

Understanding Barriers to Antenatal Care and Institutional Delivery - Service Providers Perspective Part II- Key Informant Interviews Rajsamand, Rajasthan

July 2015

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Working paper Series

Model Districts Health Project

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**Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan
Key Informant Interviews**

Table of Contents

List of Acronyms.....	3
Acknowledgments.....	5
Executive Summary.....	6
Columbia Global Centers South Asia (Mumbai).....	10
Model Districts Health Project.....	10
Introduction - Study.....	11
Background	12
Antenatal Care	12
Anaemia and Nutrition	12
Institutional and Home Delivery.....	13
Situation-Rajsamand:.....	14
Purpose of Study.....	14
Study Objectives	15
Materials and Methods.....	15
Sampling Frame	15
Mixed Methods Study.....	15
Part II- Qualitative Component- Key Informant Interviews.....	16
Service Providers Perspective - Rationale.....	16
Study Design and Procedures	16
Findings	17
Themes.....	17
A. Aware about most responsibilities under JSY and JSSK.....	18
B. Insufficient stress on Family planning, Intra-partum Care, Post-natal Care (PNC), Home Based Neonatal Care (HBNC).....	18
C. Lack of Manpower affecting efficient delivery of services for maternal care under JSY and JSSK.....	19
D. Majority ANC registrations in second trimester and lack of 100% ANC Coverage.....	20
E. Institutional Delivery Barriers	23
F. High Risk Pregnancies.....	28
G. Anemia- Challenges	29

**Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan
Key Informant Interviews**

H. Public Grievances.....	31
I. Quality of maternal care services in private institutions	33
J. Maternal Deaths	34
Discussion and Recommendations Based on Triangulation of Data	35
1. Improve the perception of importance of ANC and Institutional delivery	35
2. Providing quality services to generate demand	36
3. Improving MCHN Day Standards	37
4. Diverting Home Deliveries to Institutions – Addressing the Barriers	37
5. Family Planning	39
6. Nutrition – Community Based Prevention	39
7. Community Involvement- Do not depend on ASHA s alone.....	40
Conclusion.....	41
References	42

**Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan
Key Informant Interviews**

List of Acronyms

AHS	Annual Health Survey
ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
CES	Coverage Evaluation Survey
CHC	Community Health Center
EI	Earth Institute
FRU	First Referral Unit
Hb	Haemoglobin
HBNC	Home Based Neonatal Care
HPD	High Priority District
HD	Home Delivery
HRP	High Risk Pregnancy
IFA	Iron Folic Acid
IMR	Infant Mortality Rate
JSSK	Janani Sishu Suraksha Yojna
JSY	Janani Suraksha Yojana
LHV	Lady Health Visitor
MCHN	Maternal and Child Health and Nutrition Day
MDG	Millennium Development Goals
MDHP	Model Districts Health Project
MMR	Maternal Mortality Ratio
MNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MoIC	Medical Officer In- Charge
NFHS	National Family Health Survey
NRHM	National Rural Health Mission
OBC	Other Backward Class
PCTS	Pregnancy Child Tracking Health Services and Management System

**Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan
Key Informant Interviews**

PHC	Primary Health Center
PNC	Post Natal Care
RMNCH+A	Reproductive Maternal Neonatal Child and Adolescent Health
SBA	Skilled Birth Attendance
SC	Subcenter
TBA	Traditional Birth Attendant
WHO	World Health Organization

Acknowledgments

This research paper would not have been possible without the support of many people. The MDHP team wishes to express their gratitude to Dr. Pritam B. Yashwant, IAS, former District Collector and Dr. Tarun Chaudhary former Chief Medical Health Officer (now Project Director, Maternal Health) of Rajsamand, Rajasthan for their invaluable assistance and support during the conceptualization of the study. We would like to thank the District Program Manager Mr. Vinit Dave, for his assistance and inputs during the implementation of this research. We express our sincere appreciation to the team members of Prayas, Chittorgarh who have supported the implementation of the study. Special thanks to Mission Director, National Health Mission Rajasthan Mr. Naveen Jain, IAS, Dr. Anuradha Oswal, State Program Manager and Dr. Tarun Chaudhary for their time, consideration and inputs during discussion of the study results. Deepest gratitude is also due to the researchers Gargi Wable and Andrew Thorne-Lyman for the preparation of the initial needs assessment, study and instrument design. We express our appreciation to all the health personnel and study participants, who have given us insightful perspectives on the situation and barriers to antenatal care and institutional delivery in Rajsamand District. Finally, the team expresses immense appreciation to their donor – IKEA Foundation for their continuous support.

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

Executive Summary

The National Rural Health Mission focuses on extensive antenatal care and institutional delivery services for pregnant women and their children in order to achieve Millennium Development Goals 1, 4 and 5 related to nutrition, child and mortality. The network of ANMs, ASHAs and Medical officers are crucial to provide the benefits of the established public health system. However, implementation challenges prevent people from accessing these services and health personnel from providing them.

Rajsamand is one such district of Rajasthan in India where poor ANC indicators and stagnation of institutional delivery rates, especially in tribal zones was observed. At the request of the (then) leadership in the district, Earth institute at Columbia University conducted a study to assess the barriers experienced in antenatal care, nutrition, and institutional delivery in two blocks, Bhim and Kumbhalgarh. However the results and observations of this study hold true to many areas across different regions of Rajasthan, based on the discussion with the State Health leadership.

The study used a mixed methods approach with a quantitative and qualitative component. The survey with women who had delivered recently at home or an institution, gauged the situation of ANC and delivery services. Late registrations and quality of care were the primary concern highlighted in the data. The reasons varied from structural barriers like distance and time to consumer related barriers such as superstition and low importance perceived of benefits. Reasons for home delivery were related to delay in decision making coupled with 'convenience' factor of home. Key informant interviews with health personnel highlighted the system and beneficiary barriers which make it tough for them to perform their duties. Focus group observations with community members (ASHAs, mother in-laws, religious leaders and Dais) showed that Dais are still trusted members in many communities that depend on their experience and skill for conducting deliveries. Therefore communities do not always see the advantages of delivering at an institution. Misconceptions about nutrition prevent them from continuing with their normal diet which includes buttermilk and ghee. One of the reasons for delivering at home was also people not willing to stay for 48 hours at an institution. Migration

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

in these areas makes it difficult to track a pregnant woman from pregnancy to delivery and providing her the full coverage of services.

Based on the triangulation of information from the survey, key Informant Interviews and focus group discussions, the following recommendations need consideration and prioritization:

1. Improve the perception of importance of ANC and Institutional delivery

Late ANC registration reduces the number of check-ups and contact with ANM for health related information. Barriers related to attending MCHN day impedes full coverage. Therefore efforts need to be focused on improving the awareness of benefits of ANC and institutional delivery through more rigorous IEC. Only when the perception improves will there be a more permanent change in demand.

