

# **Rapid Assessment of Knowledge Attitude and Practice (KABP) on Continuum of Care**

For

**UNICEF**

By:



**State Institute of Health and Family Welfare, Jaipur**

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### Acronyms used in the study

AMDD:	Averting Maternal Death and Disability
ANC:	Antenatal Care
ANM:	Auxiliary Nurse Midwife
APL:	Above Poverty Line
ASHA:	Accredited Social Health Activist
AWC:	Anganwadi Center
AWW:	Anganwadi Worker
BCC:	Behavior Change Communication
BPL:	Below Poverty Line
CBO:	Community Based Organization
CHC:	Community Health Center
CSSM:	Child Survival and Safe Motherhood
DLHS:	District Level Household Survey
F-IMNCI:	Facility based Integrated Management of Newborn and Childhood Illnesses
IEC:	Information, Education and Communication
IFA:	Iron and Folic Acid
IMR:	Infant Mortality Rate
IUD:	Intrauterine Devices



IUGR:	Intrauterine Growth Retardation
JSY:	Janani Suraksha Yojana
LBW:	Low Birth Weight
LM:	Lactating Mother
MGP:	Multi Gravida Pregnant
MIL:	Mothers-in-law
MMR:	Maternal Mortality Ratio
NFHS:	National Family Health Survey
OBC:	Other Backward Class
PGP:	Primi Gravida Pregnant
PHC:	Primary Health Center
PMNCH:	Partnership for Maternal, Newborn, and Child Health
PNC:	Post Natal Care
PPH:	Post-Partum Hemorrhage
PW:	Pregnant Woman
SC:	Scheduled Caste
SRS:	Sample Registration Survey
ST:	Scheduled Tribe
TT:	Tetanus Toxoid



## Definitions

**ASHA:** are community health workers instituted by the Government of India's Ministry of Health and Family Welfare (MoHFW) as part of the National Rural Health Mission (NRHM)

**BCC:** is the process by which information and skills are shared and disseminated to people in the specific target audience with the intention of influencing them to adopt sustained changes in sexual behavior or attitude or to engage in other health seeking behavior.

Behavior Change Communication is a process of working with individuals, communities and societies to develop communication strategies to promote positive behaviors which are appropriate to their settings and provide a supportive environment which will enable people to initiate and sustain positive behaviors.

**CBO:** a local organization within a community that provides various services to people

**DLHS:** District Level Household Survey is one of largest ever demographic & Health surveys covering all the districts of the country. It was initiated in 1997 and provide district level estimates on health indicators to assist policy makers program administrators in decentralized planning, monitoring and evaluation. DLHS conducted in DLHS-3 (2007-08), DLHS-2 (2002-04), DLHS-1 (1998-99)

**IEC:** Information, education and communication (IEC) combines strategies, approaches and methods that enable individuals, families, groups, organizations and communities to play active roles in achieving, protecting and sustaining their own health. It is a process of working with individuals, communities and societies to develop communication strategies to promote positive behaviors which are appropriate to their settings.

**IMR:** The ratio of the number of deaths among children less than one year old during a given year to the number of live births during the same year.

**IUD:** An Intrauterine Device (IUD) is a small object that is inserted through the cervix and placed in the uterus to prevent pregnancy. A small string hangs down from the IUD into the upper part of the vagina.

**JSY:** is a centrally sponsored scheme aimed at reducing maternal and infant mortality rates and increasing institutional deliveries in below poverty line (BPL) families.



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- LM:** Lactation is the medical term for breast feeding, natural methods of feeding an infant from birth to the time he or she can eat solid food. Lactation period refers to the duration when the mother breastfeeds her child
- MGP:** Multigravida` is a woman who has been pregnant more than one time. The births may have been interrupted by abortion, fetal death, or may have resulted in a live birth.
- MMR:** Is the ratio of maternal deaths per 100,000 live births
- NFHS:** The National Family Health Survey (NFHS) is a large-scale, multi-round survey conducted in a representative sample of households throughout India. Three rounds of the survey have been conducted since the first survey in 1992-93.
- PGW:** A woman in her first pregnancy.
- Poverty Line:** poverty line, is the minimum level of income deemed necessary to achieve an adequate standard of living in a given country
- PPH:** excessive vaginal bleeding (blood loss greater than 500 ml) within 24 hours after delivery.
- SC/ST/OBC:** The Central Government of India classifies some of its citizens based on their social and economic condition as Scheduled Caste, Scheduled Tribe and Other Backward Class
- SRS:** Sample Registration Survey is a dual reporting system which provides the annual estimates of birth, death rate, Infant mortality rate, total fertility rate, maternal mortality rate & other measures of fertility and mortality. It is one of the largest continuous demographic household sample survey in the world and initiated in 1964-65.



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## **Introduction**



## Introduction

The global community declared a commitment to “create an environment—at the country and global levels alike—which is conducive to development and to the elimination of poverty”. This declaration led to an agreement on eight goals in key areas of global concern: **the Millennium Development Goals**.

Goal No. 4 and 5 aims **to reduce maternal and child mortality**. Investment in maternal, newborn, and child health is not only a priority for saving lives, but is also critical to advancing other goals related to human welfare, equity, and poverty reduction. The Universal Declaration of Human Rights, ratified on December 10, 1948, states that “motherhood and childhood are entitled to special care and assistance”. The Convention on the Rights of the Child, ratified in 1989, guarantees right to children for the highest attainable standard of health. Other conventions and international consensus documents focus on redressing the gender-based discrimination that might undermine good health, particularly that of girls and women.

Over the years the health care delivery system of Rajasthan got strengthened in terms of availability of infrastructure which has created easy access to health care facilities down to the village level. The efforts are visible in the data related to maternal mortality, infant mortality, exclusive breast-feeding and immunization, but the progress has been relatively slow. Rajasthan has trailed in many health care indicators such as, maternal mortality (388 per 100,000 live births, SRS, 2006), infant mortality rate (63 per 1000 live births in 2008, SRS). Even the exclusive breast-feeding practices and full immunization figures are not very encouraging. Only 65.5% of women exclusively breast feed their children between 0-5 months of age (DLHS-3) and 48.8% of the children are fully immunized (DLHS-3).

Besides the government efforts, much can be done at the family and community level to save the lives of children and help them to lead a healthy life. That could happen only when people are in knowledge of and practice also the interventions that have a positive effect on life particularly in formative years and during the physiological processes.

The continuum of care has become a rallying call to reduce the yearly toll of half a million maternal deaths, 4 million neonatal deaths, and 6 million child deaths. The continuum for maternal, newborn, and child health usually refers to continuity of individual care and is critical throughout the lifecycle (adolescence, pregnancy, childbirth, the postnatal period, and childhood) and also between places of care giving (including households and communities, outpatient and outreach services, and clinical-care settings).





The term continuum of care was initially applied in the 1970s to the integration of research and practice for provision of a continuum of care for elderly people. Historically, maternal, newborn, and child health policies and programs have generally functioned in isolation—targeting interventions to only one group at a time and ignoring linking between ages and groups. But, the whole equals more than the sum of its parts. Linking interventions in packages could save millions of lives at a lower cost than compartmentalized initiatives by allowing for greater efficiency in training, monitoring and supervision, and use of resources.

“Continuum” can be defined over the dimension of time (throughout the lifecycle), and over the dimension of place or level of care. This expression has two meanings. First it means care has to be provided as a continuum throughout the lifecycle, including adolescence, pregnancy, childbirth and childhood. Second it indicates that care has to be provided in a seamless continuum that spans the home, the community, the health center and the hospital

"The maternal-newborn-child health continuum of care is an approach to healthcare that has great potential to save thousands of lives each year by catching those who used to fall through the gaps and by more effectively using scarce resources," says Erin Sines, a policy analyst at the Population Reference Bureau and lead author of a Saving Newborn Lives policy brief entitled *The Maternal-Newborn-Child Health Continuum of Care: A Collective Effort to Save Lives*.

The approach is based on the assumption that the health care of mothers, newborns, and children are tightly linked. In developing countries, if a mother dies at childbirth, her newborn will almost certainly die as well. And her older children are more likely to suffer from disease.

The continuum of care over time includes care before pregnancy (including family-planning services, education, and empowerment for adolescent girls) and during pregnancy. During childbirth and the days immediately afterwards, mothers and babies are at highest risk of death; over half of all maternal and neonatal deaths occur during this period. Of the estimated 3.2 million stillbirths every year, 30% occur during childbirth, yet even now, every year 50 million women deliver at home.

The continuum of care approach is based on the assumption that the health care of mothers, newborns, and children are tightly linked. In developing countries, if a mother dies in childbirth, her newborn will almost certainly die as well. And her older children are more likely to suffer from disease.

Universal coverage of 16 proven newborn health interventions could avert up to 72 percent of all newborn deaths, according to the Bellagio Study Group on Child Survival. These interventions include skilled attendants at birth; access to emergency obstetric care; immediate and exclusive breastfeeding; keeping the newborn warm, and if needed, resuscitated; care of low birth-weight



infants; and treatment of infection. An estimated 63 percent of child mortality would be prevented with 99 percent coverage of effective and available interventions.

Mothers could also potentially fare much better. The World Bank has estimated that 74 percent of maternal deaths could be averted if all women had access to interventions that address complications of pregnancy and childbirth, especially emergency obstetric care.

The Continuum of Care recognizes that safe childbirth is critical to the health of both the woman and the newborn child—and that a healthy start in life is an essential step towards a sound childhood and a productive life.

### **Dimensions and importance of the Continuum of Care**

- 1. Time** - pre-pregnancy, through pregnancy, childbirth, and the early days and years of life
- 2. Place** - linking the various levels of home, community, and health facilities

Linking interventions in this way is important because it can reduce costs by allowing greater efficiency, increase uptake and provide opportunities for promoting related healthcare elements (e.g. postpartum/postnatal and newborn care).

### **Gaps in the Continuum of Care**

- 1. Family planning services:** Only one third of women in the 68 priority countries are using a modern contraceptive method.
- 2. Skilled care during childbirth and the postnatal period:** Only around half of women benefit from a skilled birth attendant at the time of birth, though this is the riskiest period for mother and infant. Care during the critical postnatal period is even lower, an important missing link in the continuum of care.
- 3. Clinical care for sick children:** Only about one-third of children with pneumonia – the biggest single killer of children – receive the right treatment.

To develop a better local understanding of the process of care and the inherent punctuations on account of unawareness resulting in non-translation of knowledge into palpable behavior at the level of the community; Rajasthan State Office of UNICEF conceived the idea and SIHFW, Rajasthan was assigned to deliver.

The present study, as a result of the aforesaid, was undertaken by SIHFW in 5 UNICEF identified districts of Rajasthan with a reasonable representation from desert, tribal and plains.



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## **The Study**



## **The study**

### **Scope of Work**

1. Conduct a survey in five selected districts of Rajasthan (Baran, Barmer, Dungarpur, Sawai Madhopur and Tonk) to assess the Knowledge, Attitude, Behavior and Practice among Individuals, Families and Community regarding Continuum of Care with special focus on socially excluded communities.
2. Develop a questionnaire focusing on the specific elements of the Continuum of Care and the objectives of this evaluation.
3. Visit to all stakeholders Families, Health Service Providers and influencers in decision making.
4. Collate and develop baseline data from the
  - a. Studies and reports published or unpublished available on the subject in respect of Rajasthan
  - b. Data of Medical and Health Department, Government of Rajasthan
5. Orient and train data collectors.
6. Devise an appropriate sampling plan and field test the draft questionnaire.
7. Monitor data collection.
8. Analyze the data from the survey in conjunction with other available data, according to a plan agreed with UNICEF
9. Conduct a desk review of all available materials (studies, evaluations and other reports)
10. Document the findings in the final report.

### **Objectives:**

The main objective is to undertake a rapid field assessment study to understand the communication barriers and gaps in knowledge, attitude and practices of families, communities and service providers in key behaviors in the continuum of care so as to suggest strategies for effective IEC/BCC.

The specific objectives include:

1. To assess the favorable key practices in relation to antenatal care, delivery and post natal care.
2. Identify key influencers of health seeking behavior in family and community.
3. To enlist the barriers in seeking continuous care.
4. To identify CBOs/NGOs working for BCC.



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## **The Approach**



### **The Approach:**

With regard to the scope of work, a dialogue was initiated with UNICEF Representatives to discuss & develop the mutual understanding on sample size, methodology to be adopted and deliverables.

The approach was engineered around the following areas-

- a. Desk review of the dossier, including 'State of World Children 2009', studies on Continuum Care and BCC, or KABP on Maternal and Child Health.
- b. Development of study tools in consultation with client organization and referring to scope of work and deliverables.
- c. Empanelment of Resource persons.
- d. Enlistment of investigators.
- e. Initiating dialogue with State and District officer.
- f. Getting the relevant information dossier from UNICEF and Medical Directorate.
- g. Orientation of Resource and Investigators.
- h. Primary data collection.
- i. Accessing and evaluating secondary data.

In consonance to the adopted approach a method mix was adhered for accomplishment of objectives within the scope of work ascribed.

Based on documents received, reports obtained and available literature; study findings and reports from various organizations were reviewed. Data from both published literature and a number of unpublished studies, conference papers, annual reports were reviewed, particularly State of World Children, Report on Averting Maternal Death and Disability (AMDD), study conducted by Population Council- in Alwar district of Rajasthan titled -Making Pregnancy Safe for Women in Rajasthan: Targeting the most vulnerable- and an study by S.K. Jain, Uma Chawla, Neeru Gupta, R.S. Gupta, S.Venkatesh and Shiv Lal on Child Survival and Safe Motherhood Program in Rajasthan *National Institute of Communicable Diseases; and Division of Reproductive Health and Nutrition, Indian Council of Medical Research, India were reviewed for reference.*

Recent studies on Maternal Health: A Case Study of Rajasthan by Sharad D. lyengar, Kirti lyengar, and Vikram Gupta by ARTH and a paper on Promoting Institutional Deliveries In Rural India: The Role of Antenatal-Care Services K. S. Sugathan, Vinod Mishra, and Robert D. Retherford was also consulted for the purpose.



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Report on National Family Health Survey (NFHS-3) for Rajasthan 2002-03; Census of India Reports, DLHS-3, Rapid Household Survey under Reproductive and Child Health (RCH) Project for Rajasthan 2004-05. Apart from these reports, various state government publications/documents, i.e., Economic Review and annual reports of various years of Department of Medical, Health and Family Welfare were also reviewed.

Online paper at [www.the.lancet.com](http://www.the.lancet.com) vol.370 October 2007- **Continuum of care for maternal, newborn, and child health: from slogan to service delivery**-Kate J Kerber, Joseph E de Graft-Johnson, Zulfi qar A Bhutta, Pius Okong, Ann Starrs, Joy E Lawn, and a paper by Sandra Yin  
Source: [www.prb.com](http://www.prb.com)- *A Continuum of Care to Catch Those Who Fall through the Cracks*.

### **Study Tools**

1. Questionnaire - In-depth interviews based on structured pre-tested questionnaire

#### **Respondents**

- a. At Community level
    - Pregnant Mothers
    - Lactating Mothers
    - Mothers-in-law
  - b. At institutional level
    - ASHA
    - AWW
    - ANM
2. Desk Review of Data, studies and Documents
    - a. Review of secondary Data at Institutions –Sub center level and validation with primary data
    - b. Behavior analysis based on primary information

#### **Sample:**

Following a stratified sampling technique, five districts were covered for assessment – Baran, Barmer, Dungarpur, Sawai Madhopur and Tonk.

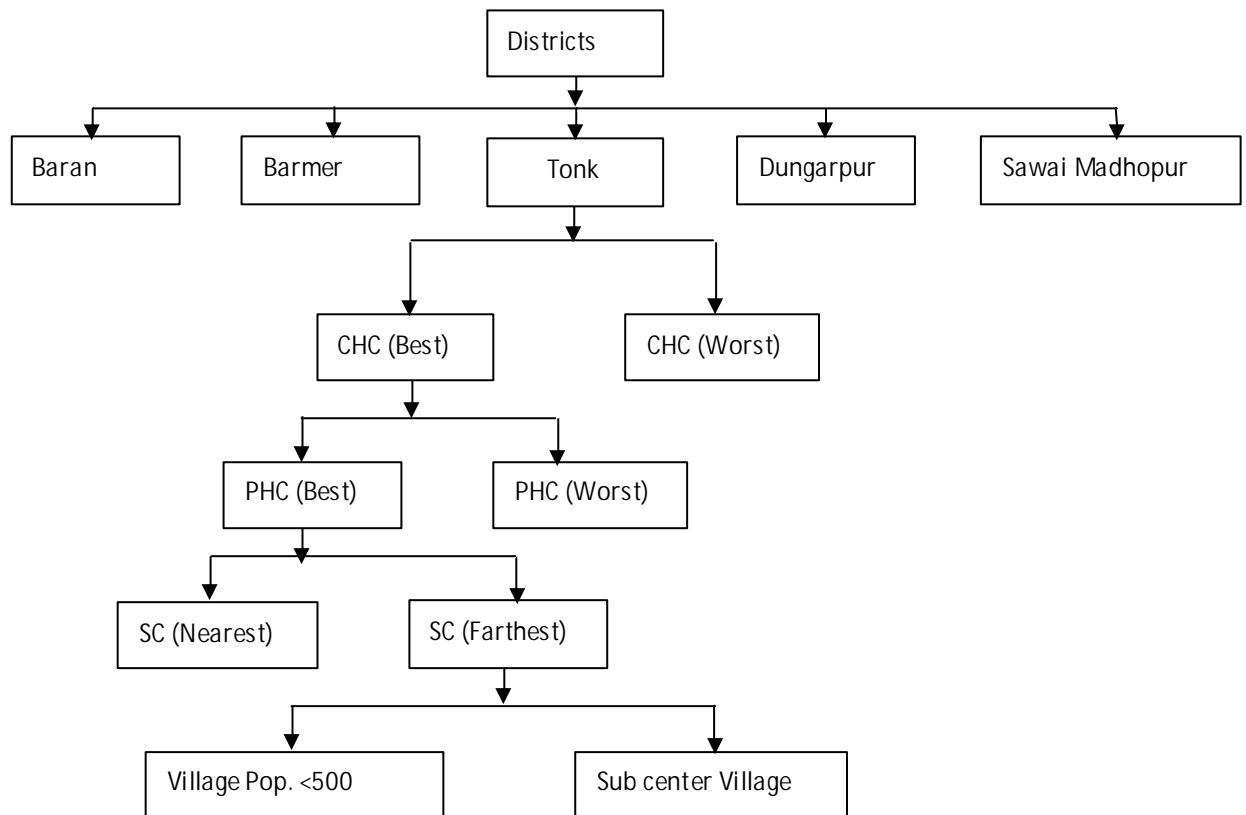
From each district two CHCs were selected on the basis of performance (best and worst) in relation to institutional deliveries.

From each CHC, two PHCs were selected and from each PHC two sub centers were selected, one near the PHC and one far off from the PHC.

From each sub center 2 villages were selected. Selection of villages was based on the population size, one with a population of less than 500 and the other Sub Center village. The village



selection was done after team reached the concerned Sub Center. From each village in-depth interviews with all the pregnant women, all lactating mothers with children less than one year and their mothers-in-law were conducted. Influencers, such as the ANM of all the study sub centers, ASHA and AWW of all the study villages were interviewed. The final sample details are as follows:







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## **Review of Literature**



## Review of literature

According to Tinker A, more than 40% of pregnancies in developing countries result in complications, illness, or permanent disability for the mother or child (Tinker A, Koblinsky MA. Making motherhood safe. Washington, DC: World Bank, 1994. (World Bank discussion paper 202). More than 7 million newborn deaths are associated with maternal health- and nutrition-related problems resulting from poorly managed pregnancies and deliveries or inadequate care of the neonate soon after birth (World Health Organization. Coverage of maternity care: a listing of available information. Geneva: World Health Organization, 1997. (WHO/RHT/MSM/96.28.)

Malnourished women (i.e., women who are short, are underweight, do not gain sufficient weight during pregnancy, or are anemic) are more likely to have miscarriages or stillbirths or to deliver babies with intrauterine growth retardation (IUGR) or low birth weight (LBW; 18–20), which are linked, in turn, to increased risk of perinatal and infant mortality. Globally, 15.3% of all babies are born with LBW, >2.5 times more so in developing (16.4%) than in developed (6.2%) countries. Severe anemia in pregnancy is believed to increase the risk of maternal mortality in childbirth and about half of the infants whose mothers have died do not survive to celebrate their fifth birthday.

New approach that focuses on offering a "continuum of care" to reach those mothers, newborns, and children in need is gaining momentum. Just as the household-to-hospital continuum of care is designed to ensure a seamless arc that spans the home, community, health center, and hospital, the maternal-newborn-child health continuum of care would manage the care of all in a more unified way than in the past.

"The maternal-newborn-child health continuum of care is an approach to healthcare that has great potential to save thousands of lives each year by catching those who used to fall through the gaps and by more effectively using scarce resources," says Erin Sines, a policy analyst at the Population Reference Bureau and lead author of a Saving Newborn Lives policy brief entitled *The Maternal-Newborn-Child Health Continuum of Care: A Collective Effort to Save Lives*.

Historically, maternal, newborn, and child health policies and programs have generally functioned in isolation—targeting interventions to only one group at a time and ignoring important connections between groups. But the whole equals more than the sum of its parts. Linking interventions in packages could save millions of lives at a lower cost than separate initiatives by allowing for greater efficiency in training, monitoring and supervision, and use of resources. Grouping interventions will also help families more easily access and take advantage of them.

The continuum of care approach is based on the assumption that the health care of mothers, newborns, and children are tightly linked. In developing countries, if a mother dies in childbirth,



her newborn will almost certainly die as well. And her older children are more likely to suffer from disease.

In addition, when mothers are malnourished, ill, or receive inadequate care, their newborns face a higher risk of disease and premature death. Nearly one in every four newborns in developing countries is born with low birth weight—largely due to their mothers' poor health and nutritional status, which makes infants more vulnerable to infection and puts them at higher risk of developmental problems.

The new global Partnership for Maternal, Newborn, and Child Health (PMNCH) has adopted the continuum of care approach as one of its guiding principles to improve the health and survival of mothers, newborns, and children. Members include donor agencies, professional associations, and academic institutions.

The government in India has added a newborn component to its existing integrated management of childhood illness program. As part of the program, health workers and community nutrition and child development workers visit newborns at home three times within the first 10 days. Workers promote exclusive breastfeeding, early recognition of illness, and management of complications.

