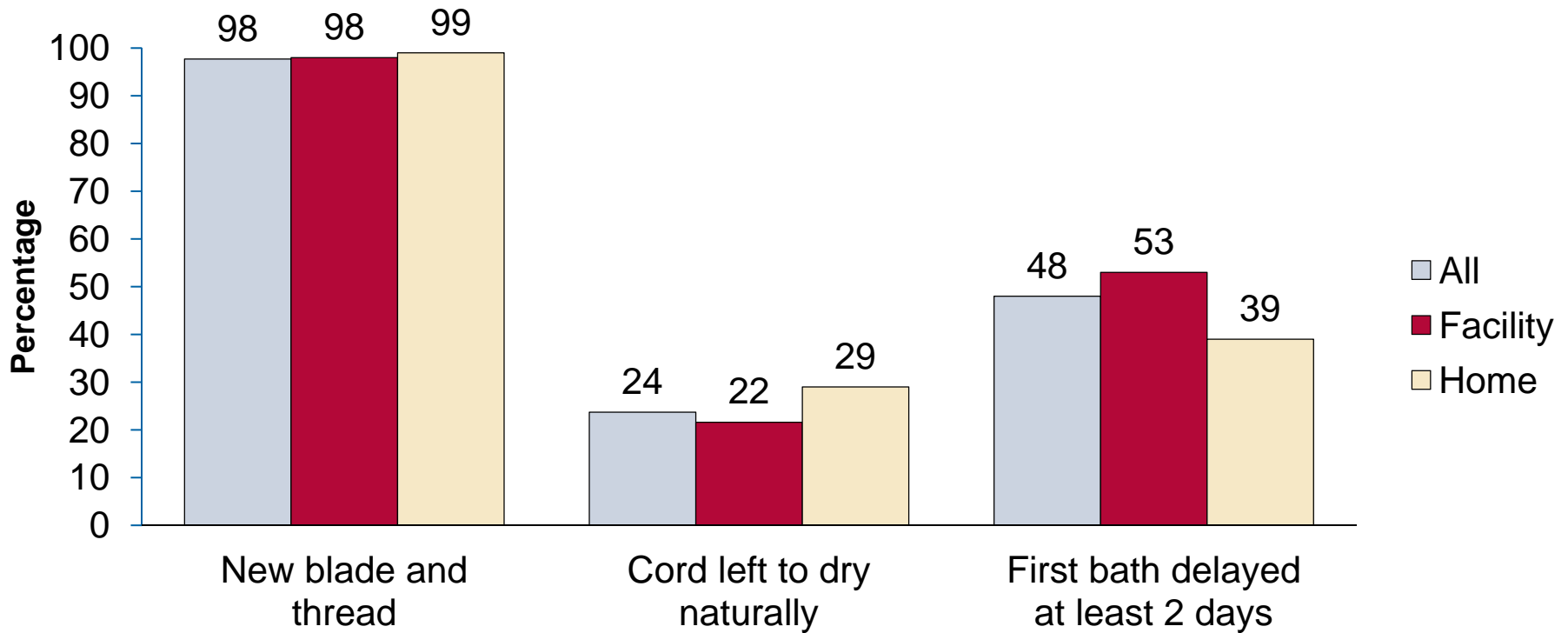
# Postpartum Visits by FLWs Are Not Common; Most Get Little Newborn Care Advice from FLWs



N=13,069



# There Are Gaps in Appropriate Newborn Care Practices



N=13,069



# Little Correlation Between Appropriate Newborn Practices and FLW Visits in Final Trimester

- Women visited by a FLW in their final trimester are:
  - Less likely to leave cord to dry naturally (more likely to apply gentian violet)
  - Just as likely to delay the first bath until at least 2 days
  - Slightly more likely to initiate breastfeeding within an hour of delivery
- Suggests that Ananya's focus on improving the quality of FLW interactions may be appropriate



# Child Nutrition and Immunization





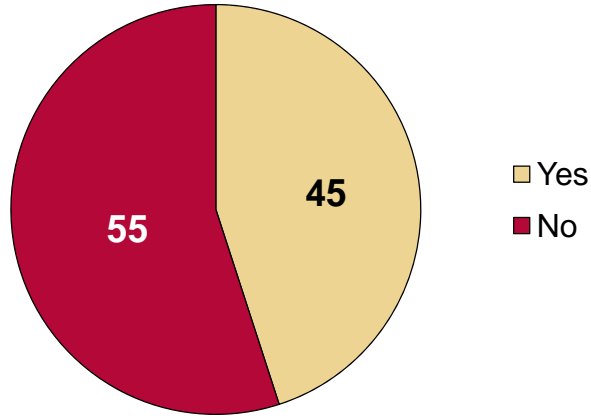
# Main Findings for Nutrition and Immunization

