Situational analysis for reasons of Home delivery and Birth preparedness level of the Home delivered mothers in Supaul district of Bihar

Presented by:
Dr. Apoorva Mahar
(MBA HM-22,0541)

Guided by:
Dr. Mohan Bairwa
(Associate Professor IIHMR University Jaipur)

Background

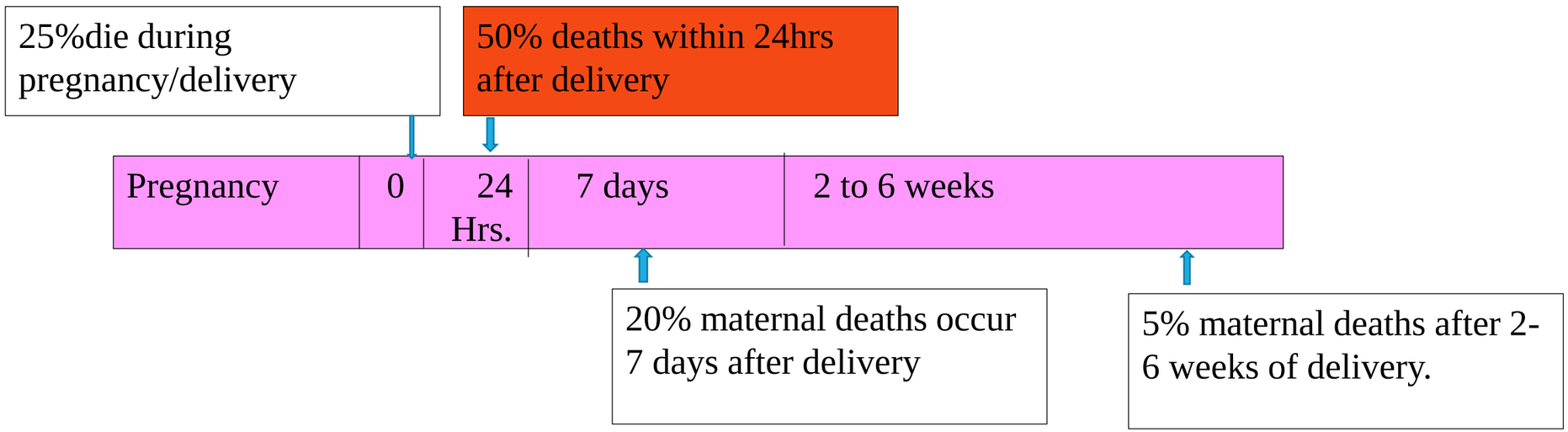
- Over 800 women are dying each day from complications in pregnancy and childbirth.(Source-WHO)
- The high number of maternal deaths in some areas of the world reflects inequities in access to health services.
- The complications leading to maternal death can occur without warning at any time during pregnancy and childbirth.
- Most these maternal deaths can be prevented if births are attended by skilled health personnel.

- Birth Preparedness and Complication Readiness (BPCR) is an essential element of the antenatal care package.
- It is often delivered to the pregnant woman by the health care provider in antenatal care or initiated or followed up through a visit to the home of the pregnant woman by a community health worker.
- A BPCR plan contains :- the desired place of birth; the preferred birth attendant; the location of the closest facility for birth and funds for any expenses related to birth and an identified labour and birth companion; an identified support to look after the home and other children while the woman is away; transport to a facility for birth and the identification of compatible blood donors in case of emergency.

Introduction:

- In a high-fertility setting, a woman faces more risk of maternal death , and her lifetime risk of death will be higher than in a low-fertility setting.
- Bihar has a TFR 3.3,this increases risk of maternal mortality.
- Bihar, having approximately more than 28 lakh pregnancies per year of which nearly 26 lakhs deliver. About 15% of these are likely to develop complications which is difficult to predict or prevent. Of 45000 maternal death per year in India,4400 alone occur in Bihar.
- One critical strategy for reducing maternal morbidity and mortality is ensuring that every baby is delivered with the assistance of a skilled birth attendant.

Risk of maternal and neonatal deaths:



- For risk of neonatal death of the estimated 130 million infants born each year worldwide, 4 million die in the first 28 days of life. 75% of neonatal deaths occur in the first week, and more than one-quarter occur in the first 24 hours.
- Neonatal deaths account for 40% of deaths under the age of 5 years worldwide. In Bihar, the main causes of neonatal death were prematurity (43.8%), birth asphyxia and birth trauma (18.9%), and sepsis (13.6%) .