The continuum of care has become a rallying call to reduce the yearly toll of half a million maternal deaths, 4 million neonatal deaths, and 6 million child deaths. The continuum for maternal, newborn, and child health usually refers to continuity of individual care. Continuity of care is necessary throughout the lifecycle (adolescence, pregnancy, childbirth, the postnatal period, and childhood) and also between places of care giving (including households and communities, outpatient and outreach services, and clinical-care settings).

The packages encompass three which are delivered through clinical care (reproductive health, obstetric care, and care of sick newborn babies and children); four through outpatient and outreach services (reproductive health, antenatal care, postnatal care and child health services); and one through integrated family and community care throughout the lifecycle.

Mothers and babies are at high risk in the first days after birth, and the lack of a defined postnatal care package is an important gap, which also contributes to discontinuity between maternal and child health programs. Similarly, because the family and community package tends not to be regarded as part of the health system, few countries have made systematic efforts to scale it up or integrate it with other levels of care.

Building the continuum of care for maternal, newborn, and child health with these packages will need effectiveness trials in various settings; policy support for integration; investment to



strengthen health systems; and results-based operational management, especially at district level. **Continuum of care for maternal, newborn, and child health: from slogan to service delivery** *Kate J Kerber, Joseph E de Graft-Johnson, Zulfiqar A Bhutta, Pius Okong, Ann Starrs, Joy E Lawn*

As recently as in 2005–2006, almost two in three (66%) women in Rajasthan were married before age 18 (of those aged 20–24, IIPS and Macro International 2008). Moreover, half (51%) of currently married girls aged 15–19 years in the state had already begun childbearing.

Study Data are drawn from a cross-sectional study, comprising a survey and in-depth interviews, conducted in 100 villages of four blocks, Bansur, Kishangarh, Rajgarh and Tijara, in Alwar district. Respondents for the survey included:

(a) young women who had experienced a recent delivery, that is, during the two-and-a-half years preceding the survey, and were aged below 20 years or between 25–29 years at the time of the index delivery; and

(b) family members of young women who had died during delivery or within six weeks following delivery due to maternal complications in the two-and-a-half years preceding the survey and were aged below 20 years or between 25–29 years at the time of death.

(c) The study was conducted during May-October 2007. A total of 1,935 women or family members of women who died of maternal complications were successfully interviewed. In addition, a total 104 women or a family member in case of maternal death were interviewed in-depth.

Findings indicate that pregnancy-related complications were common; indeed, almost three-quarters of women had experienced at least one pregnancy-related complication. Specifically, less than 1 percent of women had experienced death due to pregnancy-related complications; half had experienced one or more severe complications; and almost three-fifths had experienced one or more non-severe complications.

39 percent of young adolescent mothers compared to 30 percent of adult mothers experienced one or more severe complications during pregnancy; 11 percent compared to 7 percent experienced severe complications during delivery; and 22 percent compared to 13 percent experienced severe complications during the postpartum period.

Findings suggest that women belonging to scheduled tribes (predominantly Meena) were least likely and Meo Muslim women were most likely to have experienced pregnancy-related complications, particularly during pregnancy and the postpartum period. For example, while 28



percent of scheduled tribe women reported at least one severe complication during pregnancy, many more—50 percent—of Meo Muslim women so reported.

Pregnancy-related care was limited the study findings also underscore that maternal health care seeking was limited among women in the study setting. Just half of women had received three or more antenatal check-ups for the most recent birth, only about two-fifths (38%) had their most recent delivery in a health facility and about one-quarter (24%) had received a postpartum check-up.

Findings, moreover, indicate that outreach services tended to be weak, for example, as in the case of postpartum services. Young adolescent mothers were more constrained than adult mothers with regard to maternal health care seeking. They were less likely than adult mothers to have had the recommended number of antenatal check-ups (43% versus 63%),

Experienced institutional delivery (31% versus 55%) or received a postpartum check-up (19% versus 32%). Findings show that institutional deliveries did indeed increase following the introduction of the Janani Suraksha Yojana scheme; however, young adolescent mothers were much less likely to have benefited from the JSY scheme than other women.

Findings also indicate that maternal health care seeking was far more limited among Meo Muslim women than others. For example, just 11 percent of Meo Muslim women compared to 41–54% of others reported an institutional delivery. **Making Pregnancy Safe for Women in Rajasthan: Targeting the most vulnerable- study conducted by Population Council- in Alwar district of Rajasthan**

Less than one third (28.9%) of children, aged 12-23 months, were fully immunized with BCG, 3 DPT, 3 OPV and Measles vaccines; around a quarter (26.5%) had not received even a single vaccine (non immunized), and little less than half (44.5%) were found partially immunized. Around half of the eligible children were vaccinated for BCG (55.9%) and Measles (43.6%).

Though nearly two-third (66.8%) were covered with first dose of DPT and OPV, but about one third of these children dropped out of third dose of DPT and OPV for various reasons. National Family Health Survey (NFHS) data also had revealed that BCG coverage was 64.3%; measles was 36.2%; and coverage by DPT 1, 2, 3 and Polio 1,2 and 3 were 64.4%, 57.0%, 46.6% and 77.5%, 71.1% and 54.4% respectively in rural areas.

The main reasons for drop-out or non immunization were “lack of information about the immunization program” (41.3%). Though nearly all (more than 96%) of the children were immunized through Government established centers, but immunization cards/documents were made available only to 27.6% of children.



The problem of low coverage and high drop-out rate of immunization could be overcome by creating awareness of the program and relevance of 2nd and 3rd doses of DPT and polio vaccines. Increasing community participation through intensive and extensive health education campaign should also be undertaken. Since most of the deliveries were done at home under the supervision of untrained midwives, training program as well as involving them in IEC activities should be contemplated. (**Indian J Pediatr 2006; 73 (1): 43-47**) E-mail: guptan@icmr.org.in

This case study has used the results of a review of literature to understand the persistence of poor maternal health in Rajasthan. The rate of reduction in Rajasthan's maternal mortality ratio (MMR) has been slow, and it has remained at 445 per 1000 live births in 2003.

Seventy-six percent of women (n=3,075) in the age-group of 20-49 years were married by the age of 18 years, according to the National Family Health Survey. The literacy rate among currently married rural women was 36.2% in 2005-2006.

Women's autonomy has direct bearing on health care-seeking behaviour and healthcare-use. The National Family Health Survey (NFHS) 2005-2006 revealed that 67% of women (n=3,892) did not have access to money, and 52% of women had no say in whether they themselves could seek healthcare. These indicators were more adverse in rural areas.

**In another study on Maternal Health: A Case Study of Rajasthan by Sharad D. Iyengar et al.** referring to the period 2005-06 it was revealed that majority (66%) of women started receiving ANC after the first trimester. The NFHS 3 showed that rural women were far less likely to receive three ANC contacts (32%) compared to their urban counterparts (75%). Women with 10 or more years of education were more likely to have had three antenatal care contacts (88%) compared to illiterate women (29%) Government services were the major source of ANC, and nurse-midwives or other health professionals were the primary care providers (39%). The proportion of women receiving two or more tetanus injections has been increasing consistently over the last 15 years—from 29% in 1992-1993 (NFHS 1) to 65% in 2005-2006 (NFHS 3). Supplements of iron and folic acid (IFA) tablets reached 58% of women; however, only 13% consumed IFA tablets for 90 days or more.

The proportion of women delivering in an institution rose steadily, reaching nearly one-third by 2005-2006 (NFHS 3) However, wide urban-rural differences remained, with nearly 70% of urban women delivering in an institution while only 23% of rural women did so.

In 2005-2006, only 43% of births were attended by a health professional; urban women were more than twice as likely to seek such assistance. Besides residence, determinants of use of skilled attendance included younger age of women, a birth order of one, and the greater number of ANC visits. 70 percent of women with more than four ANC visits were served by skilled attendants during childbirth. More institutional deliveries were conducted in government facilities



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than in private facilities, although incremental growth in deliveries in the private sector was greater. The proportion of women delivering in institutions changed rapidly following the national introduction of a maternity benefit scheme called *Janani Suraksha Yojana* (literally meaning “mothers’ protection plan”) or JSY.

Less than one-third of women received postnatal care within two days of birth (NFHS 3). Only 7.5% of women who delivered in the home received a postnatal check-up. 71 percent of those who delivered in public-health facilities and 82% of those who delivered in private health facilities had a postnatal check-up. Evidence from a qualitative study revealed that several women were discharged very early from facilities after delivery, often within 2-3 hours, without any advice about postnatal care or initiation of breastfeeding.

In 2005-2006, 47% of currently-married women in Rajasthan used a method of contraception—seven percentage points more than in 1998 (NFHS 2). The increase was greater in urban areas where 66% used contraception compared to only 41% in rural areas. Modern methods were used by 44% of women. Female sterilization was the most widely-used method, accounting for 76% of total current contraceptive-use only 10.2% of married women used reversible contraceptive methods in 2005-2006, with the condom being the most widely-used (5.8%). Only 1.6% and 2% of women used intrauterine devices (IUDs) and oral pills respectively.

While the majority of people use private health services in India, use of the private sector for maternal health services has been low in Rajasthan. Only 18% of women used the private sector for antenatal care and 25% for delivery care the private sector was used more often for abortion services and for the treatment of reproductive health problems

**Promoting Institutional Deliveries in Rural India: The Role of Antenatal-Care Services** K. S. Sugathan, Vinod Mishra, and Robert D. Retherford National Family Health Survey Subject Reports Number 20 • December 2001

Data for this study are from India’s two National Family Health Surveys conducted in 1992–93 and 1998–99, respectively.

The analysis here is based on births during the three-year period before each survey to ever-married women in the four states of Andhra Pradesh, Gujarat, Bihar, and Rajasthan. The NFHS-1 and NFHS-2 samples include, respectively, 1,412 and 1,129 such births in Andhra Pradesh; 1,499 and 1,324 births in Gujarat; 2,660 and 2,912 births in Bihar; and 2,197 and 3,076 births in Rajasthan.

Place of delivery for births in the three years preceding NFHS-1 and NFHS-2 in the four states by urban/rural residence. In all four states, the majority of deliveries take place at home (either own home or parents’ home). In NFHS-2, the proportion delivering in medical institutions is highest in



Andhra Pradesh (50 percent), followed by Gujarat (46 percent), Rajasthan (22 percent), and Bihar (15 percent). In Andhra Pradesh, Gujarat, and Bihar, about three out of four deliveries in health facilities take place in private-sector health facilities. But the situation is reversed in Rajasthan, where about three out of four deliveries in health facilities take place in public-sector health facilities.

The likelihood of giving birth in a medical institution depends on many factors, including urban/rural residence, mother's demographic and socioeconomic characteristics, and availability and quality of health services. *The older mothers are somewhat less likely to give birth in a medical institution than younger mothers. It also shows that first-order births to rural mothers are much more likely to take place in a medical institution than second or higher-order births.* In NFHS-2 in Andhra Pradesh, for example, 53 percent of first-order births but only 24 percent of fourth or higher-order births took place in medical institutions. In NFHS-2, Hindu mothers are somewhat more likely than Muslim mothers to deliver in a medical institution in Bihar and Rajasthan, but somewhat less likely to do so in Andhra Pradesh and Gujarat. In all four states, rural mothers belonging to scheduled castes or scheduled tribes are much less likely to give birth in a medical institution than mothers not belonging to a scheduled caste or scheduled tribe.

In all four states, rural mothers who received antenatal care are several times more likely to deliver in a medical institution than mothers who did not receive such care. Rural mothers who received at least one antenatal check-up are six to nine times as likely to give birth in a medical institution as mothers who did not receive an antenatal check-up in NFHS-1 and three to seven times as likely in NFHS-2. Similarly, rural mothers who received two or more tetanus toxoid injections are three to four times as likely to give birth in a medical institution as mothers who received only one or no tetanus injection in NFHS-1 and two to three times as likely in NFHS-2.

As in the case of rural mothers, antenatal care is strongly associated with institutional delivery for urban mothers. In all four states and in both surveys, urban mothers who received an antenatal check-up are several times more likely to deliver in a medical institution than those who did not. Mothers who received two or more tetanus toxoid injections are also more likely to deliver in a medical institution than mothers who received one or no injection. Having received two or more tetanus toxoid injections during pregnancy also has a positive effect on institutional delivery, but this effect is much smaller than the effect of having had an antenatal check-up and, in NFHS-2, not statistically significant in the full model.

The analysis indicates that, among rural mothers in Andhra Pradesh, Gujarat, Bihar, and Rajasthan who gave birth during the 3-year periods before NFHS-1 and NFHS-2, the odds of giving birth in a medical institution are two to five times higher for mothers who received at least one antenatal check-up than for mothers who did not receive any antenatal check-up, after a number of potentially confounding variables are controlled by holding them constant. The effect of





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tetanus toxoid vaccination on institutional delivery is usually positive but smaller and not always be statistically significant when other variables are controlled.

Overall, the analysis indicates that receiving one or more antenatal check-ups is the strongest predictor of institutional delivery. This finding has important program implications. It suggests that it is possible to promote institutional delivery by expanding antenatal-care coverage and associated counseling. Given that distance to a hospital does not have a significant effect on institutional delivery, it may not be necessary to create new hospitals (at least not for the purpose of encouraging institutional delivery), but rather to focus on expanding the availability and quality of services at existing facilities, in addition to counseling and educating mothers about the importance of giving birth in a medical institution under the supervision of trained professionals. Since half or more of deliveries in all four states still occur at home, efforts to train traditional birth attendants, increase the availability of trained midwives, promote home visits by paramedics for antenatal check-ups, distribute iron and folic acid tablets, and vaccinate against tetanus should continue.



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## **Observations**



## General Information

Pursuant to the objectives, study was carried out to understand the communication barriers and gaps in knowledge, attitude and practices of families, communities and service providers in key behaviors in the continuum of care.

**Table 1: Distribution of respondents**

District	HH surveyed	Population surveyed	Pregnant	Lactating	Mothers-in-law	Service Provider		
						ANM	ASHA	AWW
Baran	465	15,352	136	274	266	9	13	16
Barmer	424	18,966	121	276	233	7	6	7
Dungarpur	458	19,359	117	310	174	8	10	4
S. Madhopur	355	22,673	155	209	159	8	10	11
Tonk	367	17,842	142	225	257	6	7	10
Total	2069	94,192	671	1294	1089	38	46	48
						132		

671 pregnant women, 1294 lactating mothers, 1089 mothers-in-law of pregnant & lactating mothers and 132 service providers were interviewed in the field during the study period. The total number of mothers-in-law does not match with the number of pregnant women and lactating mothers as few of them were common to a pregnant woman as well as lactating mother in the same family and some of the subjects did not have any mother-in-law.

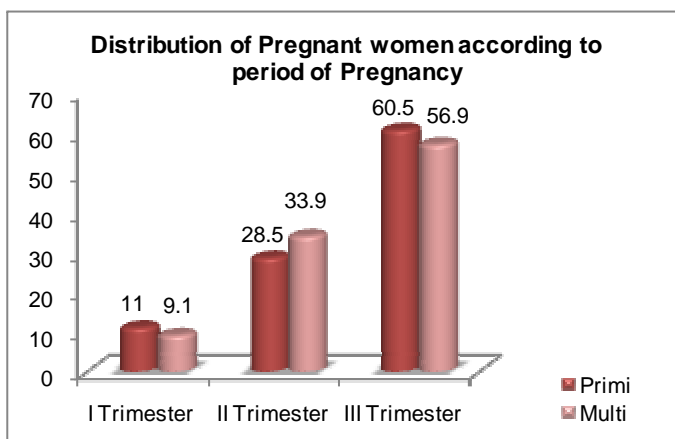
Service providers as AWW, ASHA and ANM were contacted. As per the sample plan, it was supposed to interview the same number of service providers from each district but could not be adhered to for reasons including vacant positions, staff on leave and/or out of the station.

**Table 2: Distribution of pregnant women according to period of pregnancy**

Districts	Respondents	Primi Gravida (trimester)				Multi Gravida (trimester)			
		I	II	III	Total	I	II	III	Total
Baran	136	7 (13.4)	14 (26.9)	31 (59.6)	52 (38.9)	7 (8.4)	31 (36.9)	46 (54.7)	83 (61.0)
Barmer	121	3 (12.0)	11 (44.0)	11 (44.0)	25 (20.6)	5 (5.2)	30 (31.5)	61 (63.5)	96 (79.3)
Dungarpur	117	3 (14.3)	6 (28.6)	12 (57.1)	21 (17.9)	8 (8.3)	38 (39.6)	50 (52.0)	96 (82.1)
S. Madhopur	155	4 (8.9)	10 (22.3)	31 (68.8)	45 (29.0)	13 (11.8)	35 (31.8)	62 (56.3)	110 (70.9)
Tonk	142	4 (7.6)	13 (25.0)	35 (67.3)	52 (36.6)	11 (12.2)	29 (32.2)	50 (55.5)	90 (62.7)
Total	671	21 (10.7)	54 (27.6)	120 (61.5)	195 (29.1)	44 (9.1)	163 (34.2)	269 (56.5)	476 (70.9)



Out of the 195 (29.1% of 671) women who were pregnant for the first time 10.7% were in the first trimester, 27.6% in the second and 61.5% in the third trimester at the time of survey. From the 476 (70.9%) multi gravida women 9.1% were in the first trimester of pregnancy, 34.2% and 56.5% in the second and third trimester respectively.



**Table 3: Socio economic profile of pregnant women**

Districts	Res pond ents	Family Type		Caste				Category	
		Joint	Nuclear	SC	ST	OBC	GEN.	APL	BPL
Baran	136	103 (75.7)	33 (24.3)	25 (18.4)	45 (33.1)	62 (45.6)	4 (2.9)	100 (73.5)	36 (26.5)
Barmer	121	97 (80.2)	24 (19.8)	17 (14.0)	3 (2.5)	101 (83.5)	0 (0.0)	78 (64.5)	43 (35.5)
Dungarpur	117	79 (67.5)	38 (32.5)	4 (3.4)	83 (70.9)	22 (18.8)	8 (6.8)	37 (31.6)	80 (68.4)
S. Madhopur	155	114 (73.5)	41 (26.5)	33 (21.3)	64 (41.3)	39 (25.2)	19 (12.3)	113 (72.9)	42 (27.1)
Tonk	142	119 (83.8)	23 (16.2)	41 (28.9)	22 (15.5)	68 (47.9)	11 (7.7)	87 (61.3)	55 (38.7)
Total	671	512 (76.3)	159 (23.7)	120 (17.9)	217 (32.3)	292 (43.5)	42 (6.3)	415 (61.8)	256 (38.2)

**Table 4: Socio economic profile of lactating mothers**

Districts	Resp onden ts	Family Type		Caste				Category	
		Joint	Nuclear	SC	ST	OBC	GEN.	APL	BPL
Baran	274	197 (71.9)	77 (28.1)	49 (17.9)	77 (28.1)	140 (51.1)	8 (2.9)	189 (69.0)	85 (31.0)
Barmer	276	213 (77.2)	63 (22.8)	29 (10.5)	1 (0.4)	244 (88.4)	2 (0.7)	193 (69.9)	83 (30.1)
Dungarpur	310	196 (63.2)	114 (36.8)	9 (2.9)	217 (70.0)	57 (18.4)	27 (8.7)	130 (41.9)	180 (58.1)
S. Madhopur	209	155 (74.2)	54 (25.8)	41 (19.6)	80 (38.3)	67 (32.1)	21 (10.0)	154 (73.7)	55 (26.3)
Tonk	255	184 (81.8)	41 (18.2)	56 (24.9)	29 (12.9)	127 (56.4)	13 (5.8)	157 (69.8)	68 (30.2)
Total	1294	945 (73.0)	349 (27.0)	184 (14.2)	404 (31.2)	635 (49.1)	71 (5.5)	823 (63.6)	471 (36.4)

Of all the women interviewed, pregnant OBC women (43.5%) and lactating OBC mothers (49.1%) constituted the major part of study universe; whereas general caste pregnant women and lactating were 6.3% and 5.5% respectively.



Maximum pregnant women from OBC category were found in Barmer (83.5%), Tonk (47.9%) and Baran (45.6%), while ST category had maximum representation from Dungarpur (70.9%) & Sawai Madhopur (41.3%).

There was no study subject in general category from Barmer.

APL respondents (61.8% PW and 63.6% LM) were far more than BPL (38.2% PW and 36.4% lactating).

76.3% and 73% of pregnant women and Lactating mothers respectively were from joint families while 23.7% of PW and 27% of lactating mothers belonged to nuclear family.

The maximum percentage of both pregnant & lactating living in joint families was found in Tonk district and maximum percentage of the same living in nuclear families was found in Dungarpur.

**Table 5: Distribution of pregnant women according to their current age and age at marriage**

District	Respondents	Current Age			Age at marriage	
		<20	20-30	30+	<20	20+
Baran	136	14 (10.3)	120 (88.2)	2 (1.5)	133 (97.8)	3 (2.2)
Barmer	121	19 (15.7)	92 (76.0)	10 (8.3)	114 (94.2)	7 (5.8)
Dungarpur	117	7 (6.0)	87 (74.4)	23 (19.7)	99 (84.6)	18 (15.3)
S. Madhopur	155	14 (9.0)	134 (86.5)	7 (4.5)	144 (92.9)	11 (7.1)
Tonk	142	24 (16.9)	103 (72.5)	15 (10.6)	137 (96.5)	5 (3.5)
Total	671	78 (11.6)	536 (79.9)	57 (8.5)	627 (93.4)	44 (6.6)

**Table 6: Distribution of lactating mothers according to their current age and age at marriage**

District	Respondents	Current Age			Age at marriage	
		<20	20-30	30+	<20	20+
Baran	274	13 (4.7)	246 (89.8)	15 (5.5)	262 (95.6)	12 (4.4)
Barmer	276	41 (14.9)	200 (72.5)	35 (12.7)	258 (93.4)	18 (6.5)
Dungarpur	310	18 (5.8)	222 (71.6)	70 (22.6)	256 (82.5)	54 (17.4)
S. Madhopur	209	12 (5.7)	181 (86.6)	16 (7.7)	191 (91.4)	18 (8.6)
Tonk	225	20 (8.9)	192 (85.3)	13 (5.8)	221 (98.2)	4 (1.8)
Total	1294	104 (8.0)	1041 (80.4)	149 (11.5)	1188 (91.8)	106 (8.2)

Overall 92.3% pregnant and lactating women got married below the age of 20. In all the districts, except Dungarpur (84.6%-PW & 82.5%-LM) more than 90% women belonged to this group.