2. Providing quality services to generate demand

The want for quality services play a role in where the woman and her family choose to deliver. This is apparent through the benefits they perceive at a private institution- manpower, attentive care, faster delivery and fewer days of stay. Trust in Dais or experienced health personnel's skills also influence their decision making.

3. Improving MCHN Day Standards and Supervision

Having skilled ANMs is crucial to motivate the women to attend ANCs and help her understand the benefits. The basic tests are not being conducted rigorously. Quality supervision is required not only to monitor the quality of ANMs work, but also to draw out the implementation challenges to resolve bottlenecks.

4. Diverting Home Deliveries to Institutions – Addressing the Barriers

Analysis of barriers related to access institutions for delivery highlighted that although most villages are located within an hour of reach, difficult terrains, cell phone access barrier, higher use of private vehicles leading to out of pocket expenditure, might influence families to choose the more 'convenient' option of home delivery.

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

- Strengthening Subcenters as delivery points to address access and delayed decision making
- A plan for better use and monitoring of government sanctioned vehicles
- A systematic transport and referral plan for sectors with high home deliveries
- IEC that uses risk messages with positive framing should be applied. Involving the Panchayat to bring awareness in the community regarding timely access for pregnant women and the child is crucial.

5. Family Planning

Efforts to delay first pregnancy needs further stress. IEC strategy with innovative ways of reach and communicate must be adopted. Counsel cannot be simply given to women, but to men and their community as well. Indirect effects and benefits of delaying early pregnancies, including health benefits for the child and economic benefits for the family must be emphasized.

6. Nutrition – Community Based Prevention

Based on the study results, focus on community based prevention of malnutrition is crucial.

- If woman were to more clearly understand the benefits of IFA not only for themselves, but their child, may be uptake would be better. Adolescent girls who already have poor nutrition get married and pregnant early. If community members instead of just the ASHA and ANM counsel pregnant and lactating women, the acceptance will be better.
- Dietary misconceptions regarding 'ghee and buttermilk' intake during pregnancies should be cleared
- Good nutrition should be discussed as a community norm. Women might not perceive its importance as they don't understand the developmental and cognitive effects it has on the child.

**Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan
Key Informant Interviews**

7. Community Involvement- Do not depend on ASHA s alone

Results show that there is no one key person who influences decision making of the woman regarding her pregnancy care and delivery. But the community norms as a whole do. Involvement of more peer women, committees or groups and the Panchayat would help the ASHA and ANM in their work.

Only when practices about good nutrition, ANC and institutional delivery become a norm in the community is acceptance better and it creates a demand from the consumer side to access the benefits of a public health system.

This Working Paper is a three part Series where the results of each of the 3 study components- Survey, Key Informant Interviews and Focus Group, has been separately presented. However the key recommendations provided are a triangulation of the data and findings from all 3 components of this mixed method study. This is Part II of the Series- Key Informant Interviews.

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

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The Columbia Global Centers | South Asia is part of a network of Columbia Global Centers that the University has launched around the world. The Center seeks to engage in activities and research linked to business, health, environment, education, urban planning, infrastructure, economic development, arts and culture, by providing a base throughout South Asia. It is a platform for academic partnerships, schools and programs at the University and locally in this region to collaboratively examine discuss and find solutions to complex issues in the various disciplines. Through leveraging its world-class thought leaders, sharing resources, and conducting innovative projects using a multidisciplinary approach, Columbia Global Centers | South Asia aims to engage students, faculty and stakeholders in a truly global conversation.

Model Districts Health Project

The Model Districts Health Project was launched in 2010 as a joint initiative between the Earth Institute and Ministry of Health and Family Welfare, Government of India. Its aim was to demonstrate and support health and nutrition based interventions and activities to address the policy–practice gaps that were highlighted in the mid –term evaluation of NRHM by Earth Institute (Bajpai et al, 2011). More specifically the focus is on the Millennium Development Goals 1, 4 and 5. Currently the project is under the Center for Sustainable Development at Earth Institute and is working in three states- Rajasthan, Telangana and Jharkhand. Within these states EI works in two districts, one which was selected for the Model Districts Project and one High Priority District where EI is the lead development partner for RMNCH+A. In Rajasthan, Dausa and Rajsamand (HPD), in Telangana, Medak and Mahbubnagar (HPD) and in Jharkhand, Khunti and Simdega (HPD) were selected for implementation of the Models District concept.

The Model Districts Project focuses on health systems strengthening through implementation research, strategic technical advice, monitoring and evaluation, and policy advocacy to help ensure the successful scaling up of services. It is ultimately the district governments and district health units that are responsible for implementing the quality improvements, best practices, and innovations based on the situational analysis. State governments and NRHM offices have a

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

key role to play in driving innovations at a district level, and providing additional funding on evidence based need.

Introduction - Study

NRHM provides an extensive array of maternal health services to improve the health outcomes for women and children to achieve Millennium Development Goals 1, 4 and 5. The packages are comprehensive ranging from family planning services, nutrition, antenatal care, and safe deliveries, post-natal care for mother and child and management of complications at all crucial stages. Monetary incentives for the mothers to render these services and for health cadre to provide them efficiently are given to optimize usage and motivate them to engage with the health system. Providing services which are accessible and affordable play a crucial role in improving health indicators.

Under the Reproductive, Maternal, Neonatal Child and Adolescent Health (RMNCH+A) program a continuum of care is maintained at different stages. However implementation challenges at ground level impede and slow down the processes of achieving positive changes. Assessing factors that can be changed or approached differently based on ground reality, practicality and feasibility is important while designing health systems for equitable health care.

Earth institute at Columbia University is the lead development partner for RMNCH+A activities in Rajsamand and works closely with the District Health Team providing technical support and conducting regular gap assessments. Some of the tribal regions in the district had poor indicators for antenatal care, anaemia and pockets of high home delivery load. This study was undertaken at the request of the then District Collector and in consultation with the Chief Medical Health Officer to assess the situation and specifically focus on the barriers faced in Rajsamand.

Background

Antenatal Care

NRHM offers ANC which includes at least 4 ANC check-ups, early registration within first trimester along with physical and abdominal examinations, Hb estimation and urine investigation, two doses of Tetanus Immunization and consumption of IFA tablets¹. However there are barriers related to structure, norms, capacity and monitoring that impede efficient and effective ANC care. A community based study carried out in a tribal district of India highlighted that although a significantly high percentage of women were receiving ANC care at least 3 or more times, early registration rates were still poor as women were not motivated to come on their own accord for check-ups. Additionally the quality of ANC was poor (Bhaisare, Rao, & Khakase, 2015). In the rural north region of India, it was evaluated that although pregnant women had good knowledge on ANC, age and literacy had a significant association with utilization rates. 80% of women were delivering at institutions but registration within first trimester was still very low (Gupta et al., 2015). Another study assessed the coverage of ANC services at subcenters. Although 70% of women registered for ANCs, only 50% registered in the first trimester and only 29% had at least 3 visits. Additionally the women who had IFA for 100 days or more, was negligible (Singh et al., 2015). Although Maternal Mortality rates have decreased from 212 in 2007 to 167 in 2013, the progress has been slow (MMR Bulletin). ASHAs role in informing about ANC services and ANM providing them is crucial to the success of timely and key ANC services. Although NRHM has been able to set up services in most remote regions quality and coverage are crucial at this stage.