S No.	Name of Indicators	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
1.	Number of Home deliveries	9685	8920	7970	7053	592	495
2.	Number of home deliveries attended by SBA trained (Doctor/Nurse/ANM)	1104	1009	558	678	63	53
3.	Number of home deliveries attended by Non SBA trained (trained TB/Dai)	8581	7911	7412	6375	529	442
4.	% SBA attended home deliveries to Total Reported Home Deliveries	11.4%	11.3%	7%	9.6%	10.6%	10.7%
5.	% Home deliveries to Total Reported Deliveries	18%	16.1%	14.6%	12.8%	16.9%	15%
6.	Total reported Deliveries	53904	55444	54709	55174	58311	3291

Key variations: From year 2017-18 to 2018-19 % of home deliveries was increased. SBA Trained attended Home deliveries are decreasing.

Source: HMIS

- Experts agree that the risk of stillbirth or death due to intrapartum–related complication can be reduced by about 20% with the presence of a skilled birth attendant
- Non-skilled attendants, including traditional birth attendants, can neither predict nor appropriately manage serious complications such as hemorrhage or sepsis, which are the leading killers of mothers during and after childbirth

Rationale

- Government has taken many initiatives to promote institutional deliveries, despite of that in Supaul district home deliveries are seen because of which in some blocks there has been a creation of home delivery pockets.
- This necessitates study on reasons for home deliveries which will help in targeting efforts on planned actions to reduce maternal and neonatal mortality risk due to home deliveries.

Research Question

- What are the reasons for Home delivery in the recently delivered mothers in Supaul district of Bihar?
- What is the Birth Preparedness level in recently home delivered mothers?

Research Objectives

1)To assess the reasons for home delivery in recently delivered mothers

2)To assess the level of Birth Preparedness in the home delivered mothers

3)To analyze the quality of ANCs received by the home delivered mothers.

4)To assess the frequency of home visit in ante natal period and counselling status by the frontline workers of the area.

Methodology

Study setting description: The study was conducted in Supaul district which has a population of 26.3 lakhs. Rural part in Supaul constitute nearly 95% of the population and nearly 5% (about 1.1 lakh) population live in the urban areas. Rural population density of Supaul district is 889per square kilometer. It constitutes 11 census enumeration blocks.

Duration of Study: 3 months(4^{th} Feb- 4^{th} May**)**

Study Design: The study design is Descriptive crossectional type.

Sampling Frame: Data for Home delivery was collected from the ASHA Facilitator of the area. Line listing of the mothers who have had home delivery in recent 3 months from January ’19 to March’19 was done for all the HSCs.

Type of Sampling: Purposive sampling

Sample Size : From the line listing, 20 home delivered mothers were chosen randomly for the interview from each block, a sample size of 220 was taken.

Sampling method at a glance:

Listing of all the ASHA Facilitators block wise and sector wise

↓

Collection of their Monthly review format of past three months which has data on type of deliveries in the area

↓

Line listing of the home delivered mothers through crossmatching with the help of ASHA facilitator, ASHA and AWW of that area. Only mothers who have delivered in last three months that is January, February and March were selected.

↓

Random selection of home delivered mothers from the line listing

↓

Interview of the selected mothers through semi structured interview schedule

- **Study Tool**

A semi structured interview schedule was used to interview the recently home delivered mothers. It had the following key domain areas:

- Sociodemographic profile of the woman
- Gravidity of the woman
- Number of ANC's received, and the quality of ANC received with respect to the examinations done of the woman
- Number of home visits by the frontline worker and quality of counselling given.
- Birth preparedness level of the home delivered mother
- Reasons for Home delivery.

Study participants:

Inclusion Criteria: Women who have home delivered in January'19, February'19March'19

Exclusion Criteria: Women who have had institutional delivery either in Government hospital or Private Hospital.