**Table 7: Education status of pregnant women & their spouse**

District	Respondents	Education status					
		Self			Husband		
		Illiterate	VIII	VIII +	Illiterate	VIII	VIII +
Baran	136	76 (55.9)	52 (38.2)	8 (5.9)	19 (14.0)	57 (41.9)	60 (44.1)
Barmer	121	99 (81.8)	21 (17.4)	1 (0.8)	58 (47.9)	47 (38.8)	16 (13.3)
Dungarpur	117	87 (74.4)	20 (17.1)	10 (8.5)	48 (41.0)	42 (35.9)	27 (23.1)
S. Madhopur	155	102 (65.8)	29 (18.7)	24 (15.5)	17 (11.0)	41 (26.5)	97 (62.6)
Tonk	142	94 (66.2)	43 (30.3)	5 (3.5)	41 (28.9)	47 (33.1)	54 (38.0)
Total	671	458 (68.3)	165 (24.6)	48 (7.2)	183(27.3)	234 (34.9)	254(37.8)

**Table 8: Education status of lactating women & their spouse**

District	Respondents	Education status					
		Self			Husband		
		Illiterate	VIII	VIII +	Illiterate	VIII	VIII +
Baran	274	166(60.6)	92 (33.6)	16 (5.8)	45 (16.4)	128 (46.7)	101(36.9)
Barmer	276	213 (77.2)	51 (18.5)	12 (4.3)	103(37.3)	112 (40.6)	61 (22.1)
Dungarpur	310	214 (69.0)	64 (20.6)	32 (10.3)	122(39.4)	102 (32.9)	86 (27.7)
S. Madhopur	209	136 (65.1)	56 (26.8)	17 (8.1)	28 (13.4)	74 (35.4)	107(51.2)
Tonk	225	157 (69.8)	62 (27.6)	6 (2.7)	50 (22.2)	114 (50.7)	61 (27.1)
Total	1294	886 (68.5)	325 (25.1)	83 (6.4)	348(26.9)	530 (41.0)	416(32.1)

68.3% respondents (PW) were illiterate while 31.7% were literate; highest illiteracy prevailed in Barmer (81.8%), Dungarpur (74.4%) where as minimum was in Baran (55.9%).

The DLHS 3 however, reports the literacy level amongst female population (age 7+) as 36.5% in Barmer and 46.7% in Baran.

Among the lactating women also illiteracy prevailed (68.5%).

The illiteracy level among the spouses of PW was 27.3% while 72.7% were literate. Similarly, 26.9% spouses of lactating mothers were illiterate and 73.1% were literate. The spouse illiteracy of both the PW and the lactating women was highest in Barmer (47.9% & 37.3% respectively) and Dungarpur (41.0% & 39.4% respectively).



**Table 9: Distribution of primi gravida women in relation to the age at marriage**

Districts	Age at Marriage	Present Age of Pregnant women			Total
		<20	20-30	30+	
Baran	<20	9 (18.4)	40 (81.6)	0 (0.0)	49
	20+	0 (0.0)	3 (100.0)	0 (0.0)	3
Barmer	<20	13 (54.2)	11 (45.8)	0 (0.0)	24
	20+	0 (0.0)	1 (100.0)	0 (0.0)	1
Dungarpur	<20	5 (31.3)	11 (68.8)	0 (0.0)	16
	20+	0 (0.0)	5 (100.0)	0 (0.0)	5
S. Madhopur	<20	14 (34.1)	27 (65.9)	0 (0.0)	41
	20+	0 (0.0)	4 (100.0)	0 (0.0)	4
Tonk	<20	17 (34.7)	29 (59.2)	3 (6.1)	49
	20+	0 (0.0)	3 (100.0)	0 (0.0)	3
Total	<20	58 (32.4)	118 (65.9)	3 (1.7)	179 (91.8)
	20+	0 (0.0)	16 (100.0)	0 (0.0)	16 (8.2)
	Total	58 (29.7)	134 (68.7)	3 (1.5)	195

Overall 91.8% women got married below the age of 20 years. 65.9% of this group was pregnant for the first time between the ages of 20 to 30 years, whereas 32.4% women who got married below the age of 20 also conceived before the age of 20.

Age at marriage and time of first pregnancy shows a strong association (chi square (7.93) at 95% confidence level).

**Table 10: Distribution of mothers with history of infant death in past (Pregnant Women & Lactating Mothers)**

District	Household surveyed	Population surveyed	Number of infants lost		
			One	Two	Three +
Baran	465	15,352	25 (6.1)	6 (1.5)	1 (0.2)
Barmer	424	18,966	42 (10.6)	17 (4.3)	2 (0.5)
Dungarpur	458	19,359	29 (27.2)	3 (0.7)	0 (0.0)
S. Madhopur	355	22,673	19 (5.2)	5 (1.4)	1 (0.3)
Tonk	367	17,842	32 (8.7)	4 (1.1)	0 (0.0)
Total	2069	94,192	147 (7.5)	35 (1.8)	4 (0.2)

Of the total 1965 surveyed women (PW & lactating) who reported the history of loss of an infant any time in past; 7.5% lost one, 1.8% lost two and 0.2% lost three of their children. In all 9.5% of the women lost one or the other child in the past. Dungarpur women were the most unfortunate where 27.2% of the pregnant and lactating women had a history of child loss in the recent past.



“Continuum”, defined over the dimension of time and place or level of care, has two meanings. Firstly, care has to be provided as a continuum throughout the lifecycle, including adolescence, pregnancy, childbirth and childhood. Secondly, care has to be provided in a seamless continuum at the level of home, the community, the health center and the hospital; but that requires people to know what is good so that the same can be translated into practices.

Among the pregnant respondents both primi and multi-gravida were contacted to understand the behavior pattern associated to barriers in continuing seeking care.

The knowledge of beneficiaries was assessed on various dimensions related to child bearing & rearing practices.

**Table 11: Awareness about ANC: responses of Pregnant Women**

Districts	Respondents	Awareness about number of ANC visits				
		One	Two	Three	Four	Don't know
Baran	136	9 (6.6)	31 (22.8)	44 (32.4)	10 (7.4)	42 (30.9)
Barmer	121	3 (2.5)	19 (15.7)	15 (12.4)	2 (1.7)	82 (67.8)
Dungarpur	117	19 (16.2)	20 (17.1)	33 (28.2)	12 (10.3)	33 (28.2)
S. Madhopur	155	8 (5.2)	27 (17.4)	57 (36.8)	28 (18.1)	35 (22.5)
Tonk	142	13 (9.2)	13 (9.2)	38 (26.8)	19 (13.4)	59 (41.5)
Total	671	52 (7.7)	110 (16.4)	187 (27.9)	71 (10.6)	251 (37.4)

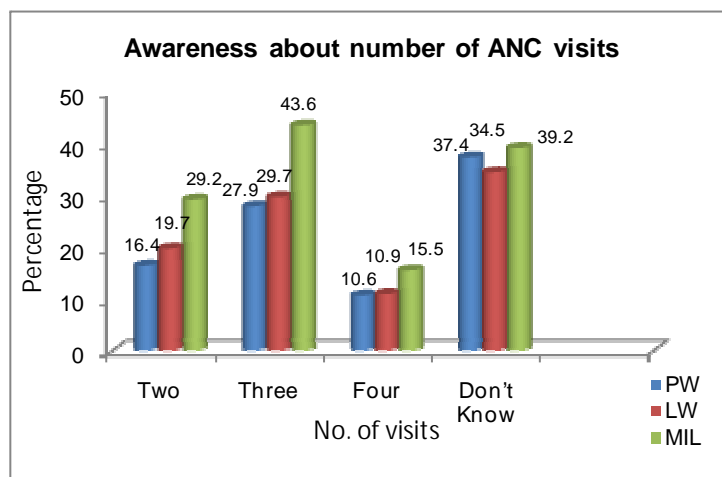
Overall 62.6% PW were aware of antenatal visits though the number of ideal visits (three) was known only to 27.9%, rest were at least aware irrespective of the frequency of visits. This awareness level was at its maximum in Sawai Madhopur (36.8%) as compared to 12.4% of Barmer.

**Table 12: Awareness about ANC: responses of Lactating Mothers**

District	Respondents	Awareness about number of ANC visits				
		One	Two	Three	Four	Don't Know
Baran	274	23 (8.4)	58 (21.2)	88 (32.1)	26 (9.5)	79 (28.8)
Barmer	276	7 (2.5)	34 (12.3)	45 (16.3)	9 (3.3)	181 (65.6)
Dungarpur	310	29 (9.4)	65 (21.0)	90 (29.0)	37 (11.9)	89 (28.7)
Sawai Madhopur	209	0 (0.0)	41 (19.6)	94 (45.0)	41 (19.6)	33 (15.8)
Tonk	225	8 (3.6)	57 (25.3)	67 (29.8)	28 (12.4)	65 (28.9)
Total	1294	67 (5.2)	255 (19.7)	384 (29.7)	141 (10.9)	447 (34.5)



Of the 1294 women who delivered earlier, 65.5% were aware and did go for antenatal visits, though only 29.7% had three antenatal visits. DLHS-3 reported percentage of mothers who had three ANC visits during last pregnancy as 37.5% for Baran, 38.6% for Tonk, 30% for Dungarpur, 18.1% for Sawai Madhopur and 19.8% for Barmer



as against 32.1%, 29.8%, 29%, 45.0% and 16.3% respectively; only the findings for Sawai Madhopur are not in consonance to DLHS-3 findings but for all other districts the study findings hover around the DLHS data, with the maximum deviation of 10 percentage points.

**Table 13: Awareness about ANC: responses of Mothers-in-law**

Districts	Respondents	Awareness about number of ANC visits				Don't know
		One	Two	Three	Four	
Baran	266	15 (7.9)	65 (34.4)	82 (43.4)	25 (13.2)	79 (29.7)
Barmer	233	7 (12.3)	24 (42.1)	25 (43.9)	1 (1.8)	176 (75.5)
Dungarpur	174	20 (13.7)	40 (27.4)	59 (40.4)	17 (11.6)	38 (21.8)
S. Madhopur	159	6 (4.8)	37 (29.4)	45 (35.7)	31 (24.6)	40 (25.2)
Tonk	257	9 (5.4)	34 (20.4)	88 (52.7)	32 (19.2)	94 (36.6)
Total	1089	57 (8.3)	200 (29.2)	299 (43.6)	106 (15.5)	427 (39.2)

In the patriarchal society with joint family system, the decisions regarding child bearing and rearing are often dictated by mothers-in-law and their awareness levels are critical to seeking services for pregnant women. Close to 60% of the mothers-in-law were aware about the antenatal visits for the expectant daughter-in-laws, though only 43.6% were aware of the ideal number (three) of antenatal visits. Substantial evidence exists that antenatal visits irrespective of the number increase chances of institutional delivery.

The awareness levels were highest (63.4%) amongst the mothers-in-law of Tonk while the least aware were from Barmer (24.5%) which can be attributed to the low levels of IEC, on account of distance and difficult terrain.



**Table 14: Pregnancy stage and registration time: responses of Pregnant Women**

District(Total registered)	Pregnancy stage	Registration time		
		I Trimester	II Trimester	III Trimester
Baran(130)	I Trimester (11)	11 (100.0)	0 (0.0)	0 (0.0)
	II Trimester(42)	29 (69.0)	13 (30.6)	0 (0.0)
	III Trimester(77)	43 (55.8)	28 (36.3)	6 (7.8)
Barmer(68)	I Trimester(2)	2 (100.0)	0 (0.0)	0 (0.0)
	II Trimester(18)	10 (55.5)	8 (44.4)	0 (0.0)
	III Trimester(48)	20 (41.6)	19 (39.5)	9 (18.7)
Dungarpur(102)	I Trimester(5)	5 (100.0)	0 (0.0)	0 (0.0)
	II Trimester(36)	17 (47.2)	19 (52.7)	0 (0.0)
	III Trimester(61)	16 (26.2)	37 (60.6)	8 (13.1)
Sawai Madhopur(135)	I Trimester(9)	9 (100.0)	0 (0.0)	0 (0.0)
	II Trimester(36)	18 (50.0)	18 (50.0)	0 (0.0)
	III Trimester(90)	35 (38.8)	41 (45.5)	14 (15.5)
Tonk(131)	I Trimester(11)	11 (100.0)	0 (0.0)	0 (0.0)
	II Trimester(36)	24 (66.6)	12 (33.3)	0 (0.0)
	III Trimester(84)	43 (51.2)	33 (39.3)	8 (9.5)
Total(566)	I Trimester(38)	38 (100.0)	0 (0.0)	0 (0.0)
	II Trimester(168)	98 (58.3)	70 (41.6)	0 (0.0)
	III Trimester(360)	157 (43.6)	158 (43.8)	45 (12.5)

Of the 671 pregnant women, 9.6% were in the first trimester pregnancy at the time of survey, 32.3% in second trimester and 57.9% were negotiating with the last trimester of pregnancy.

566 (84.3%) pregnant women out of 671 were registered at one or the other time during the course of pregnancy. Of these, 449 did avail antenatal care services. There were 14 pregnant women who despite not being registered did avail ANC at some point in time during their current pregnancy.

Ideally, a positive knowledge should have changed the attitude subsequently to be reflected in the behavior. The study subjects were probed through the pre tested structured questionnaire in order to identify attitudinal bottlenecks that have been holding them for utilizing the services in relation to pregnancy, post natal period and child health. Following few tables give an idea of the reasons why the actions could not be taken by the pregnant, lactating women and their mothers-in-law.



**Table 15: Reasons for not registering for antenatal care: responses of Pregnant Women**

Districts	Respondents	Reasons							
		Will do now	Don't know	Distance	No information	Not necessary	Lack of time	No one to accompany	Fear
Baran	6	6(100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0(0.0)
Barmer	53	10(18.9)	22(41.5)	9(17.0)	7(13.2)	4 (7.5)	0 (0.0)	1 (1.9)	0(0.0)
Dungarpur	15	11(73.3)	1 (6.7)	1 (6.7)	1 (6.7)	0 (0.0)	1 (6.7)	0 (0.0)	0(0.0)
S. Madhopur	20	15(75.0)	2 (10.0)	1 (5.0)	0 (0.0)	0 (0.0)	1 (5.0)	0 (0.0)	1(5.0)
Tonk	11	2 (18.2)	3 (27.3)	2(18.2)	0(0.0)	2(18.2)	2(18.2)	0 (0.0)	0(0.0)
Total	105	44(41.9)	28(26.7)	13(12.4)	8(7.6)	6 (5.7)	4 (3.8)	1 (1.0)	1(1.0)

Of the 671 pregnant women involved in the study 105 were not registered with any health facility for various reasons. Distance from health facility, lack of time and “not necessary” was the reasons extended by 21.9% of the non registered pregnant women. However, 41.9% said they would get registered themselves with the facility now; 40.9% of these 44 were in first trimester, 45.4% in second trimester and 13.6% in the third trimester.

**Table 16: Reasons for not registering for antenatal care: responses of Lactating Mothers**

Districts	Respondents	Reasons						
		Don't know	Not necessary	Distance	No one available at health facility	Family pressure	Expensive	No information
Baran	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1(100.0)	0 (0.0)
Barmer	124	60 (48.4)	20(16.1)	25(20.2)	2 (1.6)	2 (1.6)	0 (0.0)	15(12.1)
Dungarpur	2	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
S. Madhopur	3	1 (33.3)	2 (66.7)	0 (0.0)	0 (0.0)	0(0.0)	0 (0.0)	0 (0.0)
Tonk	9	5 (55.6)	2 (22.2)	0 (0.0)	1(11.1)	1(11.1)	0 (0.0)	0 (0.0)
Total	139	68 (48.9)	24(17.3)	25(20.2)	3 (2.2)	3 (2.2)	1 (0.7)	15(10.8)

However when it came to the responses from lactating mothers regarding reasons for non-registration in last pregnancy 48.9% said that they did not know about it.



**Table 17: Reasons for daughter-in-laws not registered for antenatal care: responses of Mothers-In-Law**

Districts	Respondents	Now she will do	Don't know	Not considered it important	Distance from health facility	Lack of time	SC/AWC doesn't give any information
Baran	8	3 (37.5)	5 (62.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Barmer	91	9 (9.9)	34 (37.4)	11 (12.1)	18 (19.8)	0 (0.0)	19 (20.9)
Dungarpur	9	4 (44.4)	2 (22.2)	1 (11.1)	0 (0.0)	1 (11.1)	1 (11.1)
S. Madhopur	10	6 (60.0)	2 (20.0)	1 (10.0)	0 (0.0)	1 (10.0)	0 (0.0)
Tonk	13	2 (15.4)	4 (30.8)	2 (15.4)	2 (15.4)	2 (15.4)	1 (7.7)
Total	131	24 (18.3)	47 (35.9)	15 (11.5)	20 (15.2)	4 (3.1)	21 (16.0)

On being probed as to why the daughter-in-law is not registered for antenatal care, out of the 131, 35.9% expressed their ignorance about the need and importance of registration for ANC, the most ignorant on this issue were from district Baran (62.5%).

**Table 18: Reasons for not availing ANC services: responses of Pregnant Women**

District	Respondents	Reasons for No Antenatal Visits							
		Not important	Distance	Lack of time	No one to accompany	Family Restrictions	Cost involved	Not informed by health workers	Other reasons
Baran	21	3 (14.2)	1 (5.0)	4 (20.0)	1 (5.0)	0 (0.0)	0 (0.0)	2 (10.0)	10 (50.0)
Barmer	65	24 (36.9)	27 (41.5)	1 (1.5)	1 (1.5)	1 (1.5)	2 (3.1)	6 (9.2)	3 (4.6)
Dungarpur	48	34 (70.1)	3 (6.7)	5 (11.1)	1 (2.2)	1 (2.2)	0 (0.0)	4 (8.8)	0 (0.0)
S. Madhopur	33	16 (48.4)	2 (5.6)	9 (25.0)	1 (2.8)	0 (0.0)	1 (2.8)	0 (0.0)	4 (11.1)
Tonk	43	25 (58.1)	4 (9.5)	2 (4.8)	5 (11.9)	4 (9.5)	0 (0.0)	1 (2.4)	2 (4.8)
Total	210	102 (48.5)	37 (17.8)	21 (10.1)	9 (4.3)	6 (2.9)	3 (1.4)	13 (6.3)	19 (9.1)



**Table 19: Reasons for not availing ANC services: responses of Lactating Mothers**

District	Respon den ts	Reasons for No Antenatal Visits							
		Not important	Distanc e	Lack of time	No one to accom pany	Family Restr ictions	Cost involved	Not informed by health workers	Other reasons
Baran	1	0 (0.0)	0(0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1(100.0)	0(0.0)	0 (0.0)
Barmer	155	84(54.2)	34(21.9)	2 (1.3)	3 (1.9)	4 (2.6)	1(0.6)	21(13.5)	6 (3.9)
Dungarpur	82	72 (87.8)	1(1.2)	4 (4.9)	0 (0.0)	3 (3.7)	2(2.4)	0(0.0)	0 (0.0)
S. Madhopur	14	12 (85.7)	0(0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0(0.0)	2(14.3)	0 (0.0)
Tonk	38	26 (68.4)	0(0.0)	3 (7.9)	4(10.5)	2 (5.3)	1(2.6)	1(2.6)	1 (2.6)
Total	290	194(66.9)	35(12.1)	9 (3.1)	7 (2.4)	9(3.1)	5(1.7)	24(8.3)	7 (2.4)

48.5% of the pregnant and 66.9% of the lactating mothers did not consider it important when questioned about why they have not gone for antenatal checkups. The other major reason propounded by the respondents was distance (17.8%–PW & 12.1%– LM). Contrary to the common belief a meager 3.1% were denied the opportunity for ANC by family members.

**Table 20: Reasons for not availing ANC services: responses from Mothers-in-law**

Districts	Respon den ts	Not important	Distanc e	Lack of time	No one to accom pany	Famil y Restr ictions	Cost involv ed	Not inform ed by health workers	Don't know	Other Reason
Baran	27	12(44.4)	0(0.0)	8(29.6)	3(11.1)	1(3.7)	1(3.7)	0(0.0)	1(3.7)	1(3.7)
Barmer	125	52(41.6)	44(35.2)	0(0.0)	1(0.8)	2(1.6)	1(0.8)	21(16.8)	4(3.2)	0(0.0)
Dungarpur	37	31(83.8)	1(2.7)	1(2.7)	0(0.0)	2(5.4)	0(0.0)	1(2.7)	1(2.7)	0(0.0)
S.Madhopur	15	7(46.7)	2(13.3)	5(33.3)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	1(6.7)
Tonk	41	14(34.1)	1(2.4)	5(12.2)	1(2.4)	3(7.3)	0(0.0)	6(14.6)	11(26.8)	0(0.0)
Total	245	116(47.3)	48(19.6)	19(7.8)	5(2.0)	8(3.3)	2(0.8)	28(11.4)	17(6.9)	2(0.8)

The commonest reason extended by mothers-in-law was that it is not important (47.3%) and the health facility is at a distance (19.6%). 83.8% mothers-in-law at Dungarpur did not consider antenatal care as important.

This is one of the areas which besides continuum of care, punctuates the initiation of an interaction with health care delivery system by the pregnant women; and that calls for an extensive BCC effort involving the family with focus on mother-in-law as decision maker.

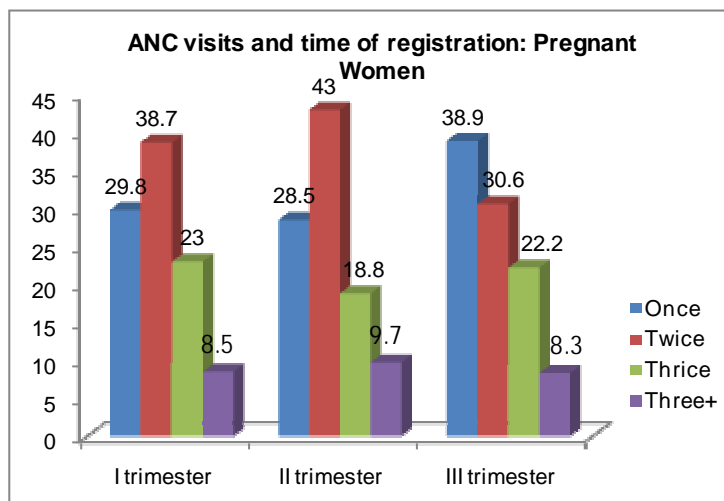


Of the 248 who had themselves registered in first trimester (55.2%), 38.7% had two antenatal visits and 29.8% had only one antenatal visit. Maximum number (43%) of pregnant women who had two antenatal visits had themselves registered in the second trimester.