Anaemia and Nutrition

Anaemia during pregnancy has important consequences for both a mother and her child. It is responsible for 120,000 maternal deaths each year globally, and 18% of maternal mortality in low and middle income countries (WHO 2009). According to the World Health Organization, anaemia affects half a billion women of reproductive age worldwide. In 2011, 29 % (496 million) of non-pregnant and 38% (32 million) of pregnant women aged 15-49 years were anaemic (WHO 2011). South Asia and Central and West Africa bear most of the burden of anaemia cases

¹ National Rural Health Mission

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

(WHO Anaemia Policy Brief). The prevalence of anaemia in pregnant women in India is 58% and accounts for 20% maternal deaths (National Iron Plus Initiative). Therefore the National Iron Plus Initiative has recommended, Iron Folic Acid Supplementation for 100 days during pregnancy and post-partum. However distribution and compliance for IFA consumption has been an issue. A study in southern India found that the compliance of IFA was moderate; with the main reasons for noncompliance being forgetfulness, travel, constipation and vomiting. The side effects noted were vomiting and gastritis (Mithra et al., 2013). A study in Bihar found that women were more likely to receive IFA if they had higher number of counselling and ANC services, and IFA consumption would be optimum if she has at least 4 ANC visits or more (Wendt et al., 2015). The prevalence of anaemia among women in Rajasthan increased from 1998 to 2005, from 48.0% to 53.7% (Balarajan et al., 2013). As per NFHS 3 prevalence of anaemia among pregnant women (15-49) in Rajasthan was 61.7%. These figures highlight the importance of reducing anaemia in pregnancy for a substantial impact on maternal and child health indicators.

Institutional and Home Delivery

Skilled birth attendance is a key factor in determining maternal and child outcomes along the continuum of care. These health professionals are expected to manage normal pregnancies, deliveries, and postnatal care, and identify, manage, or refer complications for women who are delivering and infants (WHO 2005). It has been estimated that almost 40% of pregnancies could require specialized services, and about 15% of all pregnant women develop complications during the intra-partum and immediate post-partum period needing access to emergency obstetric care (Fauveau 2004). A review on Global causes of maternal deaths from 2003-2009 showed that 73% of all deaths from the sample were due to obstetric causes (Sal et al.). Delivery at an institution provides not only skilled birth attendance but also equipment and referral mechanisms to handle basic and emergency obstetric complications. As per CES 2009, institutional delivery rate was 68% in rural India. Improvement of institutional delivery rates, improves the coverage of skilled birth attendance with the advantages of having it at a facility. A study examined trends from two nationally representative survey sample determined that economic status is a more important determinant of institutional birth rather than access and

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

distance. The importance of focusing on generating demand from users was highlighted. The influence of family member's role in decision making has not always been consistent and holds differing level of importance. Therefore although this should be considered within the framework for planning improvement in institutional delivery, other factors influencing women should be explored (Bruce et al., 2015).

Situation-Rajsamand:

Rajsamand is a small, hilly district in Rajasthan with an area of 4500 square kilometers. It has a population of 1.2 million, 84% of which live in rural areas. Female literacy remains low at 48%².

Maternal Mortality: While MMR in Rajsamand has apparently declined from 364 in 2010-11 to 265 in 2012-2013 as per AHS it remains far behind the state's MDG target of 248 maternal deaths per 1,00,000 live births by 2012-13³.

Anaemia: In 2012-2013 the number of women who had haemoglobin below 11 gm/dl was 20735 against 36588 registered for ANC (57%)⁴. In 2013-2014 the number of women who had haemoglobin below 11gm/dl was 26931 against 32932 registered for ANC (82%)⁵.

ANC Registration: In 2012-2013 18701 women registered in first trimester against 36588 ANC (51%)⁴. In 2013-2014 19550 women registered in first trimester against 32932 ANCs registered (59%)⁵. Although it is improving, it is low and requires special focus.

Percentage of Institutional Delivery: Institutional deliveries amongst the total deliveries reported for the district was 89.06% in 2013-2014⁴ vs 89% in 2012-2013⁵. This underscored stagnation in the rate of institutional deliveries in Rajsamand. Additionally the number unreported home delivery is a concern.

Purpose of Study

Based on the national, state and district scenario, a joint decision between Earth Institute and the District Unit was undertaken for EI to conduct a study to understand the status of antenatal

² Census 2011

³ Annual Health Survey 2012-2013

⁴ Pregnancy Child Tracking Health Services Management System 2012-2013

⁵ Pregnancy Child Tracking Health Services Management System 2013-2014

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

care services and the reasons for home deliveries in Rajsamand, focusing on barriers. Findings of the study would enable data driven informed decision making at all levels of the health system by the State, District and development partners to collaboratively address the gaps and re-think strategy where applicable. As most issues cut across all districts in Rajasthan, many of the findings would be relevant to other parts of the state as well.

Study Objectives

1. Explain barriers and facilitators of antenatal care
2. Explain reasons for home delivery to make evidence based- recommendations
 - a. Assess the factors influencing delivery outside of institutions/home deliveries and perceptions about how those factors could be addressed among community members and healthcare providers
3. Explain the barriers and facilitators to prevention and treatment of anaemia during pregnancy
 - a. Assess coverage of preventive iron-folic acid - distribution and compliance among pregnant women

Materials and Methods

Sampling Frame

Kumbhalgarh and Bhim blocks were selected for the sampling frame as they have a high proportion of tribal population and highest number of reported home deliveries compared to other blocks (834 in Kumbhalgarh and 713 in Bhim, the total for Rajsamand being 3379⁵). They contribute to almost 50% of home deliveries for the whole block. Over 50% of public health facilities are understaffed. Access to health facilities in these blocks is also difficult and not easy for all users of the health system, given the hilly terrain and hard-to-reach areas.

Mixed Methods Study

This study consisted of 3 components to understand the study objectives:

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

1. A quantitative survey which included women who had delivered a child in the last 1 year (age group 18-45 years)
2. Focus Groups with ASHAs, traditional birth attendants (dais), religious leaders and mother-in-laws
3. Key Informant Interviews with health service providers –ANMs, LHVs, Medical Officers, ASHA facilitators

Part II- Qualitative Component- Key Informant Interviews

Service Providers Perspective - Rationale

ANMS, LHVs, and Medical Officers are the key personnel responsible in NRHM to deliver primary services at village level. Therefore they have a good understanding of the ground reality situation prevalent in their areas. Therefore considering the broader objectives of this study it was important to assess their perspectives and opinions on:

- on the situation maternal care services in their blocks
- barriers that providers faced to successfully carry out their work
- barriers faced by the users of the health system
- anemia and nutrition
- reasons why specific pockets still had home deliveries being reported
- suggestions for improvement

Study Design and Procedures

Sample

Twenty two service providers were interviewed in Kumbhalgarh and Bhim Block. These included Auxiliary Nurse Midwife (ANMs), Lady Health Visitor Supervisors, ASHA (frontline workers) Facilitators and Medical Officers.