- There are gaps in appropriate feeding practices
  - Fewer than half of women report early and exclusive breastfeeding
  - Complementary feeding is often delayed beyond 6 months
- About one third of children aged 6-11 months are undernourished
- Early immunization rates for children in our sample are high, but drop off for later immunizations

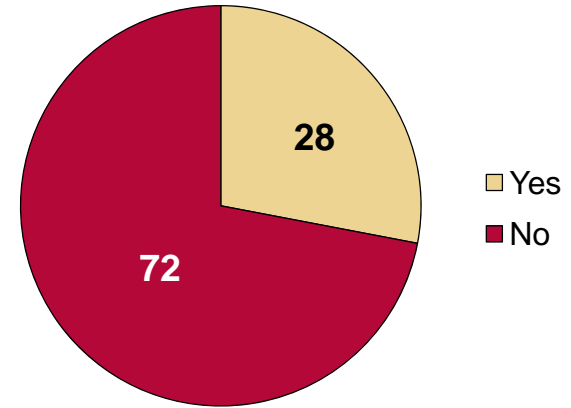


# Fewer Than Half of Mothers Report Early and Exclusive Breastfeeding

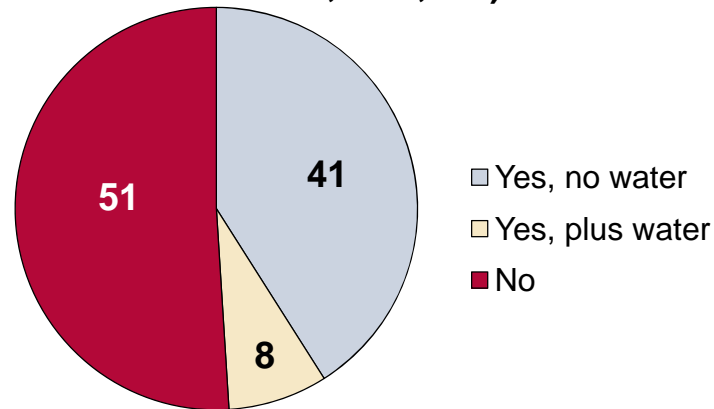
### Breastfed within 1 Hour of Delivery



### Gave Anything Besides Breast Milk on First Day



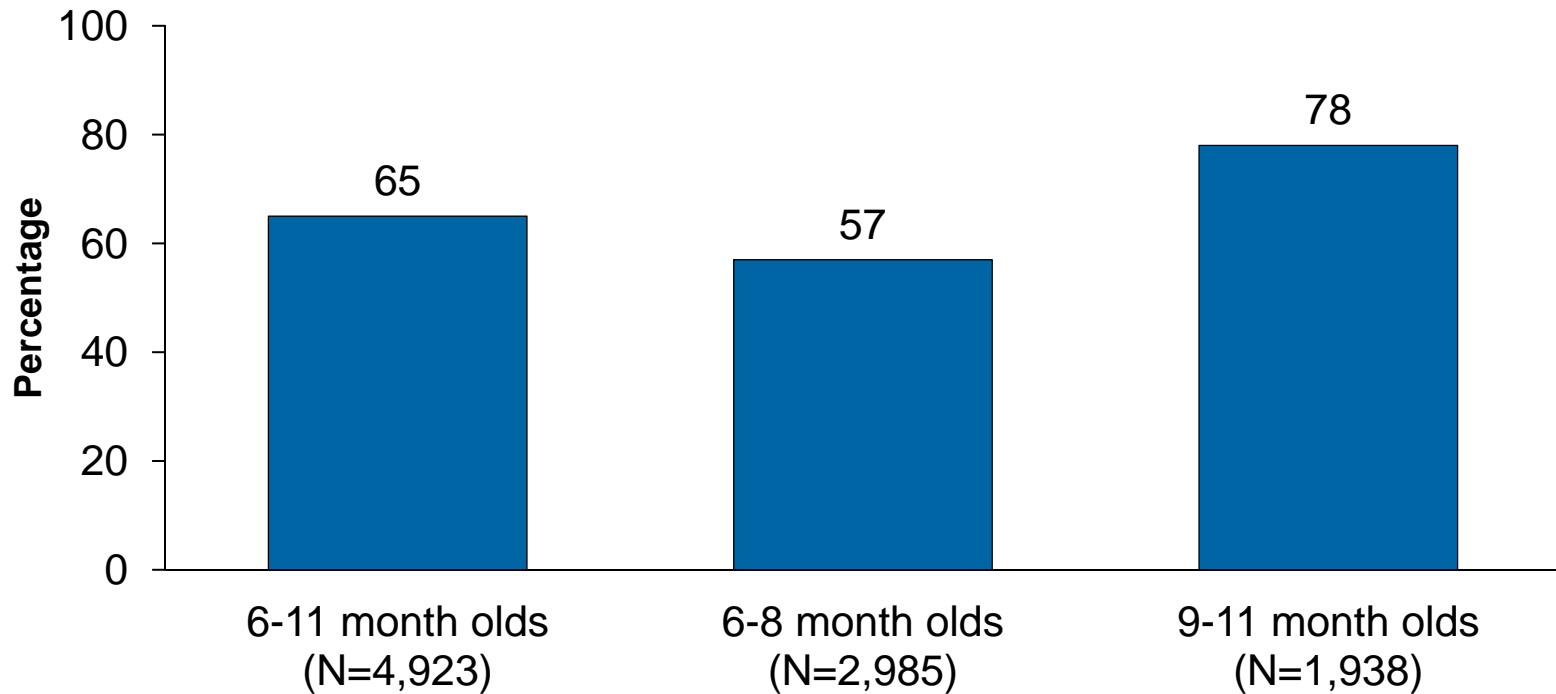
### Exclusive Breastfeeding for 6 Months (Children 6-11 months, N=4,929)