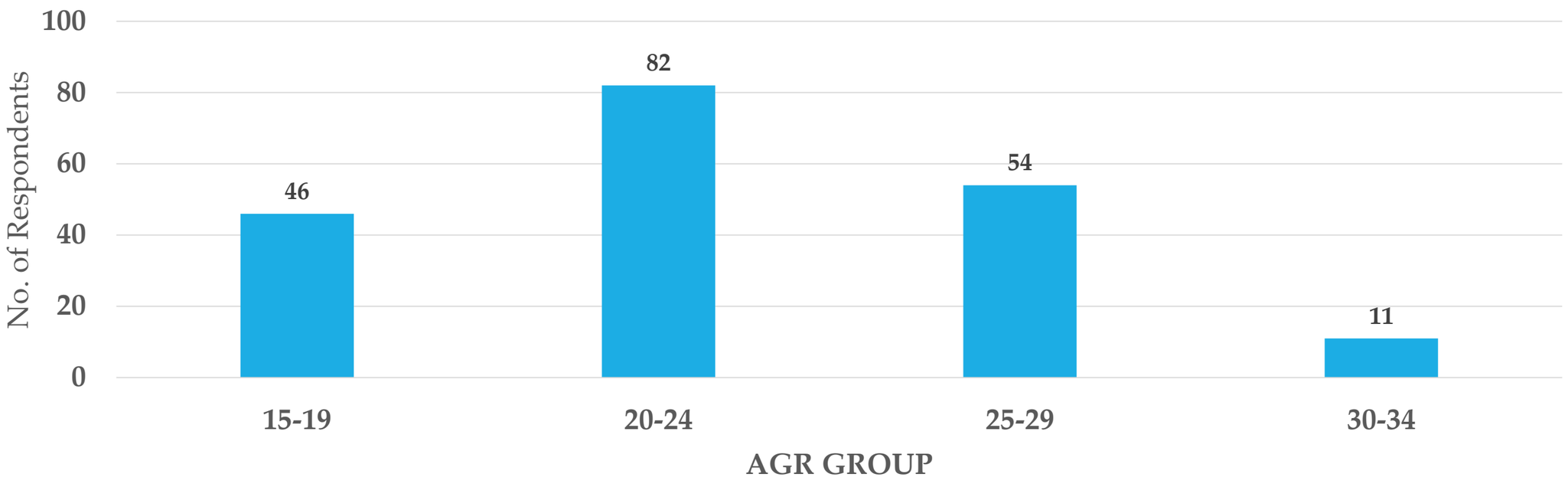
Data Analysis Plan:

The collected primary data was filtered and entered in the IBM Statistics SPSS version 22 software. Thereafter it was analyzed and results are reported in form of frequencies, percentage tables, bar graphs ,pie charts and crosstabulation tables.

Ethical Considerations:

- Written informed consent was taken from the participants before any data collection. Assuring them of the confidentiality of the data collected, also that the data collected is for academic purpose only. Permission to conduct the study was taken from the administrative office of Supaul.

Sociodemographic profile of Respondents:



Most of the respondents were of the age group 20-24 years(42%), nearly 88.9% of respondents were 18 years old at the time of marriage. Of the total respondents 76.7% were Hindu and 23.3% were Muslims

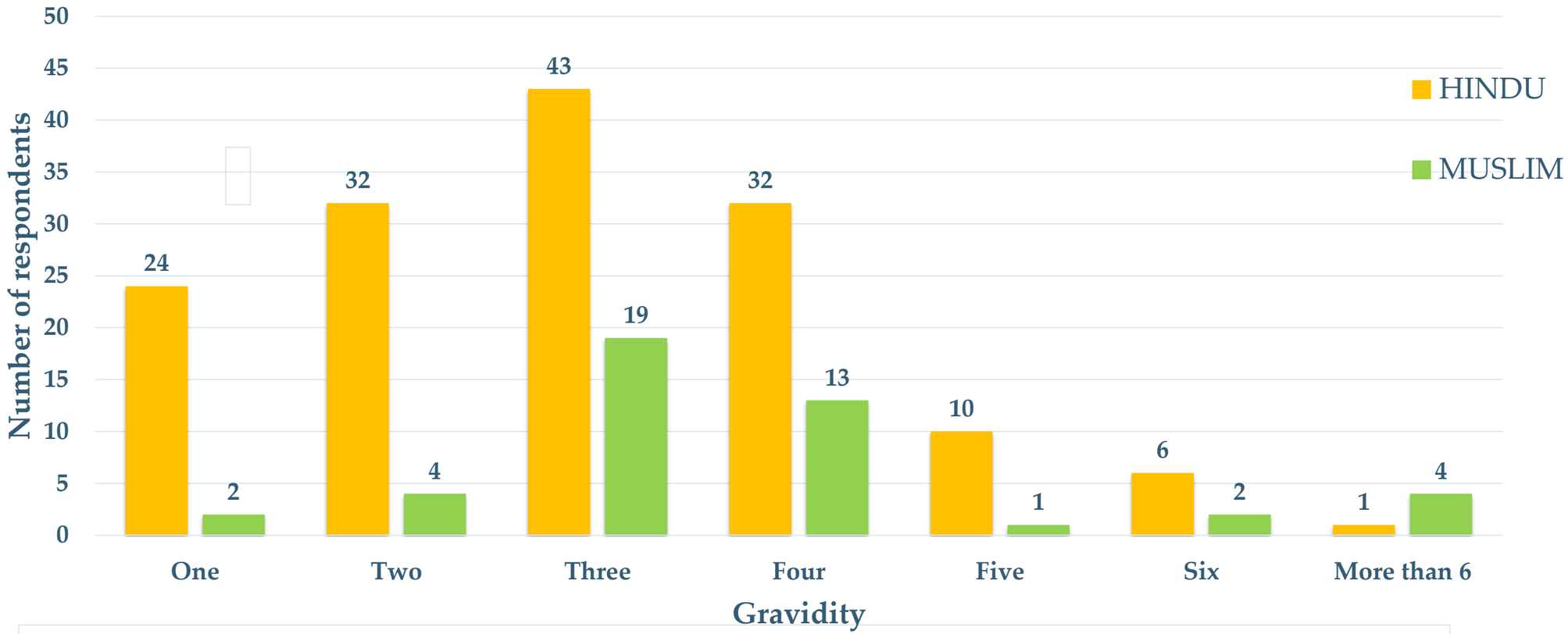
Occupation of Respondents husbands:

Occupation of Husband					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1. Labourer	86	44.6	44.6	44.6
	2. Ice cream seller	12	6.2	6.2	50.8
	3. Shopkeeper	9	4.7	4.7	55.4
	4. Farmer	61	31.6	31.6	87.0
	5. Pvt Job	17	8.8	8.8	95.9
	6. Electrician	5	2.6	2.6	98.4
	7. Business	1	.5	.5	99.0
	8. Tailoring	2	1.0	1.0	100.0

- Nearly all the women interviewed were house wife.
- Though women having husband as a farmer used to help in the fields (31.6%).

- Most of the husbands were working as Labourers (44.6%), these men also used to migrate to other cities for work.
- This migration due to work was also found one of the reasons for poor birth preparedness of the family of pregnant woman, as it was observed that in absence of her husband the family care less for the pregnant woman.

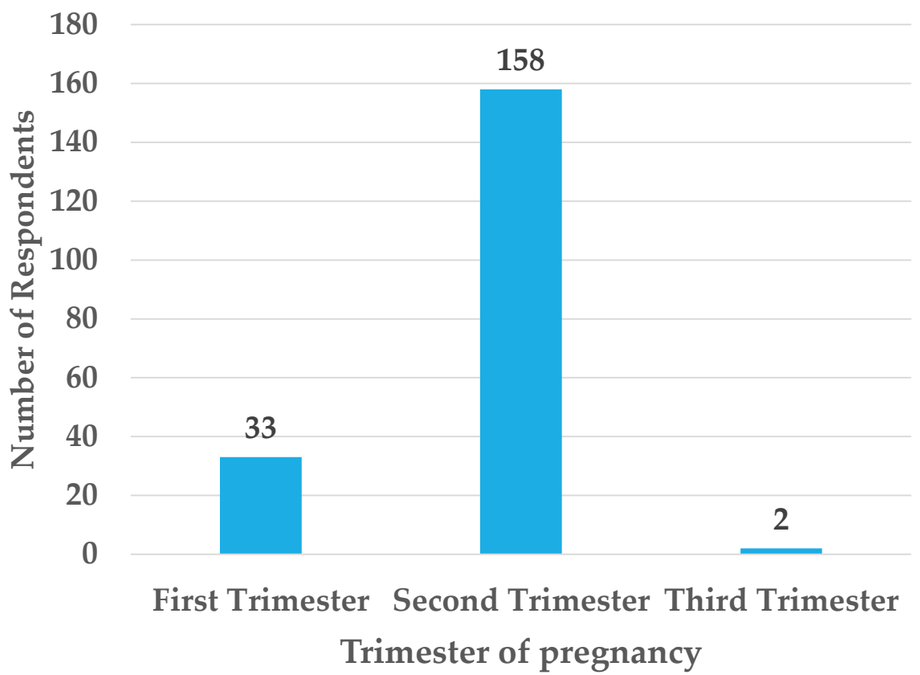
Gravidity of the respondents:



Most of the women had gravidity of three. More than 6 gravidity was found in Muslim women(8%)

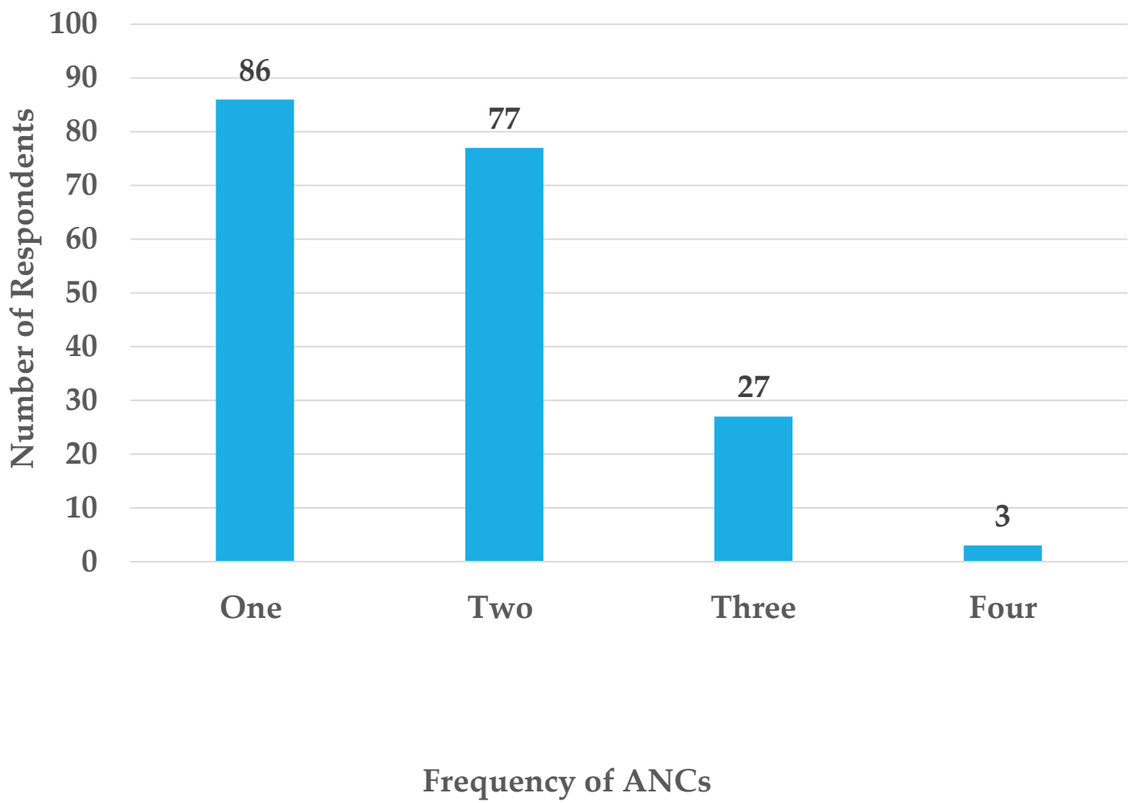
ANC distribution among home delivered mothers:

- Most of the ANCs were registered in the second trimester(81%).
- Only 17% of pregnant women registered themselves in first trimester of their pregnancy.



ANC Frequency among home delivered mothers:

Nearly 44% of Home delivered mothers have had at least one ANC checkup.
Only 15% had more than two ANC checkups.
Four ANCs was taken in 2% of the respondents.



Quality of ANCs received by home delivered mothers:

- The quality of ANC was judged by the type of examinations conducted by the health worker.
- It was seen that the most prevalent activity was administration of TT injection (97.5%).Other examination like Urine albumin test was conducted in 43% of women.
- Temperature measurement, weight measurement was done in less than 2 % of women.
- Abdominal examination was done in just 24 respondents..