Interview Guide and Data Collection

An interview guide was prepared and interviewers from Prayas, Chittorgarh were oriented to conduct the interviews. The interviews were recorded after informed consent was obtained.

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

The study was approved by the Columbia University Institutional Review Board and Prayas Chittorgarh, Ethical Committee provided the in country approval. Before administering the survey informed consent was taken from the participants.

Qualitative Analysis

- **Detailed notes:** Key points were noted during interaction with the service provider and then were further expanded with the help of the recordings by interviewers fluent in Hindi and English.
- **Themes:** The responses for each question and additional information drawn from the discussions for all the interviews were compiled and analyzed to draw out the major themes which have been discussed in this paper.

Findings

Most participants were confident and comfortable while expressing their opinions based on their observation, experience and knowledge, especially those that had worked for a longer period within the health system and were more senior in designation and age. Although confidentiality was assured few were nervous and guarded while answering specific questions due to fear of being reprimanded or questioned by higher authority. At times, they did not describe the actual status of scenario, their opinion being more biased towards the ideal. Certain cadres of workers don't feel empowered to voice their opinions, as many decisions of the health system are not participatory in nature. While assessing qualitative data this aspect is an important consideration.

Themes

The major themes that were discussed and drawn out were:

- A. Awareness about responsibilities under under Janani Suraksha Yojana (JSY) and Janani Shishu Suraksha Yojana (JSSK)
- B. Insufficient stress on Family planning, Intra-partum Care, Post-natal care (PNC), Home Based Neonatal Care (HBNC)

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

- C. Lack of Manpower affecting efficient delivery of services for maternal care under JSY and JSSK
- D. Majority ANC registrations in second trimester and lack of 100% ANC Coverage
- E. Institutional Delivery Barriers
- F. High Risk Pregnancies
- G. Anemia Challenges
- H. Public Grievances
- I. Quality of Maternal Care at Private institutions
- J. Maternal Deaths

A. Aware about most responsibilities under JSY and JSSK

Service providers described ANC care which encompassed early registration and checkups. This included TT immunization, hemoglobin measurement, steps towards prevention and treatment of anemia and counseling on nutrition. Motivating pregnant women to have institutional deliveries and orient them about monetary incentives linked to the schemes, was being followed rigorously. Familiarizing women and their families with transportation and referral services was being done to ensure institutional deliveries. However the survey answered by women who had recently delivered showed that only 73% women were receiving information about transportation.

B. Insufficient stress on Family planning, Intra-partum Care, Post-natal Care (PNC), Home Based Neonatal Care (HBNC)

Very few interviewees indicated that they discussed family planning options after delivery and provided PNC and HBNC. There wasn't sufficient stress on these services, as assessed by the researchers and reported by service providers.

- **Intra-Partum Care and PNC:** Not a single interviewee discussed the importance of intra-partum care. (It could be that it is implicit once a pregnant woman arrives for delivery.)
 - This fact is bolstered by observations of the EI team during block monitoring visits.

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

- Disinfection procedures are not known and practiced by all, as per required guidelines.
- Breastfeeding not initiated within an hour (although mentioned in the Service Delivery Register)
- Infections contracted at facilities during delivery and care of mother and child are most critical for their prognosis
- **HBNC Care:** Some of them described that poor HBNC care accounted for the early infections in mother and child post-delivery which potentially could lead to deaths.
- **Family Planning:** This was mentioned by a few, but there was not too much discussion on how they advised the couple or woman on family planning post delivery

C. Lack of Manpower affecting efficient delivery of services for maternal care under JSY and JSSK

- **Lack of Specialized Personnel:** The lack of specialized personnel, especially anesthetists and gynecologists prevents Community Health Centers (CHCs) from being functional First Referral Units (FRUs). Both block CHCs were non-functional as FRUs.
- **Lack of lady gynecologists** and doctors prevents some women from accessing facilities for delivery
- **High number of referrals from CHCs:** Although some doctors are present, referral of simple cases to other facilities from CHC level leads to loss of credibility for providing basic services
- **Unavailability of 24X7 doctors** at Primary Health Centers prevents people from accessing those facilities, functioning as delivery points, or providing basic emergency care, especially at night.
- **More manpower to strengthen Subcenters (SCs) functioning as delivery points:** They need someone to help them with cleaning, administrative and accounting work.
- **Filling Vacancies:** Vacancies in administrative staff like accountants and information assistants makes it difficult to cope with their key service delivery activities and update the online systems with relevant data for monitoring and planning.

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

Although money is an incentive to access public institutions, people nowadays give importance to staff availability and personal attention as important criteria for receiving quality services.

D. Majority ANC registrations in second trimester and lack of 100% ANC Coverage

- **Perception of importance of ANC and immunization is low - cultural dominance of the attitude “not required”:** Some people do not comprehend completely the benefits associated with early registration within first 12 weeks. Some women don't get immunized, especially in in Bhil communities, as elders believe they were fine without immunization and it is not required by this generation as well. Therefore communities like Gameti do not come forward. Women, who have recently been pregnant in the last year, need a booster doze. They delay their registration until then (5-6 months). Some people still feel that if there is no problem there is no need for a checkup.
 - Therefore service providers feel that there needs to be an increased awareness and demand for services so that people come forward on their own as well.
 - If ANM has been there living in the community for a long period of time, people trust her and come forward.
 - ASHAs cannot be depended on alone with their multiple responsibilities. Overall community support is required to close in at best possible coverage, because matters and opinions of the community are held in value. Village Panchayat members should also take active interest in health of pregnant women.

- **Structural Barriers- terrain, distance and roads:** Hilly terrain, poor road conditions and distance from Aganwadi Center or SC prevents ASHAs from making regular visits and ANMs to support them in their work while trying to counsel and encourage women for ANCs. Additionally these women are scared about abortion risks if they travel such terrain, and in the later months of pregnancy it becomes more difficult for them. Those that live in far off areas, reached via “kaccha roads” will sometimes have to spend an entire day to visit ANC sessions. For smaller families traveling for a couple of hours and

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

back for ANC is not possible when they have other children to look after. MCHN day is held only once a month or in some places once in 3 months.

- **Migration and ‘Mother’s Home’:** A lot of women migrate with their husbands for work to different cities and towns, therefore cannot register or will do so in the 3rd trimester when they return to their villages for the delivery. There ANCs in between cannot be completed. So although they are accounted for within the catchment population, they don’t really live there. Others immediately go to their parents place for duration of pregnancy and or delivery. There it is possible that the estimated numbers do not match up for the area. Therefore migration is an important criterion that needs to be included into the estimations of ANCs.