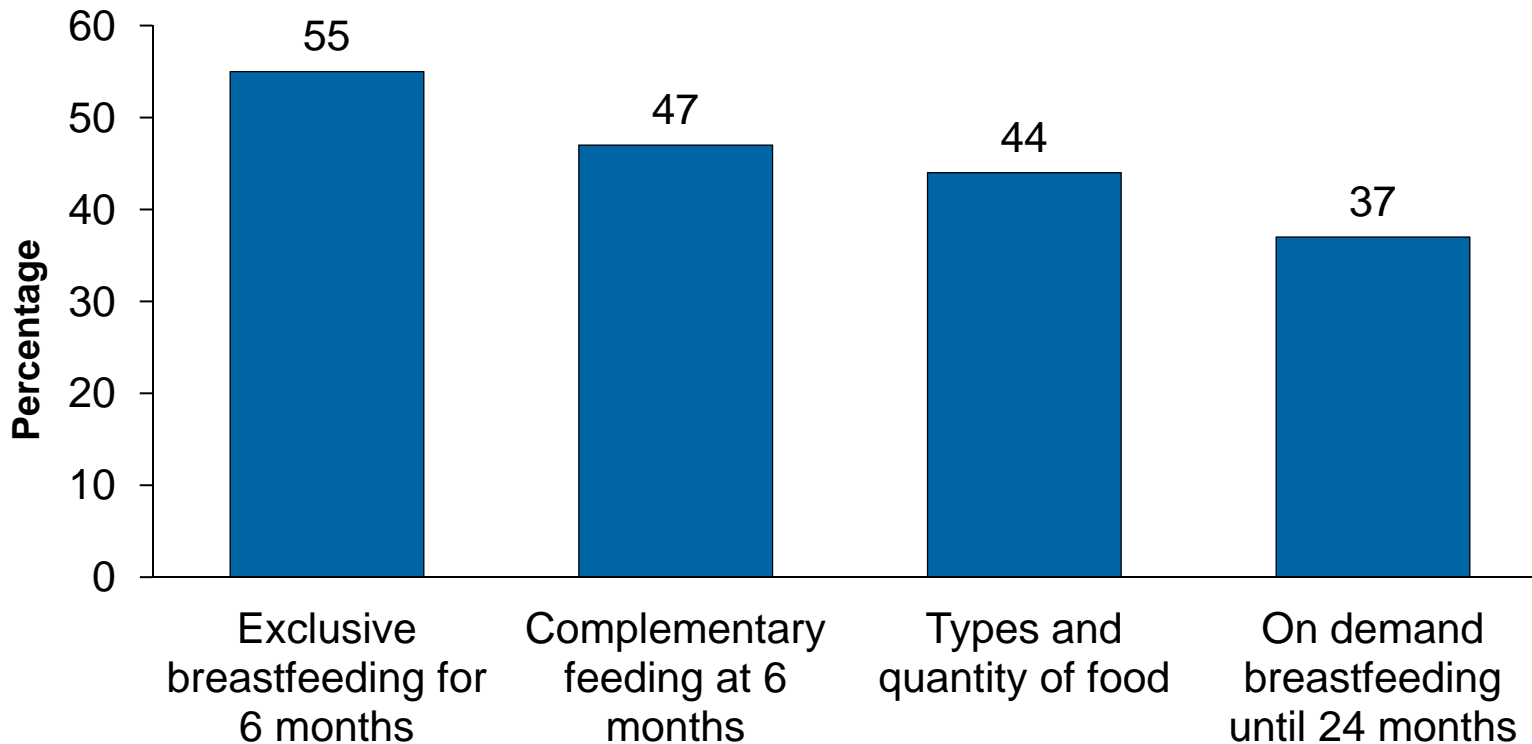
# Feeding of Solid or Semi-Solid Foods for Children 6-11 Months Old Is Not Universal