**Table 21: Time of registration and number of ANC visits: responses of Pregnant Women**

Districts (No.)	Respondents who had gone for ANC	Registration Time	Once	Twice	Thrice	Three+	Total
Baran (136)	115	I Trimester	26(34.7)	34(45.3)	11(14.7)	4(5.3)	75
		II Trimester	11(33.3)	18(54.5)	2(6.1)	2(6.1)	33
		III Trimester	4(57.1)	2(28.6)	0(0.0)	1(14.3)	7
Barmer (121)	56	No Reg.	4(66.7)	1(16.7)	1(16.7)	0(0.0)	6
		I Trimester	9(37.5)	6(25.0)	8(33.3)	1(4.2)	24
		II Trimester	5(26.3)	9(47.4)	4(21.1)	1(5.3)	19
		III Trimester	4(57.1)	2(28.6)	1(14.3)	0(0.0)	7
Dungarpur (117)	71	No Reg.	1(100.0)	0(0.0)	0(0.0)	0(0.0)	1
		I Trimester	8(25.0)	14(43.8)	7(21.9)	3(9.4)	32
		II Trimester	12(38.7)	10(32.3)	6(19.4)	3(9.7)	31
		III Trimester	3(42.9)	2(28.6)	2(28.6)	0(0.0)	7
Sawai Madhopur (155)	123	No Reg.	3(60.0)	1(20.0)	1(20.0)	0(0.0)	5
		I Trimester	10(18.5)	19(35.2)	17(31.5)	8(14.8)	54
		II Trimester	8(15.1)	27(50.9)	12(22.6)	6(11.3)	53
		III Trimester	0(0.0)	4(36.4)	5(45.5)	2(18.2)	11
Tonk (142)	98	No Reg.	1(50.0)	0(0.0)	1(50.0)	0(0.0)	2
		I Trimester	21(33.3)	23(36.5)	14(22.2)	5(7.2)	63
		II Trimester	11(37.9)	7(24.1)	7(24.1)	4(13.5)	29
		III Trimester	3(75.0)	1(25.0)	0(0.0)	0(0.0)	4
Total (671)	463	No Reg.	9(65.0)	2(15.0)	3(20.0)	0(0.0)	14
		I Trimester	74(29.8)	96(38.7)	57(23.0)	21(8.5)	248
		II Trimester	47(28.5)	71(43.0)	31(18.8)	16(9.7)	165
		III Trimester	14(38.9)	11(30.6)	8(22.2)	3(8.3)	36

A good correlation ( $r=0.635$ ) is seen between the pregnant women registered in the I trimester and availing three ANC visits. Good correlation ( $r=0.683$ ) also exists between II trimester registration and three ANC visits. With the 't' value of 17.65 and 20.07, the correlation coefficient is significant at both 5% and 1% level of significance; whereas a weak correlation ( $r=0.1437$ ) is seen for women registered in the third trimester and three ANC visits, and this holds significant at 95% and 99% confidence level ( $t=3.1175$ ).



**Table 22: Registration status and no. of ANC visits in last pregnancy of currently lactating mothers**

District(Res pondents)	Regist ration	Number of visits						
		None	Once	Twice	Thrice	Four	SOS*	Every Month
Baran (274)	Yes	1 (0.4)	56 (20.4)	154(56.2)	50(18.2)	6 (2.2)	3(1.1)	3(1.1)
	No	0 (0.0)	1 (0.4)	0 (0.0)	0 (0.0)	0(0.0)	0(0.0)	0(0.0)
Barmer (276)	Yes	47 (17.0)	17 (6.2)	40 (14.5)	39(14.1)	9(3.3)	0(0.0)	0(0.0)
	No	108(39.1)	4 (1.4)	9 (3.3)	3 (1.1)	0(0.0)	0 (0.0)	0(0.0)
Dungarpur (310)	Yes	82 (26.5)	33 (10.6)	68 (21.9)	83 (26.8)	24(7.7)	17(5.5)	1(0.3)
	No	0 (0.0)	0 (0.0)	2 (0.6)	0 (0.0)	0(0.0)	0(0.0)	0(0.0)
Sawai Madhopur (209)	Yes	13 (6.2)	16 (7.7)	58 (27.8)	82(39.2)	25(12.0)	11(5.3)	1(0.5)
	No	1 (0.5)	0 (0.0)	1 (0.5)	0(0.0)	1(0.5)	0(0.0)	0(0.0)
Tonk (225)	Yes	34 (15.1)	30 (13.3)	90 (40.0)	48(21.3)	12 (5.3)	2 (0.9)	0(0.0)
	No	4 (1.8)	1(0.4)	2 (0.9)	2(0.9)	0(0.0)	0(0.0)	0(0.0)
Total (1294)	Yes	177(15.3)	152(13.2)	410(35.5)	302(26.1)	76(6.6)	33(2.9)	5(0.4)
	No	113(81.3)	6 (4.3)	14 (10.1)	5(3.6)	1(0.7)	0(0.0)	0(0.0)

\* SOS – As and when required/suggested by service provider

Of the 1294 lactating mothers 1155 (89.2%) did register themselves with a health facility. 35.5% of these registered lactating mothers had two antenatal visits.



Surprisingly, 15.3% of the registered did not go for any ANC visit leaving the question unanswered as to how come they stand registered as ideally the registration is done at the time of first visit itself. This can only be explained that either the women did not understand the difference between registration and ANC visit or the investigator could not apply himself/herself or the worker concerned simply enrolled her during a home visit without examining and offering the desired interventions during the first visit.

**Table 23: Time of registration and number of ANC visits in last pregnancy: responses of Lactating Mothers**

District (Respondents)	Registration	No. of ANC Visits					
		None	Once	Twice	Thrice	Three +	SOS
Baran (274)	No (1)	0 (0.0)	1 (100)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	I trimester (111)	0 (0.0)	18(16.2)	56(50.4)	31(27.9)	4 (3.6)	2 (1.8)
	II trimester(137)	1 (0.7)	31(22.6)	81(59.1)	18 (13.1)	4 (2.9)	1 (0.7)
	III trimester (26)	0 (0.0)	7 (26.9)	17 (65.3)	1 (3.8)	1 (3.8)	0 (0.0)
Barmer (276)	No (124)	108(87.1)	4 (3.2)	9 (7.2)	3 (2.4)	0 (0.0)	0 (0.0)
	I trimester (71)	19 (26.7)	4 (5.6)	17 (23.9)	25 (35.2)	6 (8.4)	0 (0.0)
	II trimester (46)	15 (32.6)	3 (6.5)	14 (30.4)	12 (26.1)	2 (4.3)	0 (0.0)
	III trimester (35)	13 (37.1)	10(28.5)	9 (25.7)	2 (5.7)	1 (2.8)	0 (0.0)
Dungarpur (310)	No(2)	0 (0.0)	0 (0.0)	2 (100)	0 (0.0)	0 (0.0)	0 (0.0)
	I trimester (122)	14 (11.4)	18(14.7)	30 (24.5)	42(34.4)	11(9.0)	7 (5.7)
	II trimester(147)	55 (37.4)	14 (9.5)	27 (18.3)	31(21.1)	14(9.5)	6 (4.1)
	III trimester (39)	13 (33.3)	1 (2.5)	11 (28.2)	10 (25.6)	0 (0.0)	4(10.2)
Sawai Madhopur (209)	No (3)	1 (33.3)	0 (0.0)	1 (33.3)	0 (0.0)	1(33.3)	0 (0.0)
	I trimester (73)	5 (6.8)	4 (5.4)	16 (21.9)	31(42.4)	13(17.8)	4 (5.4)
	II trimester (99)	5 (5.1)	10(10.1)	34(34.3)	38 (38.3)	7 (7.1)	5 (5.1)
	III trimester (33)	3 (9.1)	2 (6.1)	8 (24.2)	13 (39.3)	5(15.1)	2 (6.1)
Tonk (225)	No (9)	4 (44.4)	1 (11.1)	2 (22.2)	2 (22.2)	0 (0.0)	0 (0.0)
	I trimester (104)	17 (16.3)	11(10.5)	36 (34.6)	30 (28.8)	8 (7.6)	2 (1.9)
	II trimester (97)	11 (11.3)	17(17.5)	52(53.6)	13 (13.4)	4 (4.1)	0 (0.0)
	III trimester (15)	6 (40.0)	2 (13.3)	2 (13.3)	5 (33.3)	0 (0.0)	0 (0.0)
Total (1294)	No (139)	113(81.3)	6 (4.3)	14 (10.1)	5 (3.6)	1 (0.7)	0 (0.0)
	I trimester (481)	55 (11.4)	55(11.4)	155(32.2)	159(33.1)	42(8.7)	15(3.1)
	II trimester(526)	87 (16.5)	75(14.3)	208(39.5)	112(21.3)	32(6.1)	12(2.3)
	III trimester(148)	35 (23.6)	22(14.9)	47 (31.8)	31 (20.9)	7 (4.7)	6 (4.1)





Of the total 1294 lactating women, 139 (10.7%) never got themselves “registered”, 481 were registered in first trimester; 526 in the second trimester and 148 in the third trimester. Of the 481, with registration in first trimester during their last pregnancy, 33.1% and 32.2% had sufficient time to go for three and two antenatal visits respectively. However, those registered in second (39.5%) and third trimester (31.8%) could only have two antenatal visits.

An association is seen between the time of registration and number of ANC visits with the value of chi square as 346.937. Moderate correlation ( $r=0.4470$ ) is seen between lactating mothers registering in second trimester of the previous pregnancy and two ANC visits which is significant at both 5% and 1% level of significance ( $t=17.96$ ). Very weak correlation ( $r=0.0147$ ) exists between registration during third trimester and availing two ANC visits.

**Table 24: Reasons for not receiving TT Vaccination: responses of Pregnant Women**

Districts	Res pond ents	Scared	Not important	Distanc e	Lack of time	No one available at health facility	Don't know	Will do it now	Was out of the village
Baran	15	0(0.0)	2(13.3)	0(0.0)	3(20.0)	2(13.3)	0(0.0)	6(40.0)	2(13.3)
Barmer	56	8(14.3)	17(30.4)	16(28.6)	0(0.0)	6(10.7)	8(14.3)	1(1.8)	0(0.0)
Dungarpur	18	0(0.0)	6(33.3)	4(22.2)	4(22.2)	2(11.1)	1(5.6)	1(5.6)	0(0.0)
S. Madhopur	21	0(0.0)	4(19.0)	1(4.8)	11(52.4)	0(0.0)	1(4.8)	2(9.5)	2(9.5)
Tonk	22	2(9.1)	3(13.6)	3(13.6)	4(18.2)	4(18.2)	0(0.0)	6(27.3)	0(0.0)
Total	132	10(7.6)	32(24.2)	24(18.2)	22(16.7)	14(10.6)	10(7.6)	16(12.1)	4(3.0)

Amongst 132 currently pregnant women who had not received tetanus toxoid, the reason put forward by the pregnant women is that they do not “consider it important” (24.2%) whereas another 18.2% cited distance of health facility from their dwellings as a reason.

The responses from currently lactating mothers (42.7%) in the study and the mothers-in-law (50.6%) also indicated the same.

**Table 25: Reasons for not receiving TT Vaccination: responses of Lactating Mothers**

Districts	Resp onden ts	Scared	Not important	Distance	Lack of time	No one available at health facility	Will do it now	Due to superstition
Baran	1	1(100.0)	0 (0.0)	0 (0.0)	0(0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Barmer	101	2 (2.0)	42 (41.6)	17(16.8)	1(1.0)	17(16.8)	19(18.8)	1 (2.0)
Dungarpur	5	1 (20.0)	2 (40.0)	0 (0.0)	2(40.0)	0 (0.0)	0 (0.0)	0 (0.0)
S. Madhopur	4	2 (50.0)	2 (50.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Tonk	6	0 (0.0)	4 (66.7)	0 (0.0)	0 (0.0)	1 (16.7)	1 (16.7)	0 (0.0)
Total	117	6 (5.1)	50 (42.7)	17(14.5)	3 (2.6)	18(15.4)	20(17.1)	2 (1.7)



**Table 26: Reasons for not receiving TT Vaccination: responses of Mothers-In-Law**

Districts	Respondents	Scared	Not important	Distance	Lack of time	Superstition	Will do it now	Out of village
Baran	14	4 (28.6)	3 (21.4)	0 (0.0)	5(35.7)	0 (0.0)	1(7.1)	1(7.1)
Barmer	92	4 (4.3)	51 (55.5)	36(39.1)	0(0.0)	1 (1.1)	0(0.0)	0(0.0)
Dungarpur	12	2 (16.7)	5 (41.7)	1 (8.3)	3(25.0)	1 (8.3)	0(0.0)	0(0.0)
S. Madhopur	9	2 (22.2)	3 (33.3)	0 (0.0)	4(44.4)	0 (0.0)	0(0.0)	0(0.0)
Tonk	29	3 (10.3)	17 (58.6)	4 (13.8)	5(17.2)	0 (0.0)	0(0.0)	0(0.0)
Total	156	15 (9.6)	79 (50.6)	41(26.3)	17(10.9)	2 (1.3)	1(0.6)	1(0.6)

**Table 27: ANC registration and TT vaccination: responses of Pregnant Women**

District	Respondents	Registered	TT Injections received		
			Pregnant Women		
			Yes		No
			Once	Twice	
Baran	136	Yes	46 (33.8)	75 (55.1)	9 (6.6)
		No	0 (0.0)	0 (0.0)	6 (4.4)
Barmer	121	Yes	31 (25.6)	28 (23.1)	9 (7.4)
		No	3 (2.4)	3 (2.4)	47(38.8)
Dungarpur	117	Yes	32 (27.3)	66 (56.4)	3(2.5)
		No	1 (0.8)	0 (0.0)	15 (12.8)
S. Madhopur	155	Yes	30 (19.3)	103(66.4)	2 (1.3)
		No	0 (0.0)	1 (0.6)	19 (12.2)
Tonk	142	Yes	39 (27.4)	78 (54.9)	12 (8.4)
		No	2 (1.4)	2 (1.4)	9 (6.3)
Total	671	Yes	178(26.5)	350(52.1)	35 (5.2)
		No	6 (0.8)	6 (0.8)	96 (14.3)
Grand Total			184(27.4)	356(53.1)	131(19.5)

Of the 671 pregnant women 84.3% were registered with the health facility of which 52.1% had two TT doses of and another 26.5% received only one TT. It is interesting that 11.4% of the 105 who were not registered with the facility still had one or two doses of TT. Subjected to the statistical analysis, the value of  $\chi^2 = 394.9$  proves an association between ANC registration and TT vaccination for pregnant women by setting the hypothesis. The correlation coefficient of 0.767 gives a good positive correlation between the two and this is significant at 0.05 and 0.01 levels of significance, checked through "t" test.



**Table 28: ANC registration and TT vaccination: responses of Lactating Mothers**

District	Respon dents	Registered	TT Injections received		
			Lactating Women		
			Yes		No
			Once	Twice	
Baran	274	Yes	56(20.4)	216(78.8)	1 (0.3)
		No	1 (0.3)	0(0.0)	0 (0.0)
Barmer	276	Yes	20 (7.2)	115(41.6)	17(6.1)
		No	12 (4.3)	28(10.1)	84(30.4)
Dungarpur	310	Yes	17 (5.4)	286(92.2)	5 (1.6)
		No	0 (0.0)	2(0.6)	0 (0.0)
S. Madhopur	209	Yes	11 (5.2)	193(92.3)	2 (0.9)
		No	0 (0.0)	1(0.4)	2 (0.9)
Tonk	225	Yes	35(15.6)	177(78.6)	4 (1.7)
		No	1(0.4)	6(2.6)	2 (0.8)
Total	1294	Yes	139(10.7)	987(76.2)	29 (2.2)
		No	14 (1.1)	37 (2.8)	88 (6.8)
Grand Total			153(11.8)	1024(79.1)	117(9.0)

For the lactating mothers also a relationship is seen between ANC registration and TT vaccination ( $r=0.656$ ) and this again is significant at both the levels of significance (5% and 1%); which in other terms means that there is a strong association between ANC registration and subsequent utilization of services by the beneficiaries.

Though the study does not answer where they got it from, it is assumed that this was received from a health facility.

**Table 29: Reasons for not receiving IFA Tablets: responses of Pregnant Women**

Districts	Respo ndents	Non Receiving/Obtaining of IFA Tablets						
		Did not go to health facility/ no time	Health worker did not visit	Not important	Family Restricti ons	Didn't know	Will take now	Was out of the village
Baran	43	8 (18.6)	17(39.5)	13 (30.2)	0 (0.0)	1(2.3)	2(4.7)	2(4.7)
Barmer	80	3 (3.8)	52(65.0)	21 (26.3)	0 (0.0)	4(5.0)	0(0.0)	0 (0.0)
Dungarpur	23	4 (17.4)	5 (21.7)	13 (56.5)	0 (0.0)	1(4.3)	0(0.0)	0(0.0)
S. Madhopur	39	8 (20.5)	8 (20.5)	17 (43.6)	2 (5.1)	0(0.0)	2(5.1)	2(5.1)
Tonk	50	1 (2.0)	32(64.0)	14 (28.0)	1 (2.0)	1(2.0)	1(2.0)	0(0.0)
Total	235	24 (10.2)	114(48.5)	78 (33.2)	3 (1.3)	7(3.0)	5(2.1)	4(1.7)



Expectation from the service provider to provide services at their doorstep seems to be the major reason behind 48.5% respondents for not obtaining IFA tablets. This expectation was highest in Barmer (65%) followed by Tonk (64%) and Baran (39.5%), while 33.2% of the respondents did not consider it important.

**Table 30: Reasons for not receiving IFA Tablets: responses of Lactating Mothers**

District	Respon den ts	Reasons						
		Did not go to health facility	Health worker did not visit	Not important	Family Restricti ons	Don't know	Out of Village	Under Medicat ion
Baran	52	8(15.4)	16 (30.8)	25(48.1)	0 (0.0)	2 (3.8)	0(0.0)	1 (1.9)
Barmer	160	9 (5.6)	93 (58.1)	47(29.4)	4 (2.5)	6 (3.7)	1(0.6)	0 (0.0)
Dungarpur	25	1 (4.0)	3 (12.0)	16(64.0)	1 (4.0)	3(12.0)	0(0.0)	1 (4.0)
S. Madhopur	29	5(17.2)	3 (10.3)	18(62.1)	1 (3.4)	1 (3.4)	1(3.4)	0 (0.0)
Tonk	75	0 (0.0)	29 (38.7)	38(50.7)	3 (4.0)	5 (6.7)	0 0.0)	0 (0.0)
Total	341	23(6.7)	144(42.2)	144(42.2)	9 (2.6)	17(4.9)	2(0.6)	2 (0.6)

Lactating mothers (42.2%) also expected the service providers to provide them with the IFA tablets at their doorstep. Similar number did not consider it important to obtain them. Expectations from the system, on this account were highest in Barmer (58.1%) and Tonk (38.7%). The reasons may be distance in Barmer. 12% of Dungarpur subjects did not know from where to obtain while 17.2% in Sawai Madhopur did not go to Sub center or AWC for IFA tablets.

**Table 31: Reasons for not receiving IFA Tablets: responses of Mothers-in-law**

Districts	Respondents	Reasons				
		Did not go to health facility	Health worker did not come	Not important	Family Restrictions	Don't know
Baran	41	3 (7.3)	23 (56.1)	13 (31.7)	0 (0.0)	2 (4.9)
Barmer	118	3 (2.5)	84 (71.2)	25 (21.2)	3 (2.5)	3 (2.5)
Dungarpur	16	0 (0.0)	3 (18.8)	13 (81.3)	0 (0.0)	0 (0.0)
S. Madhopur	17	2 (11.8)	2 (11.8)	13 (76.5)	0 (0.0)	0 (0.0)
Tonk	43	1 (2.3)	19 (44.2)	14 (32.6)	2 (4.7)	7 (16.3)
Total	235	9 (3.8)	131 (55.7)	78 (33.2)	5 (2.1)	12 (5.1)

The responses from mothers-in-law were no different.



**Table 32: Reasons for not consuming IFA Tablets: responses of Pregnant Women**

Districts	Respondents	Reasons					
		Not important	Nausea	Constipation/Loose Motion/itching	Causes heat in the body	Family Restrictions	Taking other Medicine
Baran	34	4 (11.8)	28 (82.4)	1 (2.9)	1 (2.9)	0 (0.0)	0 (0.0)
Barmer	9	3 (33.3)	6 (66.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Dungarpur	8	2 (25.0)	6 (75.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
S. Madhopur	50	24 (48.0)	22 (44.0)	3 (6.0)	0 (0.0)	1 (2.0)	0 (0.0)
Tonk	34	6 (17.6)	20 (58.8)	1 (2.9)	6 (17.6)	0 (0.0)	1 (2.9)
Total	135	39 (28.9)	82 (60.7)	5 (3.7)	7 (5.2)	1 (0.7)	1 (0.7)

**Table 33: Reasons for not consuming IFA Tablets: responses of Lactating Mothers**

Districts	Respondents	Reasons					
		Not important	Nausea	Constipation/Loose Motion/itching	Causes heat in the body	Family Restrictions	Taking other Medicine
Baran	113	30 (26.5)	73 (64.6)	2 (1.7)	7 (6.2)	0 (0.0)	1 (0.9)
Barmer	42	14 (33.3)	27 (64.3)	0 (0.0)	0 (0.0)	0 (0.0)	1 (2.4)
Dungarpur	43	10 (23.3)	24 (55.8)	1 (2.3)	6 (14.0)	0 (0.0)	2 (4.7)
S. Madhopur	67	37 (55.2)	28 (41.8)	0 (0.0)	2 (3.0)	0 (0.0)	0 (0.0)
Tonk	64	15 (23.4)	38 (59.4)	0 (0.0)	8 (12.5)	3 (4.7)	0 (0.0)
Total	329	106 (32.2)	190 (57.8)	3 (0.9)	23 (7.0)	3 (0.9)	4 (1.2)

In an attempt to explore the reason for not consuming a full course of IFA tablets, nausea was put as the prime reason by the subjects (60.7%-PW & 57.8%-LM). Now that is an area in continuum of care which could have been handled with a little counseling and advise on when and how to take IFA tablets.

On the contrary, the common side effects (constipation/loose motion) for which iron is notoriously known for; did not appear on the list of reasons for non-compliance with the regime.

62.7% of the mothers-in-law also did support their daughter-in-laws on this account.