- **Superstition and Shyness:** Women do not want to talk about their pregnancy early on (until 5-6 months) fearing bad omen, till it becomes visually obvious. They do not want other women visiting MCHN day to know about their pregnancy. This is changing with improvement in education and better awareness amongst the younger population. In Bhim, OBC and Rawat communities usually don’t inform personnel when they are pregnant may be because they are shy. Some say that “God” via their Bhopa has asked them to delay immunization, in turn registration and check-up is affected.

- **All staff not working to the best of their capacity:** The service providers have observed that only 60-70% staff works efficiently.
 - They feel that action cannot be taken because this is based on personal opinions, and political pressure prevents officials who do want to address the issue from taking steps.
 - Additionally in cases and situations where planned, strategic action should be taken because the personnel is skilled to perform work, officials issue notices or remove those individuals thereby preventing people to access these skilled personnel.

**Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan
Key Informant Interviews**

Interviewee-“There is no point of reporting staff names when it is the mindset of the people that has to change.”

- They were of the opinion that someone at a higher level should provide guidance how to address these situations to avoid fear among the working staff which does affect their motivation levels and work.
 - There was a general opinion that those on contractual basis feel somewhat less motivated to carry out their tasks.
-
- **Only Immunization Important:** Because of the fear of tetanus nowadays, some women only make sure they are immunized, but do not follow up with the ANC checks ups, as they do not perceive them as important.
 - **Pregnancies amongst young adolescent girls:** Some young girls marry early and do not realize they have missed their period till 2 months as they aren't really paying attention to such matters. By the time they register they are past first trimester.
 - **Decision to continue with the pregnancy:** If women have a second child too quickly, they initially feel scared to report it to family members and health personnel for fear of being scolded. By the time they inform, she is already in the second trimester. This also happens when she already had 5-6 children.
 - **Fear of abortion in the first three months prevents them from early registration:** Some women believe that it is better to render services after the first 3 months once they feel that the pregnancy will last.
 - **4th ANC Barriers:** 4th ANC with doctor is either not possible if registration is late, doctor is not there or woman not willing to travel to see doctor.

Suggestions given by Interviewees:

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

- More home visits and home-based care would have to be done to evaluate the situation realistically from a community based perspective, taking cultural norms into consideration.
- Community and Panchayats need to be engaged in matters of health and sometimes it's difficult for health personnel alone drive behavior change and convince women and her family to take the right steps.
- Holding discussions in a group with women would be very important to convince difficult cases. Additionally this would help in changing the overall perspective of how ANC check-ups are viewed.
- ASHA's educational level criteria and incentive pool needs to increase, for more quality based service. (The researchers observed that some of the ASHAs were shy, they don't visit certain communities that do not respect them, many of them live under the 'ghoonghat system' which makes it difficult to interact with community members.)
- Government needs a scheme for early registration – (although this might improve the indicator early registration, it does not ensure quality and required number of ANC check-ups).
- Ground level screening with MOIC and announcement via mics about the schemes would be beneficial
- Follow up, tracking and action against non performing staff is required

E. Institutional Delivery Barriers

A vast majority of the women are now accessing institutions for delivery. Although they might not register on time and have all required checkups, they still want to deliver at an institution. Reasons for home deliveries were as follows:

➤ **Delay in Reaching the Facility:**

- **Delay in Decision Making:** Women do not recognize labor pains on time. They bear the pain until the last moment before alerting family members and ASHAs.

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

This in turn delays calling of government sanctioned ambulance. Women who have had many children will also deliver faster. Therefore in many cases where there is intention to deliver at institution the delivery is at home or on enroute to facility.

○ **Transportation Barriers**

- **Inaccessible areas/Kaccha Roads:** Hilly terrain or and 'Kaccha roads' making it difficult vehicles to reach households. Some of the roads are not in the condition where the ambulance can reach and bring a woman safely. Women in labor have to be brought down on a bed or large cloth to the vehicle. It is difficult for a nine month pregnant woman to do so.
- **Vehicles refuse to pick pregnant women up** from these areas, especially at night time, when calls go unanswered.
- **Non-Profitable for private vehicles to serve as transport:** Additionally some of them have to go to specially to collect their cheque and come back, spending more time and money on petrol.

- **Cell phone networks poor:** Certain areas have very poor to no cellular network making it impossible for family or ASHA to contact referral transport or SBA for delivery.

- **Do not go to health facility after home delivery:** Even if there was intention to deliver at institution and due to delay at some level it takes place at home, women do not want to go the health center after delivery for post natal checkup. They do not see the point once all has been performed in the 'comfort of their home'.

➤ **Demand for Quality Services:**

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

- **Manpower - Absence of a woman doctor/gynecologist and skilled manpower:**
This has been a deterrent for women not approaching institutions. Once people get to know that a 24X7 PHC or FRU does not have full time dedicated staff, and doctors keep changing on rotation instead of having the same doctor consistently, they do not feel comfortable to approach that institution.
Therefore people are weighing in the quality of services they are provided.

- **Trust:**
 - **SBA performed deliveries being registered as home deliveries:** Some SBA's perform private deliveries at their or the beneficiary's home, which cannot be counted as institutional or SBA performed. This is their private practice not linked to JSY benefits. But people have trust in the skills and experience of these individuals to spend extra money and avail their services.
 - If people have faith in a particular Dhai, doctor, ANM then it does not matter who or where the delivery is conducted. In one area an Ayurvedic doctor used to conduct deliveries for 25 years at people's home, and they all preferred this. This also affected the retention of Medical Officers.

- **Home Deliveries are 'More Convenient':**
 - **People do not prefer to stay for 48 hours at the facility:** Some families and pregnant women do not comprehend the advantages of that care for mother and child and want to resume work immediately. Staying for 48 hours also increases the cost for the accompanying family members. Therefore they prefer going to a private facility where they will be discharged in less than 48 hours. In small nuclear families there might not be anyone to look after the children or accompany them the woman.

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

- **Dais:** In certain areas Dais, especially from the Gameti caste might be promoting home deliveries, as this is their profession. In Bhim area Dais are also performing deliveries quite often. This is also linked to the fact the people are aware that the other close by public facilities are either going to refer the cases or will not provide quality services. Therefore it is easier and more convenient to get normal deliveries done at home.
 - **Safe experience with previous home deliveries:** People believe that if so far home deliveries have been safe for them then there is no point of going to an institution. It is comfortable and does not require a 48 hour stay.
 - **No benefits perceived:** Some people don't see marked differences between them and women who deliver at institutions. Infact more maternal deaths have been observed in relation to institutional delivery. Those that have decided that they are going to deliver with a Dhai don't even reach out to the health system for delivery. In many cases they deliver without a Dhai.
 - **Difficulty to go to facilities at night time:** In distant/interior places and those in hilly locations, it is tough to access 24X7 facilities due to transportation, connectivity and manpower issues. Dais are commonly approached in these types of cases before ASHAs. Therefore even the health personnel do hold them in value in such situations.
 - **Specific communities prefer home delivery:** Certain communities like Rawat and Salvi might prefer delivering at home in some cases. There are high home deliveries reported among tribal population like Bhil.
- **Fear of C- Section and Episiotomy:** Delivering at home eliminates episiotomy and stitches. Some women have been given stitches without an anesthetic, and they find this

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

extremely painful. An ANM reported that many women have complained that an episiotomy is also done also at time of 2nd delivery, and do not understand why it needs to be repeated.