## Child Eats Solid or Semi-Solid Foods





# Discussion on Appropriate Infant Feeding with FLWs Is Limited



N=13,069

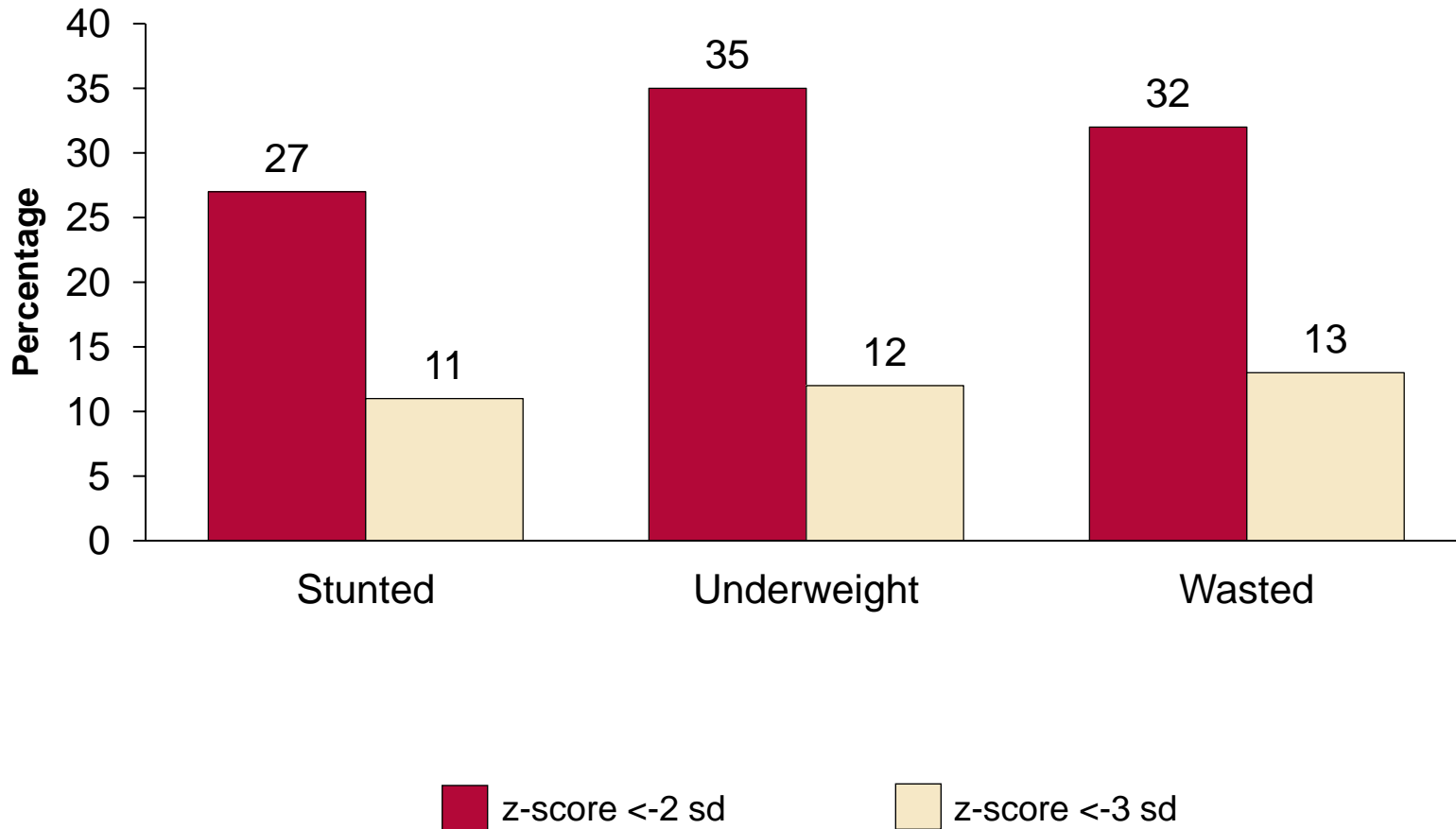


# We Measured the Length and Weight for Children Age 6-11 Months

- Two length and two weight measurements were recorded for each child, and the average taken
- Computed z-scores based on WHO growth standards:
  - Compares length-for-age, weight-for-age, and weight-for-length to the distribution of a gender-specific reference population
- Categorized children as undernourished if z-score  $< -2$  sd
  - **Stunted:** length-for-age z-score  $< -2$  sd
  - **Underweight:** weight-for-age z-score  $< -2$  sd
  - **Wasted:** weight-for-length z-score  $< -2$  sd
- Children are **severely** undernourished if z-score  $< -3$  sd