**Table 34: Reasons for not consuming IFA Tablets: responses of Mothers-in-law**

Districts	Respondents	Reasons					
		Not important	Nausea	Constipation/ Loose Motion	Causes heat in the body	Out of village	Doctor asked to stop it
Baran	47	9 (19.1)	37(78.7)	0 (0.0)	0 (0.0)	1(2.1)	0 (0.0)
Barmer	33	15 (45.5)	18(54.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Dungarpur	8	3 (37.5)	5(62.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
S. Madhopur	28	12 (42.9)	14(50.0)	1 (3.6)	0 (0.0)	0 (0.0)	1 (3.6)
Tonk	50	12 (24.0)	30(60.0)	2 (4.0)	6 (12.0)	0 (0.0)	0 (0.0)
Total	166	51 (30.7)	104(62.7)	3 (1.8)	6 (4.0)	1 (0.6)	1 (0.6)

**Table 35: Number of IFA tablets received: responses of Pregnant Women**

Districts	Respondents	No. of IFA tablets						Total no IFA beneficiaries	Not received
		Less than 30	30	60	90	More than 90	Not remembered		
Baran	136	4 (4.3)	19 (20.4)	35 (37.6)	15 (16.1)	20 (21.5)	0 (0.0)	93 (68.4)	43 (31.6)
Barmer	121	6 (14.6)	12 (29.3)	13 (31.7)	3 (7.3)	7 (17.1)	0 (0.0)	41 (33.9)	80 (66.1)
Dungarpur	117	10 (10.6)	45 (47.9)	23 (24.5)	10 (10.6)	4 (4.3)	2 (2.1)	94 (80.3)	23 (19.7)
S. Madhopur	155	19 (16.4)	30 (25.9)	44 (37.9)	8 (6.9)	15 (12.9)	0 (0.0)	116 (74.8)	39 (25.2)
Tonk	142	20 (21.7)	25 (27.2)	25 (27.2)	11 (12.0)	10 (10.9)	1 (1.1)	92 (64.8)	50 (35.2)
Total	671	59 (13.5)	131 (30.0)	140 (32.1)	47 (10.8)	56 (12.8)	3 (0.7)	436 (65.0)	235 (35.0)

Ideally as part of total antenatal care a pregnant woman should consume a total 100 IFA tablets.

Out of the total 436 pregnant women who received the IFA tablets, only 12.8% got more than 90 tablets while 14.8% of 953 lactating mothers had received the IFA tablets during their last pregnancy. 12.4% mothers-in-law expressed that their pregnant/ lactating daughter-in-laws received 90+ tablets.

On being probed about how the tablets were given and what was the time of their taking the tablets it was found that majority of respondents (93.0%) got the IFA tablets in strips.

26.3% did not receive the IFA tablets with 57.9% cases reported it from Barmer. Only 14.8% received more than 90 tablets otherwise rest settled with 60 or less tablets.

45.4% of the pregnant women and 46.9% of lactating mothers, who consumed IFA, had it after meals. Their respective mothers-in-law (43.9%) also were in knowledge of IFA to be consumed



after meals. 60.3% of the pregnant women had full course of IFA tablets, maximum being from Dungarpur (90.4%), whereas for lactating women 65.2% had consumed all the IFA tablets given. 61.2% of the mothers-in-law also vouched that their currently pregnant and/or lactating daughter-in-law during the last pregnancy had taken the full course of IFA tablets.

Overall 73.6% of lactating women consumed IFA tablets during their last pregnancy irrespective of the number and duration of the consumption. The consumption percentage was best in Dungarpur (91.9%) and worst was in Barmer (42.0%).

**Table 36: Time of registration and services utilized: responses of Pregnant Women**

District	Time of Registration	TT Vaccination			IFA Tablets		
		Yes	No	Total	Yes	No	Total
Baran	I Trimester	74(90.0)	8(9.7)	82	55(67.0)	27(32.9)	82
	II Trimester	40(97.5)	1(2.4)	41	34(82.9)	7(17.0)	41
	III Trimester	7(100.0)	0(0.0)	7	4(57.1)	3(42.8)	7
Barmer	I Trimester	74(90.0)	8(9.7)	82	18(58.0)	13(41.9)	31
	II Trimester	40(97.5)	1(2.4)	41	15(55.5)	12(44.4)	27
	III Trimester	7(100.0)	0(0.0)	7	6(60.0)	4(40.0)	10
Dungarpur	I Trimester	25(80.6)	6(19.3)	37	35(97.2)	1(2.7)	36
	II Trimester	24(88.8)	3(11.1)	27	51(92.7)	4(7.2)	55
	III Trimester	10(36.0)	0(0.0)	10	8(72.7)	3(27.2)	11
Sawai Madhopur	I Trimester	36(100.0)	0(0.0)	36	52(86.6)	8(13.3)	60
	II Trimester	53(96.3)	2(3.6)	55	49(81.6)	11(18.3)	60
	III Trimester	10(90.9)	1(9.0)	11	14(93.3)	1(6.6)	15
Tonk	I Trimester	59(98.3)	1(1.6)	60	56(72.7)	21(27.2)	77
	II Trimester	59(98.3)	1(1.6)	60	29(67.4)	14(32.5)	43
	III Trimester	15(100.0)	0(0.0)	15	7(63.6)	4(36.4)	11
Total	I Trimester	260(90.9)	26(9.0)	286	216(75.5)	70(24.4)	286
	II Trimester	217(96.0)	9(3.9)	226	178(78.7)	48(21.2)	226
	III Trimester	52(96.2)	2(3.9)	54	39(72.2)	15(27.7)	54

It is expected that early registration would give the beneficiaries enough time to avail services and health worker to offer preventive and promotive interventions during pregnancy. Contrary to the expected, irrespective of the time of registration more than 90% of the pregnant women got one or more TT doses and more than 75% received IFA tablets. And almost the same was observed for lactating women enrolled in the study.



**Table 37: Time of registration and services utilized: responses of Lactating Mothers**

District	Time of Registration	TT Vaccination			IFA Consumption		
		Yes	No	Total	Yes	No	Total
Baran	I Trimester	111(100)	0(0.0)	111	88(79.3)	23(20.7)	111
	II Trimester	135(99.3)	1(0.7)	136	112(82.4)	24(17.6)	136
	III Trimester	26(100)	0(0.0)	26	21(80.8)	5(19.2)	26
Barmer	I Trimester	64(90.1)	7(9.9)	71	47(66.2)	24(33.8)	71
	II Trimester	43(93.5)	3(6.5)	46	28(60.9)	18(39.1)	46
	III Trimester	28(80.0)	7(20.0)	35	20(57.1)	15(42.9)	35
Dungarpur	I Trimester	120(98.4)	2(1.6)	122	116(95.1)	6(4.9)	122
	II Trimester	146(99.3)	1(0.7)	147	133(90.5)	14(9.5)	147
	III Trimester	37(94.9)	2(5.1)	39	35(89.7)	4(10.3)	39
Sawai Madhopur	I Trimester	72(98.6)	1(1.4)	73	64(87.7)	9(12.3)	73
	II Trimester	99(99.0)	1(1.0)	100	86(86.0)	14(14.0)	100
	III Trimester	33(100.0)	0(0.0)	33	29(87.8)	4(12.2)	33
Tonk	I Trimester	102(98.1)	2(1.9)	104	62(59.6)	42(40.3)	104
	II Trimester	96(99.0)	1(1.0)	97	74(76.3)	23(23.7)	97
	III Trimester	14(93.3)	1(6.7)	15	11(73.3)	4(26.7)	15
Total	I Trimester	469(97.5)	12(2.4)	481	377(78.4)	104(21.6)	481
	II Trimester	522(98.6)	7(1.3)	529	433(82.3)	93(17.7)	526
	III Trimester	157(94.5)	9(5.4)	166	116(78.4)	32(21.6)	148

**Table 38: ANC registration and services availed: responses of Pregnant Women**

Districts	Respondents	Registered	2TT	≥ 90 IFA Tablets
Baran	136	130	75(57.7)	17(13.1)
Barmer	121	68	28(41.2)	7(10.3)
Dungarpur	117	102	66(64.7)	9(8.8)
Sawai Madhopur	155	135	103(76.3)	21(15.6)
Tonk	142	131	78(59.5)	19(14.5)
Total	671	566	350(61.8)	73(12.9)

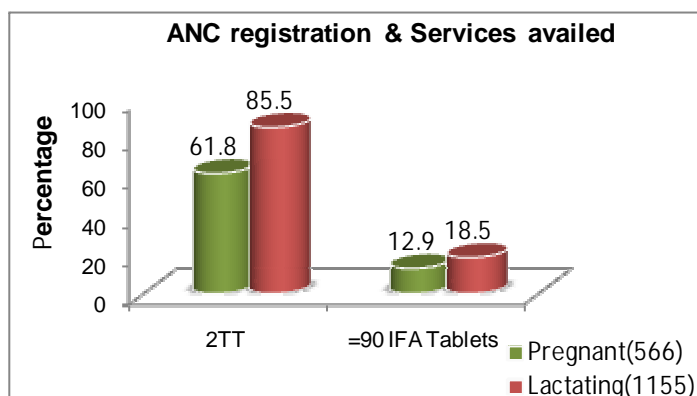
**Table 39: ANC registration and services availed: responses of Lactating Mothers**

Districts	Respondents	Registered	2TT	≥ 90 IFA Tablets
Baran	274	273	216(79.1)	53(19.4)
Barmer	276	152	115(75.7)	22(14.5)
Dungarpur	310	308	286(92.9)	56(18.2)
Sawai Madhopur	209	206	193(93.7)	51(24.8)
Tonk	255	216	177(81.9)	32(14.8)
Total	1294	1155	987(85.5)	214(18.5)





Of the 566 registered pregnant women 61.8% had two shots of tetanus toxoid but only 12.9% had 90 or more than 90 IFA tablets. Whereas for lactating women this percentage was 85.5% and 18.5% respectively.



**Table 40: Food fads and Pregnancy: responses of Pregnant Women**

Districts	Respondents	Food Prohibited During Pregnancy			
		Milk Products	Spicy Foods	Multiple Choice*	No Specific Foods
Baran	136	11 (8.1)	5 (3.7)	25 (34)	95 (69.9)
Barmer	121	1 (0.8)	0 (0.0)	7 (5.7)	113 (93.4)
Dungarpur	117	7 (6.0)	9 (7.7)	22 (18.8)	79 (67.5)
S. Madhopur	155	2 (1.3)	6 (3.9)	115 (74.2)	32 (20.6)
Tonk	142	18 (12.7)	1 (0.7)	42 (29.5)	81 (57.0)
Total	671	39 (5.8)	21 (3.1)	211 (31.4)	400 (59.6)

**Table 41: Food fads and Pregnancy: responses of Lactating Mothers**

Districts	Respondents	Food Prohibited During Pregnancy			
		Milk Products	Spicy Foods	Multiple Choice*	No Specific Foods
Baran	274	14 (5.1)	22 (8.0)	43 (15.6)	195 (71.2)
Barmer	276	1 (0.4)	7 (2.5)	7 (2.5)	261 (94.6)
Dungarpur	310	37 (11.9)	17 (5.5)	44 (14.2)	212 (68.4)
S. Madhopur	209	1 (0.5)	6 (2.9)	163 (77.9)	39 (18.7)
Tonk	225	29 (12.9)	1 (0.4)	68 (30.2)	127 (56.4)
Total	1294	82 (6.3)	53 (4.1)	325 (25.1)	834 (64.5)

**Table 42: Food fads and Pregnancy: responses of Mothers-in-law**

Districts	Respondents	Food Prohibited During Pregnancy			
		Milk Products	Spicy Foods	Multiple Choice*	No Specific Foods
Baran	266	28 (10.5)	10 (3.8)	59 (22.2)	169 (63.5)
Barmer	233	0 (0.0)	0 (0.0)	3 (1.3)	230 (98.7)
Dungarpur	174	18 (10.3)	27 (15.5)	13 (7.4)	116 (66.7)
S. Madhopur	159	2 (1.3)	2 (1.3)	112 (70.4)	43 (27.0)
Tonk	257	34 (13.2)	3 (1.2)	90 (35.1)	130 (50.6)
Total	1089	82 (7.5)	42 (3.9)	277 (25.4)	688 (63.2)



The cultural inheritance has laid down certain norms regarding food fads which at times are lucid but often are unreasoned. Once again a positive finding is that 60% of the subjects from each of the category were against any food restriction during pregnancy and/or lactation. As anticipated the common food items that are not recommended during the physiological phase were Jaggery, papaya, spicy food, rice, besan, banana, groundnut and tomato and they have their own reasons like these foods would complicate delivery or may facilitate unwanted abortion.

**Table 43: Extra Diet taken during pregnancy: responses of Pregnant Women**

Districts	Res pond ents	Extra Diet Taken during pregnancy							
		Ghee	Fruits	Green Vegetab les	Milk	All	Normal Diet	Others *	Multiple Choice**
Baran	136	1(0.7)	1(0.7)	5(3.7)	1(0.7)	37(27.2)	62(45.6)	2(1.5)	27(19.9)
Barmer	121	4(3.3)	2(1.7)	0(0.0)	0(0.0)	1(0.8)	81(66.9)	0(0.0)	33(27.3)
Dungarpur	117	1(0.9)	0(0.0)	11(9.4)	5(4.3)	18(15.4)	58(49.6)	0(0.0)	24(20.5)
S. Madhopur	155	0(0.0)	3(1.9)	0(0.0)	12(7.7)	11(7.1)	10(6.5)	1(0.6)	118(76.1)
Tonk	142	0(0.0)	0(0.0)	15(10.6)	1(0.7)	14(9.9)	41(28.9)	0(0.0)	71(50.0)
Total	671	6(0.9)	6(0.9)	31(4.6)	19(2.8)	81(12.1)	252(37.6)	3(0.4)	273(40.7)

\* Buttermilk, Dry Fruits, Rabri

\*\* Ghee, Fruits, Green vegetables, Jaggery, Milk, Buttermilk, Juice, Rice, Halw a, Dry Fruits, Gram, Curd, Rabri

**Table 44: Extra Diet taken during pregnancy: responses of Lactating Mothers**

Districts	Res pond ents	Extra Diet Taken during pregnancy							
		Ghee	Fruits	Green Vegetab les	Milk	All	Normal Diet	Others *	Multiple Choice**
Baran	274	0(0.0)	1(0.4)	1(0.4)	2(0.7)	58(21.2)	123(44.9)	3(1.1)	86(31.4)
Barmer	276	21(7.6)	0(0.0)	1(0.4)	1(0.4)	0(0.0)	174(63.0)	0(0.0)	79(28.6)
Dungarpur	310	4(1.3)	2(0.6)	10(3.2)	4(1.3)	74(23.9)	131(42.3)	0(0.0)	85(27.4)
S. Madhopur	209	0(0.0)	7(3.3)	0(0.0)	11(5.3)	10(4.8)	12(5.7)	2(1.0)	167(79.9)
Tonk	225	4(1.8)	7(3.1)	18(8.0)	2(0.9)	43(19.1)	65(28.9)	0(0.0)	86(38.2)
Total	1294	29(2.2)	17(1.3)	30(2.3)	20(1.5)	185(14.3)	505(39.0)	5(0.4)	503(38.9)

\* Buttermilk, Dry Fruits, Rabri

\*\* Ghee, Fruits, Green vegetables, Jaggery, Milk, Buttermilk, Juice, Rice, Halw a, Dry Fruits, Gram, Curd, Rabri



**Table 45: Extra Diet taken during pregnancy: responses of Mothers-in-law**

Districts	Res pondents	Extra Diet Taken during pregnancy							
		Ghee	Fruits	Green Vegetables	Milk	All	Normal Diet	Others *	Multiple Choice**
Baran	266	0(0.0)	0(0.0)	7(2.6)	4(1.5)	18(6.8)	131(49.2)	3(1.1)	103(38.7)
Barmer	233	12(5.2)	1(0.4)	0(0.0)	1(0.4)	1(0.4)	142(60.9)	0(0.0)	76(32.6)
Dungarpur	174	2(1.1)	0(0.0)	9(5.2)	6(3.4)	41(23.6)	68(39.1)	0(0.0)	48(27.6)
S. Madhopur	159	1(0.6)	1(0.6)	3(1.9)	6(3.8)	19(11.9)	8(5.0)	1(0.6)	120(75.5)
Tonk	257	0(0.0)	8(3.1)	15(5.8)	2(0.8)	52(20.2)	73(28.4)	0(0.0)	107(41.6)
Total	1089	15(1.4)	10(0.9)	34(3.1)	19(1.7)	131(12.0)	422(38.8)	4(0.4)	454(41.7)

\* Buttermilk, Dry Fruits, Rabri

\*\* Ghee, Fruits, Green vegetables, Jaggery, Milk, Buttermilk, Juice, Rice, Halwa, Dry Fruits, Gram, Curd, Rabri

37.6% pregnant and 39% lactating mothers restricted themselves to normal diet during pregnancy. 38.8% mothers-in-law also advocated normal diet during pregnancy.

14.3% lactating respondents took Milk, Ghee, Fruits & Green vegetables during pregnancy and this was maximally found in respondents of Dungarpur (23.9%).

Maximum respondents 40.7% pregnant, 38.9% lactating and 41.7% mother in law quoted multiple things to be taken during pregnancy such as Ghee, Fruits, Green vegetables, Jaggery, Milk, Buttermilk, Juice, Rice, Halwa, Dry Fruits, Gram, Curd, Rabri.

**Table 46: Knowledge regarding warning signals during pregnancy: responses of Pregnant Women**

Districts	Res pondents	Knowledge about warning signals								
		Bleeding/disch arge	Reduc ed Foetal Movem ents	High BP, O edema	Sudden Weight Increase	Pallor, Weakness	All	High Fever	Don't Know	Multiple Responses*
Baran	136	6 (4.4)	0 (0.0)	18 (13.2)	0 (0.0)	3 (2.2)	0 (0.0)	1 (0.7)	65 (47.9)	44 (32.4)
Barmer	121	4 (3.3)	0 (0.0)	19 (15.7)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.8)	86 (71.1)	11 (9.1)
Dungarpur	117	2 (1.7)	3 (2.6)	14 (12.0)	2 (1.7)	7 (6.0)	1 (0.9)	0 (0.0)	74 (63.2)	14 (12.0)
S. Madhopur	155	0 (0.0)	6 (3.9)	19 (12.3)	0 (0.0)	21 (13.5)	2 (1.3)	1 (0.6)	63 (40.6)	43 (27.7)
Tonk	142	1 (0.7)	2 (1.4)	3 (2.1)	0 (0.0)	0 (0.0)	5 (3.5)	0 (0.0)	117 (82.4)	14 (9.9)
Total	671	13 (1.9)	11 (1.6)	73 (10.9)	2 (0.3)	31 (4.6)	8 (1.2)	3 (0.4)	404 (60.2)	126 (18.8)

\* Bleeding, No movement of child, High B.P., Swelling on hands and feet, Sudden weight increase (more than 3 kg in a month), Low hemoglobin, Convulsions, Constipation, Stomach ache, Insomnia, Leg pain, White discharge (Leucorrhoea), Acidity, Headaches, Weakness, Fever, Pneumonia, Backache, Vomiting.



60.2% of the pregnant women did not know about warning signals which is crucial to care seeking and timely referral.

**Table 47: Knowledge regarding warning signals during pregnancy: responses of Lactating Mothers**

Districts	Res pond ents	Knowledge about warning signals								
		Bleedi ng/ dischar ge	Reduce d Foetal Movem ents	High BP,Oed ema	Sudde n Weight Increas e	Pallor,W eakness	All	High Fever	Don't Know	Multipl e Respo nses*
Baran	274	8 (2.9)	3 (1.1)	49 (17.9)	1 (0.4)	14 (5.1)	0 (0.0)	1 (0.4)	106 (38.7)	92 (33.6)
Barmer	276	1 (0.4)	3 (1.1)	33 (12.0)	2 (0.7)	1 (0.4)	6 (2.2)	1 (0.4)	206 (74.6)	23 (8.3)
Dungarpur	310	5 (1.6)	5 (1.6)	33 (10.6)	0 (0.0)	11 (3.5)	0 (0.0)	2 (0.6)	195 (62.9)	59 (19.0)
S. Madhopur	209	2 (1.0)	5 (2.4)	28 (13.4)	1 (0.5)	32 (15.3)	2 (1.0)	0 (0.0)	66 (31.6)	73 (34.9)
Tonk	225	2 (0.9)	0 (0.0)	10 (4.4)	0 (0.0)	1 (0.4)	10 (4.4)	0 (0.0)	182 (80.9)	20 (8.9)
Total	1294	18 (1.4)	16 (1.2)	153 (11.8)	4 (0.3)	59 (4.6)	18 (1.4)	4 (0.3)	755 (58.3)	267 (20.6)

\* Bleeding, No movement of child, High B.P., Swelling on hands and feet, Sudden weight increase (more than 3 kg in a month), Low hemoglobin, Convulsions, Constipation, Stomach ache, Insomnia, Leg pain, White discharge (Leucorrhoea), Acidity, Headaches, Weakness, Fever, Pneumonia, Backache, Vomiting.  
MIL-Mother-in-law

**Table 48: Knowledge regarding warning signals during pregnancy: responses of Mothers-in-law**

Districts	Resp onden ts	Knowledge about warning signals								
		Bleedi ng/ disch arge	Reduce d Foetal Movem ents	High BP,Oed ema	Sudde n Weight Increas e	Pallor, Weakn ess	All	High Fever	Don't Know	Multiple Respon ses*
Baran	266	2 (0.8)	4 (1.5)	45 (16.9)	1 (0.4)	8 (3.0)	0 (0.0)	1 (0.4)	95 (35.7)	110 (41.4)
Barmer	233	7 (3.0)	0 (0.0)	22 (9.4)	0 (0.0)	1 (0.4)	0 (0.0)	41 (17.6)	147 (63.0)	15 (6.4)
Dungarpur	174	4 (2.3)	0 (0.0)	13 (7.5)	1 (0.6)	4 (2.3)	24 (13.8)	22 (12.6)	78 (44.8)	28 (16.1)
S. Madhopur	159	2 (1.3)	1 (0.6)	16 (10.1)	0 (0.0)	44 (27.7)	2 (1.3)	0 (0.0)	60 (37.7)	34 (21.4)
Tonk	257	1 (0.4)	4 (1.6)	9 (3.5)	1 (0.4)	0 (0.0)	8 (3.1)	13 (5.1)	209 (81.3)	12 (4.7)
Total	1089	16 (1.5)	9 (0.8)	105 (9.6)	3 (0.3)	57 (5.2)	34 (3.1)	77 (7.1)	589 (54.1)	199 (18.3)

\* Bleeding, No movement of child, High B.P., Swelling on hands and feet, Sudden weight increase (more than 3 kg in a month), Low hemoglobin, Convulsions, Constipation, Stomach ache, Insomnia, Leg pain, White discharge (Leucorrhoea), Acidity, Headaches, Weakness, Fever, Pneumonia, Backache, Vomiting.



The awareness levels on this account were equally bad amongst the experienced mother-in-law and the lactating mothers who have undergone the process earlier.

Among 42.8% of total respondents who were aware about one or the other warning signals, maximum knew about raised blood pressure, swelling feet as the main warning signals.