Name of Examination	**Total (n=193)**
TT Injection	97.5%
Hemoglobin	18.2%
Pulse	10.9%
Temperature	1.6%
Weight	2.3%
Urine Albumin Test	43%
HIV Test	10.36%
FHR	38%
Hep B Test	15.8%
MCP Card made	68.8%
Abdominal Examination	12.8%
History taking	5.7%

Quality of Ante natal counselling among the Home delivered mothers:

- Nearly 14.2 % of the respondents were counselled about care during delivery.
- 20.8% of the respondents were informed about danger signs during pregnancy and when they should go to hospital .
- It was seen that Women having more than three visits of the frontline worker had more information about all the three topics of the ante natal counselling

S No.	Counselling topics	Total (%)
1.	Care during delivery	14.2%
2.	Diet during delivery	11.8%
3.	Danger signs (vaginal bleeding, convulsions/fits, severe headaches with blurred vision, fever and too weak to get out of bed, severe abdominal pain, fast or difficult breathing.	20.8%

Birth Preparedness level

- The birth preparedness level was overall poor among the respondents. Only 5.4% of the respondents identified support to look after at home while the woman is away.
- Nearly 20% of respondents identified labour and birth companion. These deliveries were mostly planned home deliveries.
- In only 1% of cases a compatible blood donor was identified for emergency,

Birth preparedness Indicators:	**Total (n=193)**
Pre-arrangement of vehicle to go to Hospital in time of need	10.55%
Identification of Health worker for help to reach to facility on time	8.68%
Having an emergency contact number	5.68%
Identified Labour and birth companion	20%
Identification of Compatible blood donors in case of emergency	1 %
Identified support to look after at home while the woman is away	5.4 %
Funds for expense related to birth and in case of complications	10.9 %

- Only on 10.9% of the cases funds for expenses related to birth and in case of complications were kept.
- It was observed that woman who have had more than two ANC check up and have been visited by the frontline worker more than 3 times , had better birth preparedness than the rest. The quality of ANC counselling was also better.

Reasons for Home Deliveries:

- Overall Lack of transport on time during labour and lack of companion were cited as main reasons for home delivery.

S. No.	Reasons for Home Delivery	Percentage (n=193)
1	Preference for Home Delivery	6.2%
2	Home delivery is easy and convenient	22%
3	All my previous deliveries were at Home	24.8%
4	Worries about Cost in Hospital	11.4%
5	Financial problem at home	3.6%
6	Family members prefer Home delivery	8.9%
7	Bad experience of hospital	18.1%
8	Health worker lives close to house	2.6%
9	Lack of Transport during Labour	39.4%
10	Lack of Companion during Labour	36.3%
11	Onset of Labour before the expected date	10.4%
12	Hospital is Far away	20.7%
13	Fear of Hospital	5.0%

- The reasons for delivery differed block wise. Among blocks ,the areas near to the administrative unit Supaul has main reason of main reason of poor hospital experience, the respondents mainly complaint of rude staff and un availability of medical consumable.
- Blocks like Basantpur, Nirmali and Marauna had main reason for home delivery as lack of transport on time during labour

Discussion

- As per study of different blocks in Supaul district, it was seen that the reasons for home delivery differs from block to block especially in cases of blocks which are near to Supaul main administrative unit.
- Client interviews in areas which are far away from the PHC's has revealed that ambulances services hardly reach these areas. Even if they reach they charge money for it. Such practices discourage the client to avail the services.
- Blocks like Saraigarh, Raghopur, Chhatapur, Pratapganj had main reason of poor hospital experience, the respondents mainly complaint of rude staff and non availability of medical consumables. Kishanpur block had main reason of inaccessibility of health services among the respondents.Supaul sadar block had main reason as availability of health worker in the nearby area

- The Home visits by the front-line worker are very infrequent and less in number than required, this came out as one of the major reasons of poor birth preparedness among the families of pregnant women.
- The counselling that should be provided by the Front-line workers to the pregnant woman forms an essential part of birth preparedness.
- Many initiatives by the government like Godbharai, community meetings, Poshan mela, Health fair, VHSND days are crucial platforms to promote birth preparedness.

Conclusion

- There are various factors which play a crucial role in a woman's decision for her delivery, moreover this decision is not her alone but is more impacted by the opinion of her family. So a coordinated approach including the family member and frontline workers at the outreach level and health facilities at the facility level is required.
- At outreach level more active participation of the frontline workers in the health of woman is required. Periodic client satisfaction interview at the outreach level can be used to decide on the services that need improvement. At health facility level exit client interviews can provide crucial data to act upon.
- Government of Bihar has taken many initiatives in this regard to improve the health services accessibility, acceptability and accountability but still much remains to be achieved.