# Under-Nutrition Is Common in Children Age 6-11 Months

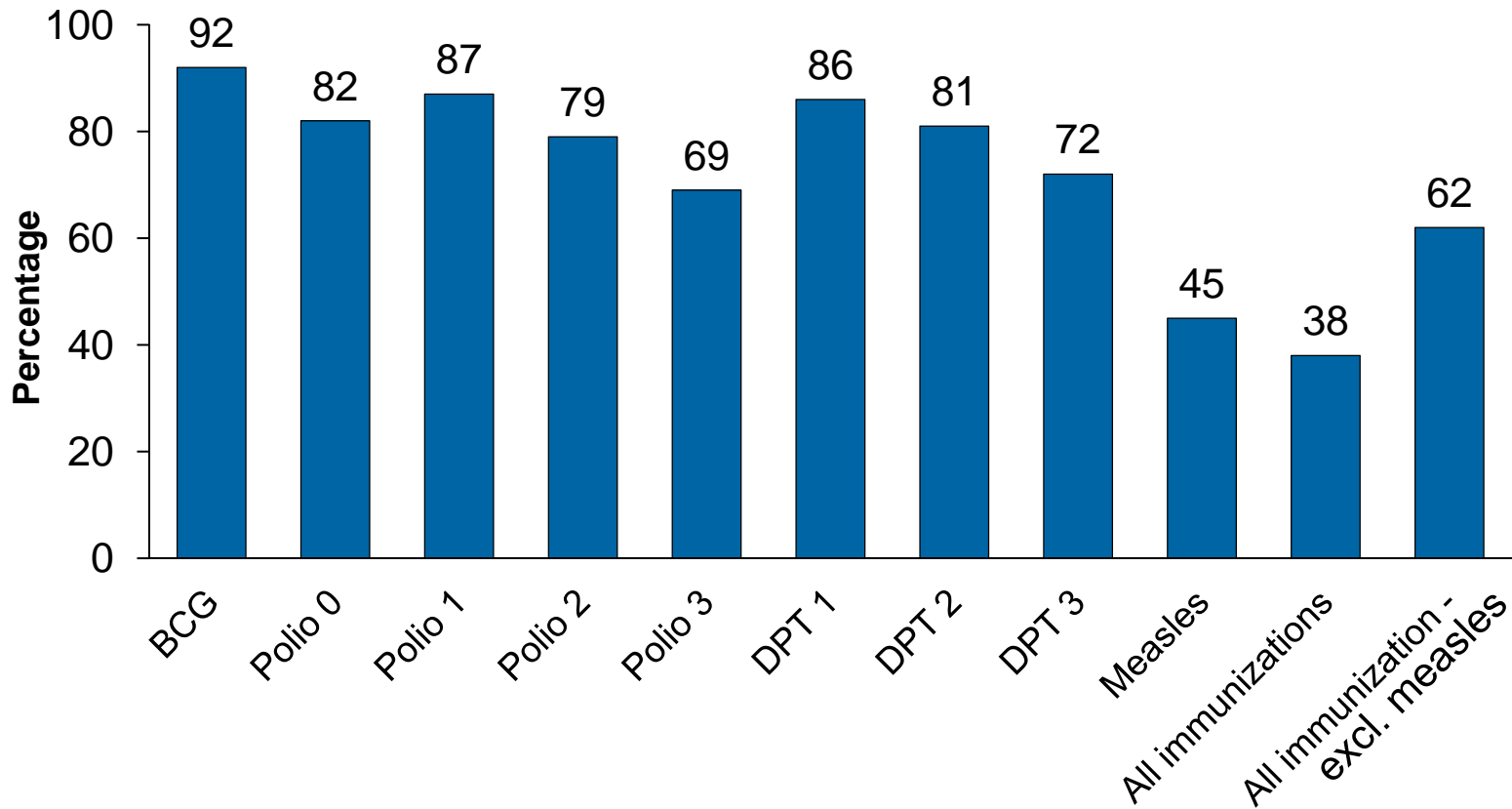


N=4,284





# Over Half of Children Over 9 Months Old Received All Immunizations But Measles (All Reports)



N=1,911

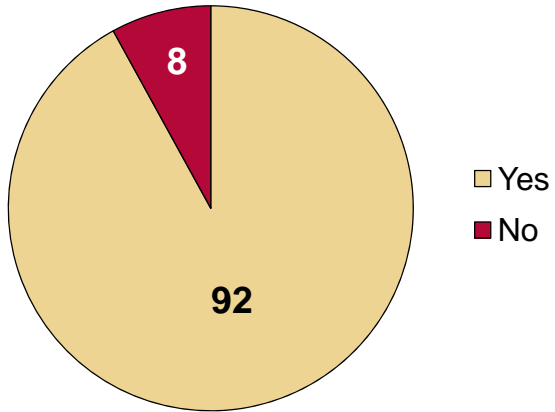


# Hygiene and Sanitation

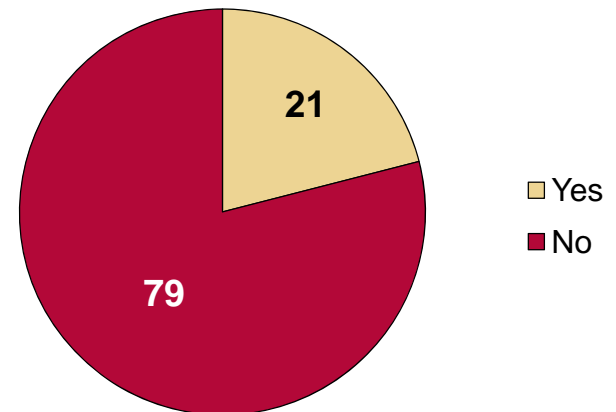