**Table 49: Awareness about action to be taken during obstetric emergencies: responses of Pregnant Women**

Districts	Respondents	Don't know	Not important	Immediately visit health centre	Contact Dai	Home Remedies
Baran	136	55 (40.4)	2 (1.5)	79 (58.1)	0 (0.0)	0 (0.0)
Barmer	121	35 (28.9)	2 (1.7)	72 (59.5)	3 (2.5)	9 (7.4)
Dungarpur	117	18 (15.4)	4 (3.4)	93 (79.5)	1 (0.9)	1 (0.9)
S. Madhopur	155	5 (3.2)	9 (5.8)	139 (89.7)	0 (0.0)	2 (1.3)
Tonk	142	8 (5.6)	3 (2.1)	128 (90.1)	3 (2.1)	0 (0.0)
Total	671	12 (18.0)	20 (3.0)	511 (76.2)	7 (1.0)	12 (1.8)

**Table 50: Awareness about action to be taken during obstetric emergencies: response of Lactating Mothers**

Districts	Respondents	Don't know	Not important	Immediately visit health centre	Contact Dai	Home Remedies
Baran	274	92 (33.6)	6 (2.2)	174 (63.5)	1 (0.4)	1 (0.4)
Barmer	276	87 (31.5)	4 (1.4)	159 (57.6)	3 (1.1)	23 (8.3)
Dungarpur	310	53 (17.1)	12 (3.9)	243 (78.4)	1 (0.3)	1 (0.3)
S. Madhopur	209	12 (5.7)	9 (4.3)	188 (90.0)	0 (0.0)	0 (0.0)
Tonk	225	40 (17.8)	12 (5.3)	167 (74.2)	4 (1.8)	2 (0.9)
Total	1294	284 (21.9)	43 (3.3)	931 (71.9)	9 (0.7)	27 (2.1)

76.2% of the currently pregnant and another 71.9% of the lactating mothers felt that seeking care from the nearest health facility is the first action to be taken.

Similarly 71.5% of the mothers-in-law also were aware that transporting the pregnant women in case of obstetric emergency to a health facility is the first action that can avoid complications.



**Table 51: Awareness about action to be taken during obstetric emergencies: responses of Mothers-in-law**

Districts	Respondents	Don't know	Not important	Immediately visit Health centre	Contact Dai	Home Remedies
Baran	266	80 (30.1)	8 (3.0)	174 (65.4)	2 (0.8)	2 (0.8)
Barmer	233	85 (36.5)	3 (1.3)	132 (56.7)	1 (0.4)	12 (5.2)
Dungarpur	174	34 (19.5)	8 (4.6)	131 (75.3)	0 (0.0)	1 (0.6)
S. Madhopur	159	17 (10.7)	7 (4.4)	134 (84.3)	0 (0.0)	1 (0.6)
Tonk	257	28 (10.9)	10 (3.9)	208 (80.9)	3 (1.2)	8 (3.1)
Total	1089	244 (22.4)	36 (3.3)	779 (71.5)	6 (0.6)	24 (2.2)

**Table 52: Action taken for warning signals during pregnancy: responses of Pregnant Women**

District	Respondents	Respondents with warning signals	Yes					No
			No action taken	Immediately went to SC	Went to SC after few days	Went to Dai	Traditional remedies	
Baran	136	20 (14.7)	2 (10.0)	16 (80.0)	2 (10.0)	0 (0.0)	0 (0.0)	116 (85.3)
Barmer	121	21 (17.4)	5 (23.8)	11 (52.4)	3 (14.3)	1 (4.8)	1 (4.8)	100 (82.6)
Dungarpur	117	22 (18.8)	1 (4.5)	17 (77.3)	4 (18.2)	0 (0.0)	0 (0.0)	95 (81.2)
S. Madhopur	155	65 (41.9)	28 (43.1)	21 (32.3)	15 (23.1)	0 (0.0)	1 (1.5)	90 (58.1)
Tonk	142	16 (11.3)	4 (25.0)	10 (62.5)	1 (6.3)	1 (6.3)	0 (0.0)	126 (88.7)
Total	671	144 (21.5)	40 (27.8)	75 (52.1)	25 (17.4)	2 (1.4)	2 (1.4)	527 (78.5)

Almost 69.5% of the currently pregnant women and 78.4% of the lactating mothers did go to a sub center or health facility immediately or after buying a little time.

86.9% of their mothers-in-law also resorted to the same practice.

**Table 53: Action taken for warning signals during pregnancy: responses of Lactating Mothers**

District	Respondents	If yes what action did you take				
		Not any action taken	Immediately went to SC	Went to SC after few days	Go to Dai	Traditional remedies
Baran	54	9 (16.7)	35 (64.8)	10 (18.5)	0 (0.0)	0 (0.0)
Barmer	55	9 (16.4)	32 (58.2)	8 (14.5)	2 (3.6)	4 (7.3)
Dungarpur	59	1 (1.7)	51 (86.4)	7 (11.9)	0 (0.0)	0 (0.0)
S. Madhopur	113	38 (33.6)	49 (43.4)	25 (22.1)	0 (0.0)	1 (0.9)
Tonk	20	0 (0.0)	15 (75.0)	4 (20.0)	1 (5.0)	0 (0.0)
Total	301	57 (18.9)	182 (60.5)	54 (17.9)	3 (1.0)	5 (1.7)



**Table 54: Preferred place for delivery: responses of Pregnant Women**

Districts	Respondents	At Home	At health facility
Baran	136	3 (2.2)	133 (97.8)
Barmer	121	79 (65.3)	42 (34.7)
Dungarpur	117	18 (15.4)	99 (84.6)
S. Madhopur	155	7 (4.5)	148 (95.5)
Tonk	142	7 (4.9)	135 (95.1)
Total	671	114 (17.0)	557 (83.0)

As regards the preferred place for delivery 83% of the currently pregnant women wanted to deliver at a health facility. However, 65.3% of respondents from Barmer preferred home for delivery.

Preference for institutional delivery was highest in Baran (97.8%) that matters with the status of ANC registration wherein 95.6% of the 136 subjects had already registered with the facility. For institutional delivery Baran was followed by Sawai Madhopur (95.5%) and Tonk (95.1%).

A significant difference was seen in the responses of pregnant women when they were asked regarding the preferred place of delivery and those lactating mothers as to their last place of delivery. The 't' test for equality of means shows a significant difference in the two responses, where 83% of pregnant women preferred deliver at a health facility and 73.4% of the lactating mothers had an institutional delivery. This could be attributed to the increased awareness about the monetary benefits and better facilities at health centers or the relatively younger generation of pregnant women is more aware.

**Table 55: Preferred place for delivery: responses from Mothers-in-law**

Districts	Respondents Daughter-in-law Pregnant)	(with currently	At Home	At health facility
Baran	84		5 (6.0)	79 (94.0)
Barmer	75		42 (56.0)	33 (44.0)
Dungarpur	49		4 (8.2)	45 (91.8)
S. Madhopur	60		3 (5.0)	57 (95.0)
Tonk	110		7 (6.4)	103 (93.6)
Total	378		61 (16.1)	317 (83.9)

Views of mothers-in-law matched those of the daughter-in-laws as 83.9% of them preferred their grandchild to be born at a health facility. Again in Barmer the mothers-in-law (56%) preferred delivery at home.



**Table 56: Reasons for home delivery: responses of Pregnant Women**

Districts	Respondents	Reasons				
		Usually deliveries are conducted at home	Facility available at home for delivery	Delivery at home is inexpensive	Distant SC	Family members want
Baran	3	1 (33.3)	1 (33.3)	1 (33.3)	0 (0.0)	0 (0.0)
Barmer	79	12 (15.2)	23 (29.1)	12 (15.2)	16 (20.3)	16 (20.3)
Dungarpur	18	7 (38.9)	0 (0.0)	6 (33.3)	2 (11.1)	3 (16.7)
S. Madhopur	7	4 (57.1)	2 (28.6)	0 (0.0)	0 (0.0)	1 (14.3)
Tonk	7	4 (57.1)	1 (14.3)	0 (0.0)	0 (0.0)	2 (28.6)
Total	114	28 (24.6)	27 (23.7)	19 (16.7)	18 (15.8)	22 (19.3)

The prime reason for preferring home for delivery was the fact that usually deliveries are conducted at home (24.6%) followed by facilities available at home-23.7% (ANMs/Dai are called at home to conduct the delivery).

The pressure from family members (19.3%), and the perception that home deliveries are inexpensive (16.7%) turned out to be reasons for preferring delivery at home. 20.3% of Barmer respondents preferred home for delivery because of distance of health facility.

**Table 57: Reasons for home delivery: responses of Mothers-in-law**

Districts	Respondents	Usually deliveries are conducted at home	Facility available at home for delivery	Delivery at home is inexpensive	Distant SC	Family members want
Baran	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Barmer	41	11 (26.8)	12 (29.3)	5 (12.2)	6 (14.6)	7 (17.1)
Dungarpur	4	1 (25.0)	0 (0.0)	1 (25.0)	1 (25.0)	1 (25.0)
S. Madhopur	1	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Tonk	6	1 (16.7)	2 (33.3)	0 (0.0)	0 (0.0)	3 (50.0)
Total	52	14 (26.9)	14 (26.9)	6 (11.5)	7 (13.5)	11 (21.2)

Mothers-in-law favored home deliveries as customarily deliveries are conducted at home (26.9%) and all facilities for home delivery are available (26.9%).

21.2% respondents stated family members preferred home delivery while 13.5% respondents quoted distance problem as the reason and that was maximum in Dungarpur (25.0%) and Barmer (14.6%) in the respective category of reasons.





**Table 58: Reasons for institutional delivery: responses of Pregnant Women**

Districts	Respondents	JSY Benefits	Better facilities available	Experts available	Safe delivery	Motivated by health worker
Baran	133	30 (22.6)	64 (48.1)	3 (2.3)	33 (24.8)	3 (2.3)
Barmer	42	7 (16.7)	29 (69.0)	0 (0.0)	3 (7.1)	3 (7.1)
Dungarpur	99	12 (12.1)	34 (34.3)	8 (8.1)	40 (40.4)	5 (5.1)
S. Madhopur	148	32 (21.6)	95 (64.2)	12 (8.1)	9 (6.1)	0 (0.0)
Tonk	135	16 (11.9)	74 (54.8)	8 (5.9)	35 (25.9)	2 (1.5)
Total	557	97 (17.4)	296 (53.1)	31 (5.6)	120 (21.5)	13 (2.3)

**Table 59: Reasons for institutional delivery: responses of Mothers-in-law**

Districts	Respondents	JSY Benefits	Better facilities available	Experts available	Safe delivery	Motivated by health worker
Baran	79	22 (27.8)	35 (44.3)	3 (3.8)	16 (20.3)	3 (3.8)
Barmer	33	9 (27.3)	18 (54.5)	1 (3.0)	3 (9.1)	2 (6.1)
Dungarpur	45	5 (11.1)	13 (28.9)	6 (13.3)	18 (40.0)	3 (6.7)
S. Madhopur	57	13 (22.8)	32 (56.1)	7 (12.3)	4 (7.0)	1 (1.8)
Tonk	103	4 (3.9)	65 (63.1)	7 (6.8)	26 (25.2)	1 (1.0)
Total	317	53 (16.7)	163 (51.4)	24 (7.6)	67 (21.1)	10 (3.2)

Among all the respondents (PW & MIL) who were in favor of institutional delivery, the driving force was better facilities at health centre (53.1%-PW & 51.4%-MIL). Monetary benefits under JSY, contrary to the common understanding, motivated only 17.4% PW & 16.7% mothers-in-law to go for institutional delivery.

**Table 60: Reasons for institutional delivery: responses of Lactating Mothers**

Districts	Respondents	Reasons				
		JSY Benefits	Better facilities available	Experts available	Safe delivery	Motivated by health worker
Baran	253	53 (20.9)	126 (49.8)	15 (5.9)	53 (20.9)	6 (2.4)
Barmer	84	17 (20.2)	49 (58.3)	5 (6.0)	12 (14.3)	1 (1.2)
Dungarpur	263	31 (11.8)	79 (30.0)	38 (14.4)	101 (38.4)	14 (5.3)
S. Madhopur	177	43 (24.3)	106 (59.9)	11 (6.2)	12 (6.8)	5 (2.8)
Tonk	173	12 (6.9)	91 (52.6)	7 (4.0)	54 (31.2)	9 (5.2)
Total	950	156 (16.4)	451 (47.5)	76 (8.0)	232 (24.4)	35 (3.7)



**Table 61: Reasons for institutional delivery: responses of Mothers-in-law**

Districts	Respondents	Reasons				
		JSY Benefits	Better facilities available	Experts available	Safe delivery	Motivated by health worker
Baran	203	47 (23.2)	116 (57.1)	7 (3.4)	30 (14.8)	3 (1.5)
Barmer	64	9 (14.1)	39 (60.9)	2 (3.1)	11 (17.2)	3 (4.7)
Dungarpur	139	5 (3.6)	50 (36.0)	19 (13.7)	61 (43.9)	4 (2.9)
S. Madhopur	108	22 (20.4)	77 (71.3)	5 (4.6)	3 (2.8)	1 (0.9)
Tonk	146	10 (6.8)	74 (50.7)	18 (12.3)	35 (24.0)	9 (6.2)
Total	660	93 (14.1)	356 (53.9)	51 (7.7)	140 (21.2)	20 (3.0)

Reasons assigned for institutional delivery were availability of better facilities by 47.5% lactating mothers and 53.9% mothers-in-law. Once again JSY benefits lured only 16.4% of lactating mothers and 14.1% of their mothers-in-law.

**Table 62: Place of last delivery: responses of Lactating Mothers**

Districts	Respondents	At Home	At health facility
Baran	274	21 (7.7)	253 (92.3)
Barmer	276	192 (69.6)	84 (30.4)
Dungarpur	310	47 (15.2)	263 (84.8)
S. Madhopur	209	32 (15.3)	177 (84.7)
Tonk	225	52 (23.1)	173 (76.9)
Total	1294	344 (26.6)	950 (73.4)

With the JSY scheme gaining popularity, institutional deliveries have been on an increase. The lactating mothers were asked about the place where they had delivered their last baby and 73.4% of them promptly replied "health facility".

The highest home deliveries took place in Barmer, as responded by 69.6% of the lactating mothers. This could be attributed to the inaccessible terrain of the area. Only 7.7% of the women of Baran had their last child delivered at home.

The responses of the mothers-in-law also supported those of the lactating mothers as daughter-in-laws, 73.5% of them delivered their last baby in a health center.



**Table 63: Place of last delivery: responses of Mothers-in-law**

Districts	Respondents	At Home	At health facility
Baran	216	13 (6.0)	203 (94.0)
Barmer	204	140 (68.6)	64 (31.4)
Dungarpur	166	27 (16.3)	139 (83.7)
S. Madhopur	126	18 (14.3)	108 (85.7)
Tonk	186	38 (21.5)	146 (78.5)
Total	898	233 (26.5)	660 (73.5)

**Table 64: Reasons for last delivery at home: responses of Lactating Mothers**

District	Respo ndents	Reasons						
		Labor pains	No one to accomp any	Distance	Family practice	Facility at home	Inexpens ive	Family pressur e
Baran	21	13 (61.9)	3(14.3)	0 (0.0)	3 (14.3)	0 (0.0)	0 (0.0)	2 (9.5)
Barmer	192	16 (8.3)	5 (2.6)	39(20.3)	39 (20.3)	45 (23.4)	15 (7.8)	33(17.2)
Dungarpur	47	22 (46.8)	1 (2.1)	3 (6.4)	11 (23.4)	1 (2.1)	2 (4.3)	7 (14.9)
S. Madhopur	32	22 (68.8)	2 (6.3)	3 (9.4)	2 (6.3)	0 (0.0)	2 (6.3)	1(3.1)
Tonk	52	27 (51.9)	3 (5.8)	2 (3.8)	2 (3.8)	2 (3.8)	3 (5.8)	13(25.0)
Total	344	100(29.1)	14(4.1)	47 (13.7)	57 (16.6)	48 (14.0)	22 (6.2)	56(16.3)

Lactating mothers who had their last delivery at home, ascribed reasons like labor pains (29.1%) meaning thereby that they did not have enough time to go to a health facility.

**Table 65: Reasons for last delivery made at home: responses of Mothers-In-Law**

Districts	Respo ndents	Reasons						
		Labor pains	No one to accomp any	Distance	Family practice	Facility at home	Inexpe nsive	Family pressure
Baran	11	6 (54.5)	2 (18.2)	0 (0.0)	1 (9.1)	0 (0.0)	0 (0.0)	2 (18.2)
Barmer	140	17 (12.1)	5 (3.6)	29 (20.7)	26(18.6)	39 (27.9)	6 (4.3)	18 (12.9)
Dungarpur	26	12 (46.2)	2(7.7)	1(3.8)	7 (26.9)	1 (3.8)	1 (3.8)	2 (7.7)
S. Madhopur	18	8 (44.4)	1(5.6)	4(22.2)	2 (11.1)	1 (5.6)	0 (0.0)	2 (11.1)
Tonk	38	14 (36.8)	3(7.9)	1(2.6)	3 (7.9)	2 (5.3)	5(13.2)	10 (26.3)
Total	233	57 (24.5)	13(5.6)	35(15.0)	39(16.7)	43(18.5)	12(5.2)	34 (14.6)

Once again, onset of labor pains (24.5%) was the prime reason assigned by mothers-in-law for home delivery, supporting the views of lactating mothers. This suggests that more needs to be done on birth preparedness plans by families.



18.5% felt that when all the facilities were available at home there was no need to go for institutional delivery. 27.9% of Barmer mothers-in-law supported this reason.

According to the mothers-in-law from Tonk (26.3%) the decision of family members did play an important role in deciding the place of delivery.

**Table 66: Distribution according to education status and their preferred/last place of delivery: responses of Pregnant Women**

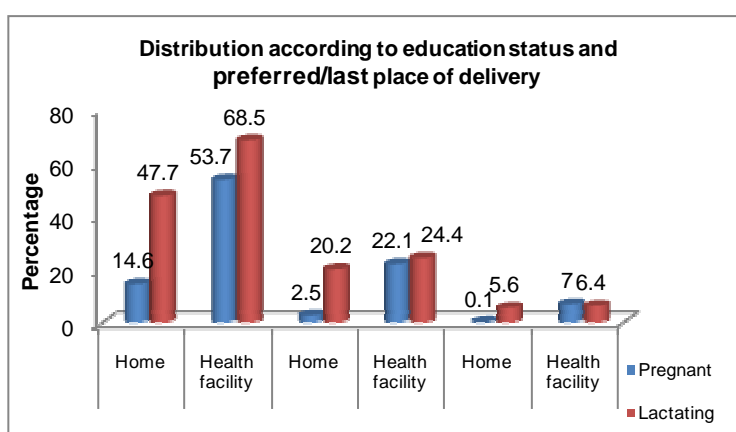
Districts	Education status	Place of delivery preferred by pregnant women			Grand Total
		At Home	At Health facility	Total	
Baran	IL	2 (2.6)	74 (97.4)	76	136
	L up to VIII	1 (1.9)	51 (98.1)	52	
	L above VIII	0 (0.0)	8 (100.0)	8	
Barmer	IL	67 (67.7)	32 (32.3)	99	121
	L up to VIII	12 (57.1)	9 (42.9)	21	
	L above VIII	0 (0.0)	1 (100.0)	1	
Dungarpur	IL	15 (17.2)	72 (82.8)	87	117
	L up to VIII	3 (15.0)	17 (85.0)	20	
	L above VIII	0 (0.0)	10 (100.0)	10	
S. Madhopur	IL	6 (5.9)	96 (94.1)	102	155
	L up to VIII	0 (0.0)	29 (100.0)	29	
	L above VIII	1 (4.2)	23 (95.8)	24	
Tonk	IL	8 (8.5)	86 (91.5)	94	142
	L up to VIII	1 (2.3)	42 (97.7)	43	
	L above VIII	0 (0.0)	5 (100.0)	5	
Total	IL	98 (14.6)	360 (53.7)	458 (68.3)	671
	L up to VIII	17 (2.5)	148 (22.1)	165 (24.6)	
	L above VIII	1 (0.1)	47 (7.0)	48 (7.2)	



**Table 67: Distribution according to education status and their preferred/last place of delivery: responses of Lactating Mothers**

Districts	Education status	Last delivery place of Lactating woman			Grand Total
		At Home	At Health facility	Total	
Baran	IL	16 (9.6)	150(90.4)	166	274
	L up to VIII	5 (5.4)	87 (94.6)	92	
	L above VIII	0 (0.0)	16(100.0)	16	
Barmer	IL	159(74.6)	54 (25.4)	213	276
	L up to VIII	27 (52.9)	24 (47.1)	51	
	L above VIII	6 (50.0)	6 (50.0)	12	
Dungarpur	IL	38 (17.8)	176(82.2)	214	310
	L up to VIII	9 (14.1)	55 (85.9)	64	
	L above VIII	0 (0.0)	32(100.0)	32	
S. Madhopur	IL	21 (15.4)	115(84.6)	136	209
	L up to VIII	8 (14.3)	48 (85.7)	56	
	L above VIII	3 (17.6)	14 (82.4)	17	
Tonk	IL	35 (22.3)	122 77.7)	157	225
	L up to VIII	15 (24.4)	47 (75.8)	62	
	L above VIII	2 (33.3)	4 (66.7)	6	
Total	IL	269(20.7)	617(47.7)	886(68.5)	1294
	L up to VIII	64(4.9)	261(20.2)	316(24.4)	
	L above VIII	11(0.9)	72(5.6)	83(6.4)	

A sizeable number of illiterate women, either currently pregnant (53.7%) or lactating (47.7%) have/had opted for delivery at the facility as compared to the educated populace included in the study and cannot be supported by any kind of lucidity but for the monetary benefits attached to an Institutional Delivery.