- The main reasons of lack of transport and birth companion can be addressed by ensuring that ambulance services are monitored for the number of service request they receive and its client satisfaction level, for Birth companion a proper birth preparedness would ensure his/her availability which can be achieved through proper ANC counselling.
- The Frontline health workers are the major link between the people and the health services provided, an active and effective participation from their side would ensure that required awareness to motivate people to avail services is generated.

References:

References:

1. World Health Organization, India has achieved groundbreaking success in reducing maternal mortality. SEARO [Internet]. 2018 [cited 2019 Apr 16]; Available from: http://www.searo.who.int/mediacentre/features/2018/india-groundbreaking-sucess-reducing-maternal-mortality-rate/en/

2. Say L, Chou D, Gemmill A, Tunçalp Ö, Moller A-B, Daniels J, et al. Global causes of maternal death: a WHO systematic analysis. Lancet Glob Heal [Internet]. 2014 Jun 1 [cited 2019 May 13];2(6):e323-33. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25103301

3. Delivery care - UNICEF DATA [Internet]. [cited 2019 May 5]. Available from: https://data.unicef.org/topic/maternal-health/delivery-care/

4. Filippi V, Ronsmans C, Campbell OMR, Graham WJ, Mills A, Borghi J, et al. Maternal Survival 5 Maternal health in poor countries: the broader context and a call for action. www.thelancet.com [Internet]. [cited 2019 May 12]; Available from: www.thelancet.com

5. Solnes Miltenburg A, Roggeveen Y, Shields L, van Elteren M, van Roosmalen J, Stekelenburg J, et al. Impact of Birth Preparedness and Complication Readiness Interventions on Birth with a Skilled Attendant: A Systematic Review. Niederkrotenthaler T, editor. PLoS One [Internet]. 2015 Nov 23 [cited 2019 May 9];10(11):e0143382. Available from: https://dx.plos.org/10.1371/journal.pone.0143382

6. Gorain A, Barik A, Chowdhury A, Rai RK. Preference in place of delivery among rural Indian women. Roy JK, editor. PLoS One [Internet]. 2017 Dec 29 [cited 2019 May 13];12(12):e0190117. Available from: http://dx.plos.org/10.1371/journal.pone.0190117

7. Kaul S, Tech V, Boyle KJ. Delivery at Home Versus Delivery at a Health Care Facility-A Case Study of Bihar, India [Internet]. [cited 2019 May 13]. Available from: http://www.beta.undp.org/undp/en/home/mdgoverview.html,

8. Sreeramareddy CT, Joshi HS, Sreekumaran B V, Giri S, Chuni N. Home delivery and newborn care practices among urban women in western Nepal: a questionnaire survey. BMC Pregnancy Childbirth [Internet]. 2006 Dec 23 [cited 2019 May 13];6(1):27. Available from: https://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/1471-2393-6-27

9. Devasenapathy N, George MS, Ghosh Jerath S, Singh A, Negandhi H, Alagh G, et al. Why women choose to give birth at home: a situational analysis from urban slums of Delhi. BMJ Open [Internet]. 2014 May 22 [cited 2019 May 13];4(5):e004401. Available from: http://www.ncbi.nlm.nih.gov/pubmed/24852297

10. Munjial M, Kaushik P, Agnihotri S. A COMPARATIVE ANALYSIS OF INSTITUTIONAL AND NON-INSTITUTIONAL DELIVERIES IN A VILLAGE OF PUNJAB [Internet]. Vol. 32, Health and Population: Perspectives and Issues. 2009 [cited 2019 May 14]. Available from: http://medind.nic.in/hab/t09/i3/habt09i3p131.pdf

11. Thind A, Mohani A, Banerjee K, Hagigi F. Where to deliver? Analysis of choice of delivery location from a national survey in India. BMC Public Health [Internet]. 2008 Dec 24 [cited 2019 May 13];8(1):29. Available from: https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-8-29

12. Sugathan KS, Mishra V, Retherford RD. Promoting Institutional Deliveries In Rural India: The Role of Antenatal-Care Services [Internet]. 2001 [cited 2019 May 14]. Available from: https://www.eastwestcenter.org/sites/default/files/filemanager/Research_Program/NFHS_Subject_Reports/subj-20.pdf

13. Delivery care - UNICEF DATA [Internet]. [cited 2019 May 13]. Available from: https://data.unicef.org/topic/maternal-health/delivery-care/

THANK YOU