# Hand Washing Rates Are High, But Disposal of Child Stools Is Not Hygienic and OD Is Common

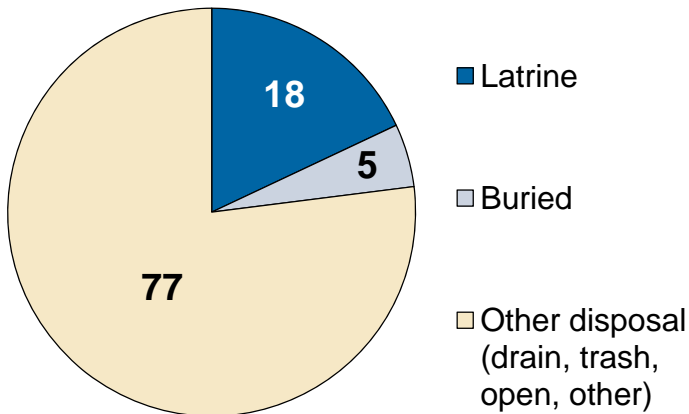
### Used Soap to Wash Hands Yesterday



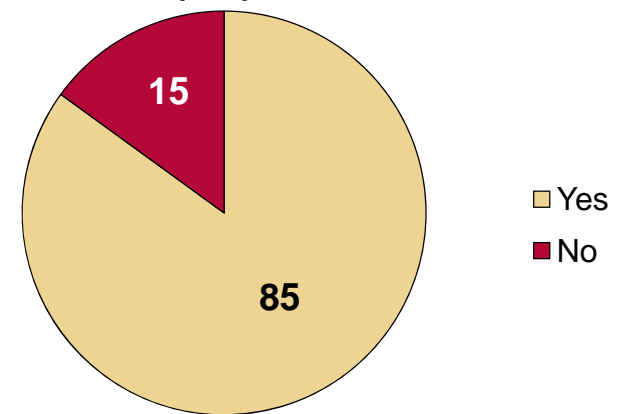
### Health Worker Demonstrated Hand Washing