Interviewee -“People are referred from here anyways, even for small problems, so then either Dais convince them, or they just prefer delivering at home. No work is done here. In one case I was willing to take the responsibility, she was dilated 4 fingers, still they referred her and she delivered in the van.”

“Women who have gone to hospitals the labor pains were misdiagnosed and they were sent home.”

Suggestions given by Interviewees:

- **Deployment of trained staff:** The ANM in from on SC also goes to nearby PHC to conduct deliveries, as currently there is no trained or confident staff for delivery there and people all around that area trust her. Similarly other SBA should be deployed and also compensated accordingly.
- **Understanding the importance of 48 hour stay:** Women need to understand that PNC at a hospital is of much better quality. Therefore PNC counseling should be improved.
- **More efficient transportation services:** There should be a mobile team available everywhere, in each village if delay is to be avoided to help a women reach the institution, otherwise it is very difficult to achieve total institutional delivery.
- **104 services should not function sector-wise but rather reach out area wise** based on need. More 104 vans are required to reach high home delivery areas.
- **Small special programs in extremely poor functioning areas:** Programs addressing specific cultural barriers need to be undertaken at a village or sector level to promote institutional deliveries.
- **Education from the start/young age:** This is a key factor to a woman’s and her family’s awareness about the benefits of delivering at an institution. Additionally with awareness

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

about services families also make the effort to bring the woman in private vehicles as soon as possible. Most people who come understand mother and child will be safe.

F. High Risk Pregnancies

- **High Risk Cases ‘Not present in my area’:** Many of the interviewees reported that they do not have high risk pregnancies as such in their areas. This is possibly linked to insufficient identification and tracking of high risk cases, although their knowledge about HRP factors was good. They only described high risk cases when they had been presented to them with complications during delivery. Then the high risk cases would be taken to higher facility levels after referral from lower level facility instead of being directly referred from home in the beginning.
- **Anemia most commonly observed as causes of complication related to HRP:** Most women have hemoglobin level of 10gm/dl or less, was a major risk assessed during pregnancy and delivery. Multiparity further contributes to risk. The most common complication talked about was hemorrhage.
- **Transportation Delay ‘Increases Risk’:** Either a late alert from family or difficult to reach areas increases the risk of delivery complications.
 - Similarly if transport is not available from referral facilities to first functional FRU it results in further delay.

Interviewee- “In one case, 108 dropped off the woman in the night when staff had not reached the facility. After the staff arrived and assessed the fully dilated woman it was diagnosed that it was a breech pregnancy and the case had to be referred. The 108 would take 30 minutes to arrive and a private vehicle had to be arranged single handedly by me. Additionally I had to look after the nervous family. These barriers make referral of high risk pregnancies difficult.”

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

- **Failed attempts at saving HRPs:** If family members are convinced by ANM and ASHA to properly manage high risk cases and they still die in the process, people lose trust in the system.

Interviewee- "Dais' daughter was delivering and was severely anemic. She was in need of blood. I convinced them to go to for blood transfusion. They went to RK, referred to Udaipur and from there private. She still had post-partum hemorrhage. Now nobody from the village comes. Trust is a major factor. So People will come for immunization, but deliveries they now prefer to get done at home."

- **Reasons for poor ANC coverage** also make it difficult to also track high risk pregnancies

Suggestions given by Interviewees:

- Primarily the referral systems and FRU facilities need strengthening to manage HRP cases. There are no blood storage units available in both blocks. The delay along the referral line is potentially a major cause of maternal deaths.
- The problem of diet will resolve many issues. There is no concept of nutrition; people don't give extra care to pregnant women.
- Concentration on line list preparation, and providing the list to 104 drivers.
- The MCHN day quality needs to be strengthened- that is the main scope for positive development.

G. Anemia- Challenges

- **Poor identification and tracking:** ANMs need to be trained perfectly to identify and track cases and referral systems need to improve.
- **Low and irregular IFA consumption:** Although in many areas the uptake of IFA is increasing many women do not consume IFA because of the nausea it triggers. Due to

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

fear from higher authority, ANMs and ASHAs report that women are regularly taking it.

In rare cases religious leaders like Bhopas or elderly community members dissuade pregnant women from taking IFA if it does not suit them. IFA should be gauged through utilization, and not distribution, and correlating with better hemoglobin levels. The barriers to this are incorrect reporting by pregnant women and inability of field staff to measure Hb properly. To further complicate this when women are detected with anemia, they don't follow up with the full treatment.

- **Subtraction of healthy protein food from general diet during pregnancy:** Superstitions which exist culturally such as avoiding milk, buttermilk, curd, ghee, groundnuts, during pregnancy, affects the woman's diet. The popular belief is that this will accumulate as the sticky substance over the child's head causing problems in delivery. This thought is passed down to each generation, cutting down even the bare minimum healthy food a pregnant woman can consume. Health workers have tried to orient the women and her mother-in-law about the difference between stomach and uterus without success.

Interviewee- "If we tell them to eat good nutritious food, and have milk products, they say okay then do you take the responsibility to deliver safely."

- **Low perception about the importance of diet:** Many can't afford milk and other nutritious as part of daily diet. To top this they cut out protein rich food during pregnancy and do not consume IFA regularly. This triple effect is not conducive for health of a pregnant woman, and her child. ANMs advice mother-in-laws to look after their daughter-in-laws diet.

Interviewee- "We tell them that they should be looking after their daughter in laws just like their daughter."

- **Belief that there is no anemia prevalent in the region:** Some interviewees felt that there weren't too many anemic women in their catchment areas. This could be either

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

due to acceptance that generally woman has Hb at 10gm/dl, or that they are not being measured properly.

- **Multiple children:** Women who have been pregnant multiple times have poor health. This in turn affects health of child. The vicious circle of having multiple children, nutrition, poor education, higher chances of abortion deteriorates health of a woman.

Suggestions given by Interviewees:

- ANMs need to be trained perfectly to identify and track anemia and referral systems need to improve.
- Weekly Iron Folic Acid Supplementation needs to be given importance as nutrition must start from school when a girl is in her adolescence. Poor hemoglobin at young age continues into motherhood.

Interviewee-“Education is the key for norms to change but that also takes time. For immediate results we the ground workers need to be in the forefront. How can one educate mothers at this stage? But let’s start with the child.”

- A community based nutrition program needs to be implemented efficiently as poor nutrition is difficult to resolve on an individual basis. Good nutrition has to become a community norm.
- Special campaigns for hill tribes where the community is adamant and not following diet as prescribed.

H. Public Grievances

Usually people are not active and upfront about reporting public grievances as per the opinion of the personnel. However they described the grievances faced by the users of the health system.