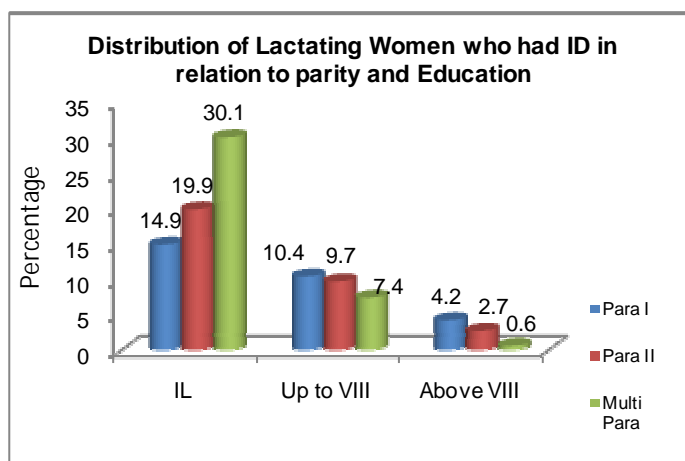




**Table 68: Distribution of Lactating Women who had Institutional Delivery in relation to their parity and education**

District	Education status	Para I	Para II	Multi Para
Baran	IL	29(20.4)	64(33.9)	57(19.9)
	L up to VIII	24(24.2)	32(34.8)	31(44.3)
	L above VIII	9(22.5)	6(23.1)	1(16.7)
Barmer	IL	11(7.7)	12(6.3)	31(10.8)
	L up to VIII	14(14.1)	7(7.6)	3(4.3)
	L above VIII	3(7.5)	2(7.7)	1(16.7)
Dungarpur	IL	38(26.8)	35(18.5)	103(36.0)
	L up to VIII	23(23.2)	18(19.6)	14(20.0)
	L above VIII	21(52.5)	9(34.6)	2(33.3)
Sawai Madhopur	IL	24(16.9)	35(18.5)	56(19.6)
	L up to VIII	16(16.2)	18(19.6)	14(20.0)
	L above VIII	5(12.5)	8(30.8)	1(16.7)
Tonk	IL	40(28.2)	43(22.8)	39(13.6)
	L up to VIII	22(22.2)	17(18.5)	8(11.4)
	L above VIII	2(5.0)	1(3.8)	1(16.7)
Total	IL	142(14.9)	189(19.9)	286(30.1)
	L up to VIII	99(10.4)	92(9.7)	70(7.4)
	L above VIII	40(4.2)	26(2.7)	6(0.6)
Total	950	281(29.6)	307(32.3)	362(38.1)

It is interesting to note that though there is a marginal increase, the institutional deliveries have gradually increased in para I, II and multi para women from 29.6% to 38.1%; and equally interesting is the fact that this trend was relatively better in illiterate women as compared to those with educational standard of class 8 and above. Increase in ID in relation to the parity probably can be justified on



account of a better awareness of schemes including JSY benefits, improved health facilities and/or their past experience with home delivery.



**Table 69: Relation between number of ANC visits and place of delivery: responses of Lactating Mothers**

District	Respondents	Place of delivery	Number of visits						
			None	Once	Twice	Thrice	Four	SOS	Every Month
Baran	274	Home	0 (0.0)	5 (1.8)	15 (5.4)	1 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)
		Health facility	1 (0.3)	52 (18.9)	139 (50.7)	49 (17.8)	6 (2.1)	3 (1.09)	3 (1.09)
Barmer	276	Home	126 (45.6)	13 (4.7)	25 (9.05)	22 (7.97)	6 (2.1)	0 (0.0)	0 (0.0)
		Health facility	29 (10.5)	8 (2.8)	24 (9.05)	22 (7.9)	3 (1.0)	0 (0.0)	0 (0.0)
Dungarpur	310	Home	17 (5.4)	4 (1.2)	11 (3.5)	13 (4.1)	2 (0.6)	0 (0.0)	0 (0.0)
		Health Facility	65 (20.9)	29 (9.3)	59 (19.0)	70 (22.5)	22 (7.0)	17 (5.4)	1 (0.3)
Sawai Madhopur	209	Home	8 (3.8)	4 (1.91)	7 (3.3)	7 (3.3)	5 (2.3)	1 (0.4)	0 (0.0)
		Health Facility	6 (2.8)	12 (5.7)	52 (24.8)	75 (35.8)	21 (10.04)	10 (4.7)	1 (0.4)
Tonk	225	Home	10 (4.4)	9 (4.0)	20 (8.8)	10 (4.4)	3 (1.33)	0 (0.0)	0 (0.0)
		Health facility	28 (12.4)	22 (9.7)	72 (32.0)	40 (17.7)	9 (4.0)	2 (0.88)	0 (0.0)
Total	1294	Home (344)	161 (12.4)	35 (2.70)	78 (6.02)	53 (4.0)	16 (1.2)	1 (.07)	0 (0.0)
		Health facility (950)	129 (9.9)	123 (9.5)	346 (26.7)	254 (19.6)	61 (4.7)	32 (2.4)	5 (0.38)

Of the 1294 lactating mothers, 821 (63.4%) who had their last delivery in a health facility also had gone for one or more antenatal visits during the pregnancy period. For the purpose of convenience ANC visits, whether one, two, three or more have been pooled up. The basic premise for which is whether the exposure to a health facility (invariable a positive interaction between client and service provider) triggers and/or facilitates the decision to go for an institutional delivery.

Place of delivery	No. of ANC		
	One or >one	None	Total
Health facility	821	129	950
Home	183	161	344
Total	1004	290	1294

Further, in order to test the hypothesis (ANC visits facilitate decision for institutional delivery), attempt was made to establish an association, if any, between ANC visits and place of delivery  $\chi^2=160.31$  indicates that place of delivery is affected by ANC visits. There is a positive correlation



between the two attributes ( $r=0.352$ ) which is significant at 5% and 1% level of significance, checked through “t” test. This explicitly brings out that probability of women going for institutional delivery is more amongst those attending ANC.

**Table 70: Awareness about child immunization: Need and Benefits: responses of Lactating Mothers**

Districts	Respondents	Need for vaccination		Total	Immunization Prevents from diseases	
		Yes	No		Yes	No
Baran	274	260 (94.9)	14 (5.1)	274	257 (93.8)	17 (6.2)
Barmer	276	185 (67.0)	91 (33.0)	276	137 (49.6)	139 (50.4)
Dungarpur	310	301 (97.1)	9 (2.9)	310	284 (91.6)	26 (8.4)
S. Madhopur	209	205 (98.1)	4 (1.9)	209	193 (92.3)	16 (7.7)
Tonk	225	216 (96.0)	9 (4.0)	225	177 (78.7)	48 (21.3)
Total	1294	1167 (90.2)	127 (9.8)	1294	1048 (81.0)	246 (19.0)

90.2% of lactating mothers were aware of the need for vaccination and another 81% knew that it can prevent diseases in young infants. This could be further corroborated by the findings at Table no. 84 where in 84.2% children are covered by immunization. As the study by default did not include questions on partial or full immunization, this figure sounds to be unreasonable particularly so where the DLHS 3 data for different districts puts full immunization as 51% (Barmer), 46.7% (Tonk), 87.4% (Dungarpur), 26.4% (Sawai Madhopur) and 48% (Baran).

**Table 71: Awareness about child immunization: Need and Benefits: responses of Mothers-In-Law**

Districts	Respondents	Awareness about vaccination			Awareness that it Prevents from diseases		
		Yes	No	Don't know	Yes	No	Don't know
Baran	216	202(93.5)	11 (5.1)	3 (1.4)	197(91.2)	13 (6.0)	6 (2.7)
Barmer	204	138(67.6)	64 (31.4)	2 (0.9)	106(52.0)	97 (47.5)	1 (0.5)
Dungarpur	166	159(95.8)	6 (3.6)	1 (0.6)	138(83.1)	27 (16.3)	1 (0.6)
S. Madhopur	126	119(94.4)	6 (4.8)	1 (0.8)	118(93.7)	7 (5.6)	1 (0.8)
Tonk	186	171(91.9)	11 (5.9)	4 (2.2)	138(74.2)	42 (22.6)	6 (3.2)
Total	898	789(87.9)	98 (10.9)	11 (1.2)	697(77.6)	186 (20.7)	15 (1.6)

Efforts on part of the system and the exposure to media, has made mothers-in-law also familiar with vaccination and the benefits of it. 87.9% of the total 898 mothers-in-law were found to be aware of vaccination and another 77.6% knew that it can prevent diseases and these awareness levels are close to 90%+ in all the districts but for Barmer.





**Table 72: Practice of colostrum feeding to new born: responses of Lactating Mothers**

Districts	Respondents	Yes		No	
		Number	Percentage	Number	Percentage
Baran	274	226	82.5	48	17.5
Barmer	276	152	55.1	124	44.9
Dungarpur	310	278	89.7	32	10.3
S. Madhopur	209	177	84.7	32	15.3
Tonk	225	152	67.6	73	32.4
Total	1294	985	76.1	309	23.9

Practice of feeding the new born with colostrum was followed by 76.1% of the lactating mothers.

**Table 73: Practice of colostrum feeding to new born: responses of Mothers-In-Law**

Districts	Respondents	Colostrum fed to the new born			
		Yes	No	Do not know	No response
Baran	216	147 (68.1)	67(31.0)	0 (0.0)	2 (0.9)
Barmer	204	112 (54.9)	91 (44.6)	0 (0.0)	1 (0.5)
Dungarpur	166	141 (84.9)	21 (12.7)	3 (1.8)	1 (0.6)
S. Madhopur	126	99 (78.6)	26 (20.6)	1 (0.8)	0 (0.0)
Tonk	186	121 (65.1)	53 (28.5)	6 (3.2)	6 (3.2)
Total	898	620 (69.0)	258 (28.7)	10 (1.1)	10 (1.1)

69% of the mothers-in-law responded that their daughter-in-laws gave colostrum to their new born. This percentage was highest in Dungarpur (84.9%) and lowest in Barmer (54.9%).

**Table 74: Reasons for not giving colostrum: responses of Lactating Mothers**

District	Respondents	Reasons				
		Unaware	*Family Customs	Unfit for baby	Mother and child not well	Restriction by MIL
Baran	48	23 (47.9)	10 (20.8)	12 (25.0)	3 (6.3)	0 (0.0)
Barmer	124	43 (34.7)	45 (36.3)	12 (9.7)	16 (12.9)	8 (6.5)
Dungarpur	32	9 (28.1)	17 (53.1)	0 (0.0)	6 (18.8)	0 (0.0)
S. Madhopur	32	6 (18.8)	17 (53.1)	3 (9.4)	6 (18.8)	0 (0.0)
Tonk	73	22 (30.1)	12 (1.9)	12 (16.4)	27 (37.0)	0 (0.0)
Total	309	103(33.3)	101 (32.7)	39 (12.6)	58 (18.8)	8 (2.6)

\* given after performing ceremony, practice not followed in the family

Of the 1294 lactating mothers included in the study 985 (76.1%) did feed their new born with colostrum. However, 309 (23.9%) who did not feed the colostrums assigned various reasons for not doing so.

By and large the traditional family customs (32.7%) vetoed against the colostrums feeding practice and another 33.3% said that they were unaware of feeding colostrum to the new born.



**Table 75: Reasons of not giving colostrum: responses of Mothers-In-Law**

District	Respondents	Reasons				
		Unaware	*Family Customs	Unfit for baby	Mother and child not well	Dirty Milk
Baran	67	13 (19.4)	23 (34.3)	18 (26.9)	1 (1.5)	12 (17.9)
Barmer	91	22 (24.2)	56 (61.5)	13 (14.3)	0 (0.0)	0 (0.0)
Dungarpur	21	5 (23.8)	14 (66.7)	2 (9.5)	0 (0.0)	0 (0.0)
S. Madhopur	26	9 (34.6)	11 (42.3)	3 (11.5)	3 (11.5)	0 (0.0)
Tonk	53	22 (41.5)	21 (39.6)	10 (18.9)	0 (0.0)	0 (0.0)
Total	258	71 (27.5)	125 (48.4)	46 (17.8)	4 (1.6)	12 (4.7)

\* given after performing ceremony, practice not followed in the family

Out of 898 mothers-in-law of currently lactating women, 640 (71.3%) were supportive of feeding the colostrum to new born, whereas 258 (28.7%) who rejected the idea of colostrum being fed to new born, sustained their views for reasons like family customs (48.4%) and unawareness (27.5%). 17.8% respondents felt that feeding colostrum to newborn was “unfit for baby”.

**Table 76: Place of delivery and relation with practice of colostrums feeding: responses of Lactating Mothers**

District	No of respondents	Place of delivery	Colostrums given Status	
			Yes	No
Baran	274	Home	11 (4.0)	10 (3.4)
		Health Facility	215 (78.4)	38 (13.8)
Barmer	276	Home	103 (37.3)	89 (32.2)
		Health Facility	49 (17.7)	35 (12.6)
Dungarpur	310	Home	28 (9.0)	19 (6.1)
		Health Facility	250 (80.6)	13 (4.1)
Sawai Madhopur	209	Home	23 (11.0)	9 (4.3)
		Health Facility	154 (73.6)	23 (11.0)
Tonk	225	Home	35 (15.5)	17 (7.5)
		Health Facility	117 (52.0)	56 (24.8)
Total	1294	Home	200 (15.4)	144 (11.1)
		Health Facility	785 (60.6)	165 (12.7)

The practice of colostrums feeding was more in case of lactating mothers having an institutional delivery. 60.6% lactating mothers who had delivered at a health facility fed their children with colostrums, whereas only 15.4% practiced colostrums feeding in case of home delivery. This practice was most practiced in Dungarpur (80.6%), Baran (78.4%) and Sawai Madhopur (73.6%). The significant difference largely could be attributed to counseling and motivation by the health staff and accompanying ASHA.



**Table 77: Time of initiation of breast feeding: responses of Lactating Mothers**

District	Respondents	Yes			
		Within one hour of delivery	Within 1-6 hrs.	After 6 hrs.	After 2-3 days
Baran	274	114 (41.6)	77 (28.1)	40 (14.6)	43 (15.7)
Barmer	276	45 (16.3)	60 (21.7)	45 (16.3)	126 (45.7)
Dungarpur	310	171 (55.2)	89 (28.7)	21 (6.8)	29 (9.4)
S. Madhopur	209	142 (67.9)	40 (19.1)	6 (2.9)	21 (10.0)
Tonk	225	72 (32.0)	95 (42.2)	34 (15.1)	24 (10.7)
Total	1294	544 (42.0)	361 (27.9)	146 (11.3)	243 (18.8)

42% of lactating mothers fed their new born within one hour of birth while another 27.9% did put their child on breast within 1-6 hours of delivery.

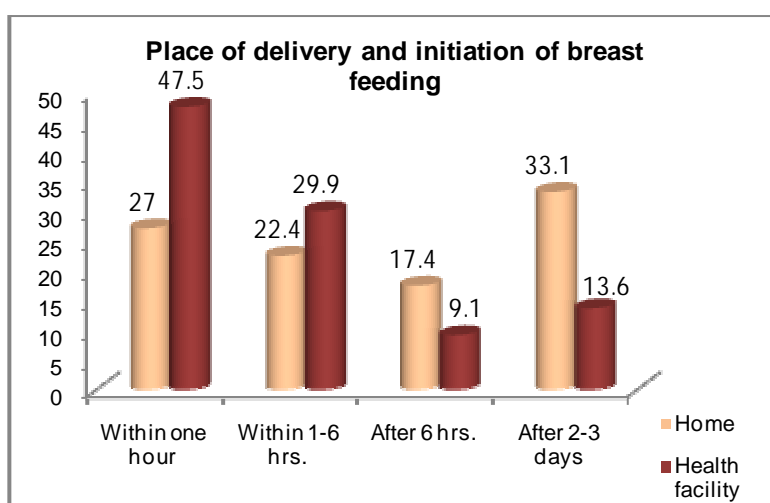
Mothers in Sawai Madhopur (67.9%) had the best practice in this regard.

**Table 78: Time of initiation of breast feeding: responses of Mothers-In-Law**

District	Yes				Don't know	Total
	Within one hour of delivery	Within 1-6 hrs.	After 6 hrs.	After 2-3 days		
Baran	62 (28.7)	78 (36.1)	58 (26.9)	16 (7.4)	2 (0.9)	216
Barmer	27 (13.2)	42 (20.6)	108 (52.9)	22 (10.8)	5 (2.5)	204
Dungarpur	100 (60.2)	42 (25.3)	18 (10.8)	4 (2.4)	2 (1.2)	166
S. Madhopur	80 (63.5)	27 (21.4)	13 (10.3)	3 (2.4)	3 (2.4)	126
Tonk	52 (28.0)	79 (42.5)	31 (16.7)	8 (4.3)	16 (8.6)	186
Total	321 (35.7)	268 (29.8)	228 (25.4)	53 (5.9)	28 (3.1)	898

Though for all other parameters pertaining to practice the responses of mothers-in-law matched with lactating and/or pregnant women. This is an area where the mothers had an idea contrary to the actual practices of their daughter-in-laws and only 35.7% said that their respective granddaughter/son were put on breast within one hour of birth.

While trying to establish the correlation connect between ANC, place of delivery and child care focusing on initiation of breast feed, it was observed that mothers with home delivery did not initiate early breast feed.





With care and advice provided by the trained staff at the health facilities 47.5% women initiated breast feed within 1 hour of delivery while in the absence of such care at home only 27% women gave their first feed within 1 hour of delivery.

The practice of delaying the initiation of breast feed after 2-3 days is seen more when delivery was at home.

**Table 79: Relation between place of delivery and initiation of breast feeding: responses of Lactating Mothers**

District	Place of delivery(No.)	Initiation of breast feeding			
		within 1hr	1-6hr	after 6hr	after 2-3 days
Baran	Home(21)	7(33.3)	1(4.8)	6(28.6)	7(33.3)
	Health facility(253)	107(42.3)	76(30.0)	34(13.4)	36(14.2)
Barmer	Home(192)	33(17.2)	34(17.7)	36(18.8)	89(46.4)
	Health facility(84)	12(14.3)	26(31.0)	9(10.7)	37(44.0)
Dungarpur	Home(47)	17(36.2)	15(31.9)	10(21.3)	5(10.6)
	Health facility(263)	154(58.6)	74(28.1)	11(4.2)	24(9.1)
Sawai Madhopur	Home(32)	20(62.5)	4(12.5)	1(3.1)	7(21.9)
	Health facility(177)	122(68.9)	36(20.3)	5(2.8)	14(7.9)
Tonk	Home(52)	16(30.8)	23(44.2)	7(13.5)	6(11.5)
	Health facility(173)	56(32.4)	72(41.6)	27(15.6)	18(10.4)
Total	Home(344)	93(27.0)	77(22.4)	60(17.4)	114(33.1)
	Health facility(950)	451(47.5)	284(29.9)	86(9.1)	129(13.6)

Even if we take into account only the home delivery, it is seen that ANC visits which includes counseling by the service provider makes a difference in the breast feed initiation practice. 35.5% of the lactating mothers who had received ANC did start feeding the baby within 1 hour of delivery while those who did not avail the ANC checkup started as late as 2-3 days after delivery (45.3%).

An attempt was also made to find a correlation between place of delivery and colostrum feeding and it was found that mothers who had institutional delivery fed their babies with colostrum which shows a positive correlation ( $r=0.254$ ) and is significant at 95% and 99% confidence interval.



**Table 80: Relation between status of ANC and the initiation time of breast feeding: responses of Lactating Mothers**

District	ANC check ups	Initiation of breast feeding			
		within 1 hr	1-6 hrs	after 6 hrs	after 2-3 days
Baran	Yes (21)	7(33.3)	1(4.8)	6(28.6)	7(33.3)
	No (0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Barmer	Yes (66)	16(24.2)	14(21.2)	13(19.7)	23(34.8)
	No (126)	17(13.5)	20(15.9)	23(18.3)	66(52.4)
Dungarpur	Yes (30)	14(46.7)	12(40.0)	2(6.7)	2(6.7)
	No (126)	17(13.5)	20(15.9)	23(18.3)	66(52.4)
Sawai Madhopur	Yes (24)	15(62.5)	4(16.7)	1(4.2)	4(16.7)
	No (8)	5(62.5)	0(0.0)	0(0.0)	3(37.5)
Tonk	Yes (42)	13(31.0)	18(42.9)	6(14.3)	5(11.9)
	No (10)	3(30.0)	5(50.0)	1(10.0)	1(10.0)
Total	Yes (183)	65(35.5)	49(26.8)	28(15.3)	41(22.4)
	No (161)	28(17.4)	28(17.4)	32(19.9)	73(45.3)

There is an association between ANC checkups and initiation of breast feeding among the lactating mothers ( $\chi^2=68.424$ ) which is significant at 95% and 99% confidence interval.

**Table 81: Relation between time of initiation of breast feeding and colostrum feeding: responses of Lactating Mothers**

District	No. of respondents	Initiation of breastfeeding after delivery			
		Within 1 hr.	After 1-6 hr.	After 6 hr.	After 2-3 days
Baran	226	112 (49.5)	71 (31.4)	31 (13.7)	12 (5.3)
Barmer	152	42 (27.6)	46 (30.2)	21 (13.8)	43 (28.2)
Dungarpur	278	167 (60.0)	82 (29.4)	11 (3.9)	18 (6.4)
Sawai Madhopur	177	139 (78.5)	32 (18.0)	2 (1.1)	4 (2.2)
Tonk	152	63 (41.4)	57 (37.5)	23 (15.1)	9 (5.9)
Total	985	523 (53.0)	288 (29.2)	88 (8.9)	86 (8.7)

53% of those lactating mothers who fed their new born with colostrum had also initiated breast feeding within one hour of delivery. This practice was best in Sawai Madhopur (78.5%). Colostrum feeding being followed by breast feeding within one hour is simply one of the indications of how the practices can cascade and continue and is an indirect reflection of awareness, attitude and motivation.



**Table 82: Exclusive breast feeding practices: responses of Lactating Mothers**

District	Respondents	Yes	No
Baran	274	156 (56.9)	118 (43.1)
Barmer	276	115 (41.7)	161 (58.3)
Dungarpur	310	238 (76.8)	72 (23.2)
S. Madhopur	209	138 (66.0)	71 (34.0)
Tonk	225	121 (53.8)	104 (46.2)
Total	1294	768 (59.4)	526 (40.6)

One of the universally accepted interventions for reducing infant mortality is exclusive breast feeding for the first six months. It was seen that 59.4% of the now lactating mothers did adhere to the practice. Yet 40.6% started complementary food along with breast feeding before six months. 54.3% of the mothers-in-law also were aware and supported the exclusive breast feeding. The 526 lactating mothers who offered complementary foods enumerated the commonest supplementary foods as milk (34.2%), ghutti (35.6%) besides water (23.8%) and the commonly held beliefs by mothers-in-law also favored the same supplements for new born.