### Child Stool Disposal



### Anyone in Household Openly Defecated (OD) in Last Week





# Contraception

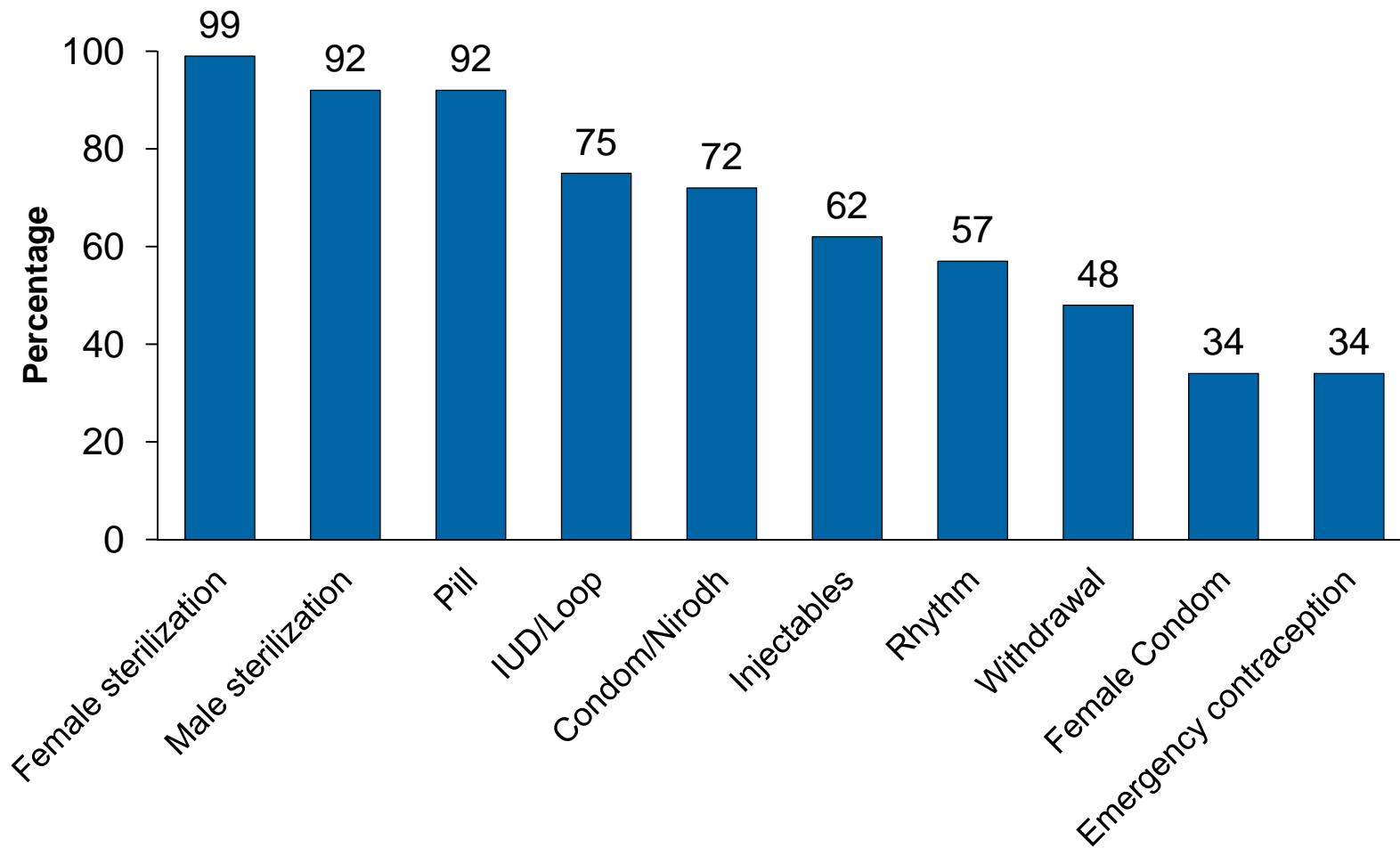


# Main Findings for Contraception

- About one quarter of women with children over 6 months are using some form of contraception
  - Only 17% are using permanent or other modern methods
  - Despite the fact that knowledge of modern methods is high
- Discussions with FLWs around contraception are limited
- Positive correlations between discussions with FLWs and contraceptive use
  - Also positive correlations between media exposure to messages and contraceptive use



# Sterilization and Pill Most Commonly Known Contraceptive Methods

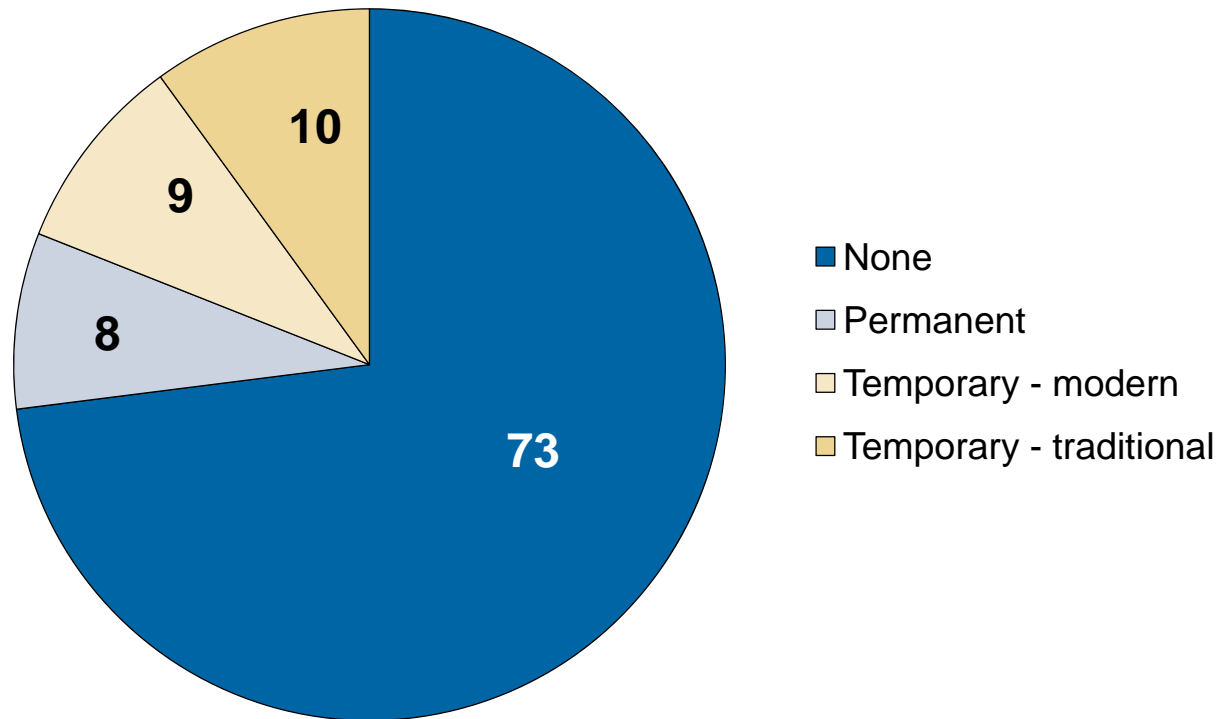


N=13,069



# Use of Modern Contraceptive Methods Is Low

Among Women Who Are Not Pregnant and Have a Child Over 6 Months (N=5,458)