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

- **Transportation and Payment:** 108 not providing services in hard to reach areas with kaccha roads and private vehicles not always assisting in such situations. Many times private transport services want direct cash from the beneficiaries. For certain facilities especially for referral at the District level these private vehicles land up spending more in going to collect a cheque and coming back. So the driver charges more to the family over and above the JSY money. Instead money should be directly given to the mother/family making it easier to avail transportation services in remote areas.

Interviewee- "The patient would have spent less on her own, rather than availing the JSY services."

- **Bank account opening not flexible:** Due to ID requirements that women are not able to fulfill as per bank rules, it is not easy for them to open an accounts and avail JSY benefits. Different names on ID and documentation makes it difficult for payment to process - father/husband called differently, registered differently, and names on documentation different. Additionally some girls are married before legal age, making it difficult to produce and submit documentation.

Interviewee-"In one area the district issued a letter to the Gram Panchayat in a village facing this problem, which in turn issued a letter to the bank to resolve the issue. However no change was noted. As many girls marry young, sometimes under the legal age for marriage, they have not followed up with bank account requirements."

- **Location certain of facilities impedes access and optimal utilization:** Some of the PHC and CHCs are not located at convenient places. In few cases they are located away from the actual village on a main highway with no hotels or food stalls close by. This makes it difficult for people to access facilities. If a facility is located in a forest without 24 hour staffing, patients feel unsafe in these situations. In these cases even though the facilities are well equipped and have good infrastructure their usage is not maximized.

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

- **Accessing private institutions for sonography:** It is quite common for women who are pregnant for the first time, younger girls and known high risk pregnancy to have a sonography. But sonography services are not easily available at public institutions. If they do visit bigger district hospitals they have to spend for transportations and take multiple trips since caseloads are high and one might have to get appointments. Also doctors cannot keep the sonography services on for the full day and have to cap it at some point. Therefore it is becoming popular to access private institutions for this service, as in the end it turns out to be comparatively cheaper.
- **Lack of Skilled Manpower at all facilities and Specialized Manpower at FRUs** (described in previous sections)

I. Quality of maternal care services in private institutions

- **Availability of staff and specialized manpower:** 24X7 staff and specialized professionals like gynecologists and women doctors are a motivating factor encouraging people to deliver at private institutions.
- **Demand for personalized attention and required equipment:** Quality care is important to people and having personal attention is preferable to intermittent care at public facilities provided by staff that has to multitask. They also have sonography machines available which people find easier to access than going to public facility multiple times. Public institutions are not always clean.

Interviewee “-People are not simply motivated through monetary incentives today. Rs. 1400 is barely anything in today’s world. - You get proper rest and safe delivery at private a facility, which is why people who can afford go.”

Interviewee -" We can't be clinicians and managers. How can we concentrate on both.”

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

- **Quicker delivery and shorter stay:** Private institutions might not have the same protocols in relation to oxytocin. Its administration makes delivery quicker and people believe that their staff is more skilled. They do not understand the risks associated with oxytocin use. People do not like the concept and do not understand the importance of 48 hour stay and private institutions sometimes give them leave in a couple of hours.
- **Salary and benefits:** There are no additional benefits for working as a 24x7 doctor in a public facility. A private doctor gets higher compensation for fewer hours of service. This is very demotivating for government personnel and affects their retention at public institutions.

J. Maternal Deaths

- **No specific pattern of deaths observed:** According to personnel maternal deaths are not a commonly occurring incidence. As numbers are not huge in quantity, especially at a block or village level they haven't observed any patterns specifically. Most cases they have come across have been related anemia and bleeding. Additionally they are well aware that the deaths that most of them have heard about have all been cases of institutional deliveries. If deaths had not occurred in their area, they were not well versed with the reasons.
- **Poor PNC and HBNC:** ASHAs and ANMs have to make more quality based home visits. Some women don't understand the importance of hygiene and don't bath for 4-5 days after delivery. Infections, especially related to stitches, leads to complications.
- **Discussing maternal deaths with the community:** They interviewees suggest that open discussions on maternal death events are important for the community to become aware about causes and how they can engage in preventing them (social review).

Suggestions given by Interviewees:

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

- Better phone networks, transport systems for referrals and staffing are key components in addressing maternal deaths. Currently there are no quality services for HRP cases.
- (Researchers observation) People can't explain the cause of death, especially systems related cause. They can only discuss symptoms associated with death. They need to be better trained to determine cause.
- Understanding what happens in other areas will also help improve mechanisms.
- Importance needs to be given to PNC and HBNC care which is weak and not practiced in some areas. ASHAs and ANMs have to make more quality based home visits.

Discussion and Recommendations Based on Triangulation of Data

(Survey, Key Informant Interviews and Focus Groups)

Based on the triangulation of information from the survey, key Informant Interviews and focus group discussions, the following facts need consideration and prioritization.

1. Improve the perception of importance of ANC and Institutional delivery

- Within the sample 45% of the women who delivered at home and 60% of the women who delivered at an institution had registered in the first trimester. The reasons quoted for late registration within the survey point out that they were not aware, were not informed to register early or had no apparent health problem.
 - a. Although the ASHA is making efforts to inform women, they face the obvious challenge of pregnancy identification. The reasons are varied from women not informing them due to fear of bad omen, being shy to reveal pregnancy and fear of abortion risks. This in turn ties into the perception of 'importance' as many believe no ANC check-up is required as such unless they face a problem.
 - b. 47% of the sample belonged to nuclear families. There was not much difference between these in the group that delivered at home verses an institution. However the service providers do feel that this issue to some extent influences the support the women has to access health facilities. She is not able to leave her other children at home if there is no one to look after them. Even if she does deliver at an

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

institution, she is sometimes unable to visit the once a month MCHN day due to the same reason, as it does take up a significant proportion of her day. This in turn affects the number of ANC check-ups.

Efforts need to be focused on improving the awareness of benefits of ANC so that women and community members perceive early registration and ANC follow up as very important. Only when the perception improves will there be a change in demand from the community for these services.

2. Providing quality services to generate demand

- Education is crucial to understanding the counsel of ANCs, benefits of delivering at institution and importance of nutrition during the life cycle of an individual. More than half the sample (56%) did not have any schooling. There was not much difference in proportion of women who delivered at home and at an institution in schooling years. It is clear via the data in this study that apart from education, there are other important factors that play a role in the outcome of place of delivery. For example:
 - a. The women and the community's perception of the importance and benefits of ANC and delivery at an institution and the 48 hour stay are poor.
 - b. Even if they understand the benefits of delivering at an institution, there is a want for quality services. This is apparent through the benefits they perceive at a private institution-manpower, attentive care, faster delivery and fewer days of stay. Trust in Dais, who they also perceived as more skilled to conduct deliveries rather than being referred from facilities even for simple deliveries, leads to the high numbers of reported and unreported home deliveries.
 - c. Manpower also determines the quality of services that the system can provide. Specialized personnel, lady gynaecologists and availability of 24x7 doctors generate better demand from people.