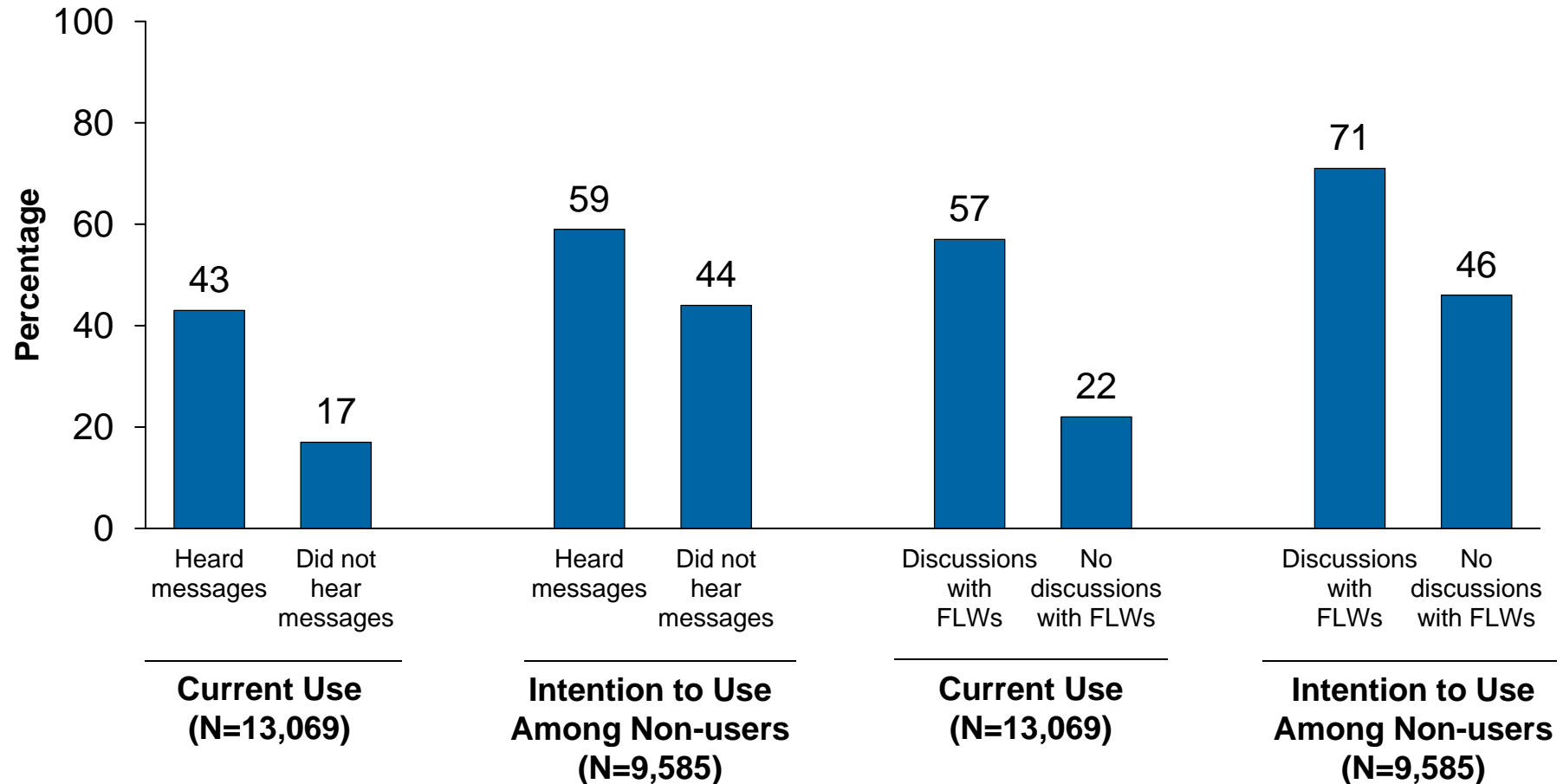
# Other Findings on Contraception

- Contraceptive use is higher for certain subgroups
  - Older women/women with more children
  - Women in higher SES households
  - Hindu women compared to Muslim women
  
- Almost half of non-users intend to use contraception in the next year
  - Female sterilization is the most common method planned (20% of nonusers)
  
- Only 12% of women discussed contraception with an FLW during pregnancy or after birth
  - Only 10% of women with a facility delivery had a family planning discussion at the facility after delivery





# Association Between Media Exposure or FLW Discussions and Use of Contraception





# Summary of Findings

- Certain behaviors/practices in the continuum of care are strong/show improvement, but there are still many gaps in coverage
  - One-third of young children under nourished
- Even though facility deliveries have increased, there remain quality gaps
- Home visits by FLWs are limited, particularly post-partum
- Some suggestive evidence that increased interactions with FLWs help improve contraceptive use
- Ananya's focus on improving quality of FLW interactions and quality of facilities can help improve coverage