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

Changing the perception is not enough. This has to be followed by provision of quality to maintain the continuum of increased service delivery efforts.

3. Improving MCHN Day Standards

- Over 80% of the women had their first ANC check-ups at MCHN days by the ANM. Therefore the ANM is crucial to motivate the women to attend ANCs and help her understand the benefits.
 - a. Assessment by SIFHW has already pointed out that the basic skills of ANMs need strengthening through quality based trainings. However to improve the quality, better supervision is necessary.
 - b. The data in this survey highlighted that, 50%-80% women who had undergone 3 ANCs, had not undergone the relevant basic tests even 3 times. 47% women reported that they were not explained why the different check-ups during ANCs had been done.

Quality Supervision: Supervision is required not only to monitor the quality of ANMs work, but also to draw out the implementation challenges so that the block and district officials can actively discuss how to resolve bottlenecks in a participatory way. This will also be motivate well performing ANMs and ASHAs and identify personnel that are not carrying out their duties. Currently our interaction has revealed that supervisors sometimes only come to drop off the vaccines.

4. Diverting Home Deliveries to Institutions – Addressing the Barriers

- a. **Distance and Time:** Although data revealed that 90% of women were reaching facilities within 60 minutes and they were placed within 60km, many deliveries are still occurring at home. This is because it does not take into consideration the time it takes for transport to be contacted and reach the woman’s home.
- b. **Terrain:** Difficult terrain makes it tough for woman to reach the road where the vehicle is waiting. 55% of the women hired private vehicles which points to less

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

- use of the government sanctioned vehicle. The response of vehicles, especially at night and when they have to navigate difficult terrain is poor.
- c. **Cost:** Almost half the women had to pay more than Rs.250 for transportation cost. In fact proportion of women paying additional costs at public institutions is close to that of women delivering at home and incurring additional costs.
 - d. **Case Load:** Most of the case load is going to PHCs and CHCs as per the data. The subcenters are underutilized for deliveries.
 - e. **Cell Phone Barrier:** Within the sample 53% women were found to have no cell phones of their own. 41% of women had no cell phone access (did not own a cell phone, neither did husband or close by living family/friends). This highlights the fact that although ASHAs and ANMs may provide them with their own numbers, with relevant numbers for referral and transport services, but people might not be able to make the prompt contact as required. This might also lead to delay while reaching an institution. Many of these areas have poor cell phone network making it difficult even for the ASHA to contact ambulances and private vehicles.

Strengthening Subcenters as delivery points to address some of the above barriers related to access and delayed decision making will be crucial to better uptake of services.

Monitoring of government sanctioned vehicles must be heightened as women and their families are spending even above Rs.1000 to reach the delivery facility, out of pocket.

A Systematic transport and referral plan needs to be in place for each village based on the access (road and cell phone network) and needs to contact and reach facilities, (based on broader guidelines provided). A similar plan to reach functional First Referral Units also needs to be in place to avoid delay of high risk cases reaching these facilities. Additionally a systematic and simple plan also motivates people to use facilities. Private vehicles might be more convenient for people and also within closer reach. The challenges faced to access them should be addressed.

IEC and involving the Panchayat and prominent community members to bring more awareness in the community regarding timely access for pregnant women and the child is

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

crucial in improving the perception of the community to deliver at institutions. IEC that uses risk messages with positive framing should be applied.

5. Family Planning

- 53% of the sample had married before the legal age. 74% of these women had their first pregnancy between the age of 16-20 years.
 - a. An effort to delay first pregnancy via family planning education for this vulnerable age group is crucial to bring change, even though it is a sensitive topic to address in communities.
 - b. Women who do get pregnant early on are more shy to come forward for ANC and sometimes do not realize they are pregnant within the first trimester. Their young age already puts them at high risk.

IEC Strategy for family planning and spacing needs to be given more focus and innovative ways of reach and communication must be adopted. Family Planning advice and counsel cannot be simply given to women, but to men and their community. For example may be the focus should be on indirect effects and benefits of late marriage and delaying early pregnancies. This includes health benefits for the child and economic benefits for the family.

6. Nutrition – Community Based Prevention

- There is already an initiative towards community based management of malnutrition. However based on the data this program also needs to include focus on community based prevention of malnutrition.
 - a. IFA consumption is low and irregular mainly because women feel nauseous and sick. However if they were to more clearly understand the benefits that their health has on the developing foetus, rather than just understanding how IFA benefits the “blood and delivery process” may be they would make a better effort for uptake.
 - b. Adolescent girls who marry young, and have poor nutrition are further at risk if they become pregnant early on.

Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan Key Informant Interviews

- c. From the interviews it was apparent that ASHAs and other personnel within the health system do not give the required focus and face challenges related to beliefs and family's access to a diversified diet.
- d. If community members instead of just the ASHA and ANM convince adolescent, pregnant and lactating women to take iron supplementation and complement it with a balanced nutrition, the acceptance will be better.
- e. Based on the focus groups and interviews women stop taking buttermilk and ghee based products during pregnancy as the community believes it will accumulate on the head of the child make delivery difficult. These misconceptions prevent them from even consuming their normal diet let alone adopting a healthy diet.
- f. Good nutrition is not a community norm and women do not understand the reason for increased requirements during pregnancy and lactation. They might not perceive this as important as they don't understand the developmental and cognitive effects it has on the child. Anaemic women are at higher risk of giving birth to low birth weight babies. Poor nutrition affects development which affects the productivity of the generation. This vicious cycle continues.

Reinforcement via risk messaging in a positive frame is a potential strategy for improved diet and community based management of prevention of malnutrition.

7. Community Involvement- Do not depend on ASHA s alone

- It was apparent from the interviews of the ASHAs and mother-in laws that there is no one key person who influences decision making of the woman regarding her pregnancy care and delivery.
- When the ASHA alone tries to deal with difficult cases there is the attitude that "she is doing it for money" which also demotivates the ASHA to carry out her work.

Involvement of more peer women, committees or groups and the Panchayat would help the ASHA and ANM in their work.

Conclusion

Based on the discussion and recommendations, improving the quality of ANC care, nutrition and institutional delivery needs to be a joint effort of the Health Unit and the community. However the community involvement has to be propelled by the State and District Health teams. Encouraging women to go for the required ANC check-ups and further deliver at a facility has to be coupled with quality services by the health care workers so that the people feel motivated, trust the system and perceive its benefits. Only when practices about good nutrition, ANC and institutional delivery become a norm in the community is acceptance better and it creates a demand from the consumer side to access the benefits of a public health system. Additionally structural and system barriers related to poor roads and cell phone connectivity needs to be addressed by district and state leadership, and not just the health department. Convergence between different departments although tough, is crucial, as a platform for shared goals is necessary. Education, nutrition, health, sanitation and access to services are interdependent to a large extent.

**Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan
Key Informant Interviews**

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**Understanding Barriers to Antenatal Care and Institutional Delivery in Rajsamand, Rajasthan
Key Informant Interviews**

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