**Table 83: Exclusive breast feeding practices: responses of Mothers-In-Law**

District	Yes	No	Don't know	Total
Baran	100 (46.3)	114 (52.8)	2 (0.9)	216
Barmer	75 (36.8)	128 (62.7)	1 (0.5)	204
Dungarpur	128 (77.1)	36 (21.7)	2 (1.2)	166
S. Madhopur	83 (65.9)	41 (32.5)	2 (1.6)	126
Tonk	102 (54.8)	74 (39.8)	10 (5.4)	186
Total	488 (54.3)	393 (43.8)	17 (1.9)	898

**Table 84: Reasons for not exclusively breast feeding: responses of Lactating Mothers**

District	Respondents	Reasons				
		Unaware	Insufficient breast milk	Family practices*	Doctor suggested	Baby was not well
Baran	118	22 (18.6)	40 (33.9)	54 (45.8)	2 (1.7)	0 (0.0)
Barmer	161	39 (24.2)	23 (14.3)	98 (60.9)	1 (0.6)	0 (0.0)
Dungarpur	72	5 (6.9)	54 (75.0)	13 (18.1)	0 (0.0)	0 (0.0)
S. Madhopur	71	24 (33.8)	23 (32.4)	24 (33.8)	0 (0.0)	0 (0.0)
Tonk	104	20 (19.2)	15 (14.4)	66 (63.4)	1 (1.0)	2 (1.9)
Total	526	110 (20.9)	155 (29.5)	255 (48.4)	4 (0.8)	2 (0.4)

\* ghutti/ honey

768 (59.4%) of the 1294 currently lactating women were found to be exclusively breast feeding their baby and 526 (40.6%) for one or the other reason had supplemented breast feed with other



feeds. Of the reasons voiced, family practices for feeding traditional feeds like honey and ghutti (48.4%) and mother not being able to produce enough milk (29.5%); predominated the actuation. The new born in Barmer and Tonk suffered most on account of family practices.

**Table 85: Reasons for not exclusively breast feeding: responses of Mothers-In-Law**

District	Respondents	Reasons			
		Unaware	Insufficient breast milk	Family practices*	Absence of mother (Hospitalized/Death)
Baran	114	32 (28.1)	43 (37.7)	38 (33.3)	1 (0.9)
Barmer	128	20 (15.6)	18 (14.1)	88 (68.8)	2 (1.6)
Dungarpur	36	0 (0.0)	28 (77.8)	7 (19.4)	1 (2.8)
S. Madhopur	41	20 (48.8)	16 (39.0)	5 (12.2)	0 (0.0)
Tonk	74	14 (18.9)	16 (21.6)	44 (59.5)	0 (0.0)
Total	393	86 (21.9)	121 (30.8)	182 (46.3)	4 (1.0)

\* ghutti/ honey

43.8% of the 898 mothers-in-law also felt that exclusive breast feeding cannot support the child's nutritional needs and therefore supplementary feeds are required. In order to substantiate their understanding multiple reasons were put on the floor in support of breast feed complemented by top feed. These are, once again the family practices (46.3%), insufficient breast milk (30.8%) and unawareness (21.9%) about the benefits of exclusive breast feeding.

**Table 86: Place of delivery and its relation to status of exclusive breast feeding: responses of Lactating Mothers**

District	No. of Respondents who exclusively breast fed	Place of Delivery	
		Home	Health Facility
Baran	156	8 (5.1)	148 (94.8)
Barmer	115	76 (66.0)	39 (33.1)
Dungarpur	238	24 (10.0)	214 (89.9)
Sawai Madhopur	138	16 (11.5)	122 (88.4)
Tonk	121	27 (22.3)	94 (77.6)
Total	768	151 (19.6)	617 (80.3)

Considering the place of delivery, exclusive breast feeding was practiced more by those having delivery at the health facility. Of the 768 lactating mothers who exclusively breast fed their new born, 80.3% were those who had their delivery at a health facility. Baran (94.8%), Dungarpur (89.9%) and Sawai Madhopur (88.4%) had the best practice in the regard.



**Table 87: Time of baby's first bath: responses of Lactating Mothers**

Districts	Respondents	Time			
		After the cord dried and separated	Immediate	Within 2-7 days	After one week
Baran	274	14 (5.1)	94 (34.3)	159 (58.0)	7 (2.6)
Barmer	276	24 (8.7)	210 (76.1)	36 (13.0)	6 (2.2)
Dungarpur	310	31 (10.0)	105 (33.9)	171 (55.2)	3 (1.0)
S. Madhopur	209	23 (11.0)	40 (19.1)	141 (67.5)	5 (2.4)
Tonk	225	65 (28.9)	67 (29.8)	73 (32.4)	20 (8.9)
Total	1294	157 (12.1)	516 (39.9)	580 (44.8)	41 (3.2)

The practices in relation to maintaining the body warmth were explored. 39.9% of the interviewed lactating mothers did bathe the baby immediately after delivery; mothers in Barmer (76.1%) were more “hygiene” conscious with poor understanding of body warmth maintenance. Only 12.1% of the lactating mothers bathe their babies after the cord dried and fell off. Mothers-in-law were relatively better informed as to when the baby should be given the first bath

**Table 88: Time of baby's first bath: responses of Mothers-In-Law**

Districts	Respondents	Time				
		After the cord dried and separated	Immediately	Within 2-7 days	After one week	Don't know
Baran	216	13 (6.0)	52 (24.0)	148 (68.5)	0 (0.0)	3 (1.4)
Barmer	204	38 (18.6)	116 (56.8)	49 (24.0)	0 (0.0)	1 (0.5)
Dungarpur	166	51 (30.7)	21 (12.7)	93 (56.0)	0 (0.0)	1 (0.6)
S. Madhopur	126	0 (0.0)	6 (4.8)	114 (90.5)	4 (3.2)	2 (1.6)
Tonk	186	91 (48.9)	4 (2.2)	65 (34.9)	3 (1.6)	23 (12.4)
Total	898	193 (21.5)	199 (22.2)	469 (52.2)	7 (0.8)	30 (3.3)

**Table 89: Reasons of baby's bath before cord shedding: responses of Lactating Mothers**

Districts	Respondents	Reasons		
		Unaware	Family pressure	Tradition
Baran	260	100 (38.5)	160 (61.5)	0 (0.0)
Barmer	252	170 (67.5)	33 (13.1)	49 (19.4)
Dungarpur	279	227 (81.4)	52 (18.6)	0 (0.0)
S. Madhopur	186	90 (48.4)	95 (51.1)	1 (0.5)
Tonk	160	91 (56.9)	69 (43.1)	0 (0.0)
Total	1137	678 (59.6)	409 (36.0)	50 (4.4)





**Table 90: Reasons of baby's bath before cord shedding: responses of Mothers-In-Law**

Districts	Respondents	Reasons		
		Unaware	Family pressure	Tradition
Baran	200	118 (59.0)	82 (41.0)	0 (0.0)
Barmer	165	125 (75.7)	27 (16.4)	13 (7.9)
Dungarpur	114	70 (61.4)	44 (38.6)	0 (0.0)
S. Madhopur	120	62 (51.7)	57 (47.5)	1 (0.8)
Tonk	69	15 (21.7)	51 (73.9)	3 (4.3)
Total	668	390 (58.4)	261 (39.1)	17 (2.5)

Of the 1294 lactating women, 1137 (87.9%) and 668 of 898 mothers-in-law, who did not wait for the cord to dry and fall off had various reasons for bathing the baby with tradition (2.5%) and family member's whims (39.1%) besides the usual "unawareness" (58.4%), highest among the lactating mothers in Dungarpur (81.4%).

**Table 91: Problems faced by lactating mothers after delivery**

District	Problems faced	Problems faced						No problem faced
		Excessive bleeding /discharge	High Fever	Fits	Pain abdomen	Weakness	Other	
Baran (274)	58 (21.2)	6 (10.3)	14(24.1)	0 (0.0)	18(31.0)	8(13.7)	12 (20.6)	216(78.8)
Barmer (276)	37 (13.4)	4 (10.8)	5 (13.5)	3 (8.1)	5 (13.5)	18(48.6)	2 (5.4)	239(86.6)
Dungarpur (310)	14 (4.5)	0 (0.0)	2 (14.3)	0 (0.0)	9 (64.3)	0 (0.0)	3 (21.4)	296(95.5)
S Madhopur (209)	31 (14.8)	3 (9.6)	8 (25.8)	0 (0.0)	5 (16.1)	5(16.1)	10(32.2)	178(85.2)
Tonk (225)	19 (8.4)	1 (5.2)	0 (0.0)	0 (0.0)	7 (36.8)	6(31.6)	5 (26.3)	206(91.6)
Total (1294)	159 (12.3)	14 (8.8)	29(18.2)	3 (1.8)	44(27.6)	37(23.3)	32(20.1)	1135(87.7)

Of the 1294 lactating mothers, 159 (12.3%) had one or the other problem during post natal period; the commonest being pain in abdomen (27.6%), weakness (23.3%) and high fever (18.2%). 8.8% complained of excessive bleeding/discharge.



**Table 92: Relation between place of delivery and problems faced by lactating mothers after delivery**

District	No. of respondents who faced problems	Home delivery		Institutional delivery	
		Number	Problems faced	Number	Problems faced
Baran	58	21	3 (14.3)	253	55 (21.7)
Barmer	37	192	25 (13.0)	84	12 (14.3)
Dungarpur	14	47	1 (2.1)	263	13 (4.9)
Sawai Madhopur	31	32	3 (9.4)	177	28 (15.8)
Tonk	19	52	2 (3.8)	173	17 (9.8)
Total	159	344	34 (9.9)	950	125 (13.2)

Irrespective of the place of delivery problems were faced by women after delivery. Of those who delivered at a health facility 13.2% faced some problem after delivery. 9.9% lactating mothers who delivered at home faced problem, and that is where the logics are defied as ideally home delivery should have had more problems as compared to supervised institutional deliveries.

**Table 93: Relation between place of delivery and type of problems faced by lactating mothers after delivery**

District	Place of Delivery	Problems faced					
		Excessive bleeding/discharge	High Fever	Fits	Pain abdomen	Weakness	Other
Baran (274)	Home(3)	1 (33.3)	0 (0.0)	0 (0.0)	1 (33.3)	0 (0.0)	1 (33.3)
	Health facility(55)	5 (9.0)	14 (25.4)	0 (0.0)	17 (30.9)	8 (14.5)	11 (20.0)
Barmer (276)	Home(25)	4 (16.0)	5 (20.0)	1 (4.0)	2 (8.0)	12 (48.0)	1 (4.0)
	Health facility(12)	0 (0.0)	0 (0.0)	2 (16.6)	3 (25.0)	6 (50.0)	1 (8.3)
Dungarpur (310)	Home(1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
	Health facility(13)	0 (0.0)	2 (15.3)	0 (0.0)	9 (69.2)	0 (0.0)	2 (15.3)
S. Madhopur (209)	Home(3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (44.4)	2 (66.6)
	Health facility(28)	3 (10.7)	8 (28.5)	0 (0.0)	5 (17.8)	4 (14.2)	9 (32.1)
Tonk (225)	Home(2)	0 (0.0)	0 (0.0)	0 (0.0)	1 (50.0)	1 (50.0)	0 (0.0)
	Health facility(17)	1 (5.8)	0 (0.0)	0 (0.0)	10 (58.8)	9 (52.9)	4 (23.5)
Total (1294)	Home(34)	5 (14.7)	5 (14.7)	1 (23.9)	4 (11.7)	14 (41.1)	5 (14.7)
	Health facility(125)	9 (7.2)	24 (19.2)	2 (1.6)	44 (35.2)	37 (29.6)	27 (21.6)

The most prominent problem faced in case of home delivery is weakness (41.1%) and women with an institutional delivery had complaint of pain abdomen after delivery. However, excessive bleeding was observed more in case of home deliveries where out of the 34 cases of home



deliveries 5 women (14.7%) complaint of the problem and only 9 women out of 125 who had institutional delivery had excessive bleeding.

**Table 94: Action taken in case of problem after delivery: responses of Lactating Mothers**

District	Respondents	Action Taken				
		Nothing	Immediately went to hospital	Went to hospital after 2-3 days	Contacted Dai/Bengali doctor	Home remedies
Baran	58	23 (39.7)	19 (32.8)	12 (20.7)	0 (0.0)	4 (6.9)
Barmer	37	6 (16.2)	18 (48.6)	4 (10.8)	2 (5.4)	7 (18.9)
Dungarpur	14	1 (7.1)	6 (42.9)	2 (14.3)	0 (0.0)	5 (35.7)
S. Madhopur	31	4 (12.9)	17 (54.8)	5 (16.1)	1 (3.2)	4 (12.9)
Tonk	19	2 (10.5)	13 (68.4)	4 (21.1)	0 (0.0)	0 (0.0)
Total	159	36 (22.6)	73 (45.9)	27 (17.0)	3 (1.9)	20 (12.6)

Among 159 respondents who faced any/some problem in the post delivery period, 45.9% immediately sought medical advice from health centre and their mothers-in-law (44.3%) also supported this practice. The practice was best found in Tonk (68.4%), Sawai Madhopur (54.8%) and Barmer (48.6%) district.

17% respondents sought delayed medical care after 2-3 days whereas 22.6% respondents did nothing or simply ignored the problem and 1.9% took treatment from Dai/Bengali Doctor (quacks).

Ignoring the problem was maximum in Baran (39.7%) in contrast to Dungarpur (7.1%) respondents.

The subjects from tribal district (Dungarpur) sought solace in home remedies (35.7%).

**Table 95: Action taken in case of problem after delivery: responses of Mothers-In-Law**

District	Respondents	Action Taken				
		Nothing	Immediately went to hospital	Sometimes went hospital after 2-3 days	Went to Familiar Dai/Bangali doctor	Home remedies followed
Baran	57	12 (21.1)	18 (31.6)	7 (12.3)	1 (1.8)	19 (33.3)
Barmer	14	1 (7.1)	8 (57.1)	1 (7.1)	0 (0.0)	4 (28.6)
Dungarpur	9	1 (11.1)	5 (55.6)	1 (11.1)	0 (0.0)	2 (22.2)
S. Madhopur	17	4 (23.5)	11 (64.7)	1 (5.9)	0 (0.0)	1 (5.9)
Tonk	9	0 (0.0)	5 (55.6)	3 (33.3)	1 (11.1)	0 (0.0)
Total	106	18 (17.0)	47 (44.3)	13 (12.3)	2 (1.9)	26 (24.5)



**Table 96: Status of consumption of IFA tablets after delivery: response of Lactating Mothers**

Districts	Respondents	Yes		No	
		Number	Percentage	Number	Percentage
Baran	274	62	22.6	212	77.4
Barmer	276	40	14.5	236	85.5
Dungarpur	310	74	23.9	236	76.1
S. Madhopur	209	14	6.7	195	93.3
Tonk	225	71	31.6	154	68.4
Total	1294	261	20.2	1033	79.8

79.8% of the lactating mothers did not consume IFA tablets after delivery. The responses from mothers-in-law (75.9%) also supported that their daughter-in-laws did not consume IFA following delivery.

**Table 97: Status of consumption of IFA tablets after delivery: response of Mothers-In-Law**

Districts	Respondents	Yes	No	Don't know
Baran	216	42 (19.4)	165 (76.4)	9 (4.1)
Barmer	204	37 (18.1)	156 (76.5)	11 (5.4)
Dungarpur	166	55 (33.1)	107 (64.5)	4 (2.4)
S. Madhopur	126	12 (9.5)	113 (89.7)	1 (0.8)
Tonk	186	30 (16.1)	141 (75.8)	15 (8.1)
Total	898	176 (19.6)	682 (75.9)	40 (4.4)

**Table 98: Reasons for non-consumption of IFA Tablets after delivery: response of Lactating Mothers**

Districts	Non-Consumption of IFA Tablets							Total
	Did not go to health facility	AWW were not present in AWC	Health worker did not visit	Not important	Family Restrictions	Didn't get	Nausea	
Baran	67(31.6)	27(12.7)	48 (22.6)	70 (33.0)	0 (0.0)	0 (0.0)	0 (0.0)	212
Barmer	20 (8.5)	26(11.0)	70 (29.7)	109(46.2)	2 (0.8)	8 (3.4)	1 (0.4)	236
Dungarpur	5 (2.1)	5 (2.1)	16 (6.8)	208(88.1)	2 (0.8)	0 (0.0)	0 (0.0)	236
S. Madhopur	1 (0.5)	8 (4.1)	42 (21.5)	143(73.3)	1 (0.5)	0 (0.0)	0 (0.0)	195
Tonk	1 (0.6)	2 (1.3)	103(66.9)	43 (27.9)	1 (0.6)	3 (1.9)	1 (0.6)	154
Total	94 (9.1)	68 (6.6)	279(27.0)	573(55.5)	6 (0.6)	11(1.1)	2 (0.2)	1033

Of the 1294 lactating mothers, 1033 did not consume IFA during post partum period for many reasons, the most visible being "did not consider it important" (55.5%) and another 27% ascribed to ANM/AWW not visiting them at home. However, this is in contradiction to their own responses where 58% did vouch that PNC visits were made post partum.



An attempt was made to find out whether those women who went for ANC also availed PNC. For this paired 't' test was applied and the calculated value is  $t=1.838$ . Which commits the acceptance of null hypothesis at 5% and 1% level of significance and shows that in all the districts all the lactating mothers who had one or more ANC visits during pregnancy did go for post natal care.

**Table 99: PNC visits: responses of Lactating Mothers**

Districts	Respondents	Yes	No	Don't know
Baran	274	186 (67.9)	88 (32.1)	0 (0.0)
Barmer	276	88 (31.9)	188 (68.1)	0 (0.0)
Dungarpur	310	173 (55.8)	137 (44.2)	0 (0.0)
S. Madhopur	209	140 (67.0)	69 (33.0)	0 (0.0)
Tonk	225	169 (75.1)	56 (24.9)	0 (0.0)
Total	1294	756 (58.4)	538 (41.6)	0 (0.0)

**Table 100: PNC visits: responses of Mothers-In-Law**

Districts	Respondents	Yes	No	Don't know
Baran	216	135 (62.5)	76 (35.2)	5 (2.3)
Barmer	204	64 (31.4)	139 (68.1)	1 (0.5)
Dungarpur	166	109 (65.7)	54 (32.5)	3 (1.8)
S. Madhopur	126	88 (69.8)	37 (29.4)	1 (0.8)
Tonk	186	121 (65.1)	54 (29.0)	11 (5.9)
Total	898	517 (57.6)	360 (40.1)	21 (2.3)

**Table 101: Type of diet taken after delivery: responses of Lactating Mothers**

Districts	Respondents	Normal food	Special diet*
Baran	274	82 (29.9)	192 (70.1)
Barmer	276	24 (8.7)	252 (91.3)
Dungarpur	310	77 (24.8)	233 (75.2)
S. Madhopur	209	21 (10.0)	188 (90.0)
Tonk	225	17 (7.6)	208 (92.4)
Total	1294	221 (17.1)	1073 (82.9)

\* Ghee/ladoo



**Table 102: Type of diet taken after delivery: responses of Mothers-In-Laws**

Districts	Respondents	Normal food	Special diet*
Baran	216	67 (31.0)	149 (69.0)
Barmer	204	12 (5.9)	192 (94.1)
Dungarpur	166	40 (24.1)	126 (75.9)
S. Madhopur	126	8(6.3)	118 (93.7)
Tonk	186	25 (13.4)	161 (86.6)
Total	898	152 (16.9)	746 (83.1)

\* Ghee/ladoo

The traditional practice of restraining certain foods during pregnancy but compensating it post partum simply stands substantiated as 82.9% of lactating mothers were given energy rich foods; irrespective of the terrain, tribes and districts. The mothers-in-law were supportive of this.

**Table 103: Status of rest taken after delivery: responses of Lactating Mothers**

Districts	Respondents	Less than a week	Around one to two weeks	Till one month	More than one month
Baran	274	20 (7.3)	32 (11.7)	121 (44.2)	101 (36.9)
Barmer	276	56 (20.3)	92 (33.3)	94 (34.1)	34 (12.3)
Dungarpur	310	25 (8.1)	74 (23.9)	128 (41.3)	83 (26.8)
S. Madhopur	209	13 (6.2)	50 (23.9)	89 (42.6)	57 (27.2)
Tonk	225	10 (4.4)	16 (7.1)	120 (53.3)	79 (35.1)
Total	1294	124 (9.6)	264 (20.4)	552 (42.7)	354 (27.3)

Traditional cultural inheritance and norms with respect to relatively isolating the women and putting her to rest during post partum period has a strong scientific evidence based on the period by which involution of uterus normally takes place. The practice transcends across all the sections of society irrespective of the beliefs, practices and poverty levels. The practice also is conducive to avoiding Post-Partum Haemorrhage (PPH).

42.7% of lactating mothers rested for a month and 27.3% were confined for more than a month. 9.6% had to resort to daily chores within a week. 45.3% of the mothers-in-law favored a rest for a month and another 31.4% supported rest for lactating mothers for more than a month.



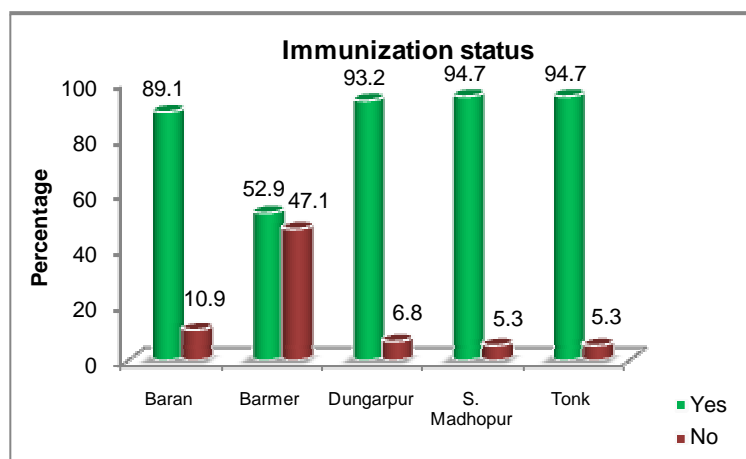
**Table 104: Status of rest taken after delivery: responses of Mothers-In-Law**

Districts	Respondents	Less than a week	Around one to two weeks	Till one month	More than one month
Baran	216	12 (5.6)	12 (5.6)	104 (48.1)	88 (40.7)
Barmer	204	33 (16.2)	63 (30.9)	86 (42.2)	22 (10.7)
Dungarpur	166	11 (6.6)	23 (13.9)	77 (46.4)	55 (47.4)
S. Madhopur	126	4 (3.2)	27 (21.4)	66 (52.4)	29 (23.0)
Tonk	186	16 (8.6)	8 (4.3)	74 (39.8)	88 (47.3)
Total	898	76 (8.5)	133 (14.8)	407 (45.3)	282 (31.4)

**Table 105: Child immunization: responses of Lactating Mothers**

Districts	Respondent	Status of Infant vaccination			
		Yes		No	
		Number	Percentage	Number	Percentage
Baran	274	244	89.1	30	10.9
Barmer	276	146	52.9	130	47.1
Dungarpur	310	289	93.2	21	6.8
S. Madhopur	209	198	94.7	11	5.3
Tonk	225	213	94.7	12	5.3
Total	1294	1090	84.2	204	15.8

Though the design of the protocols did not allow explicit categorization of partially immunized and fully immunized children; still based on the information collected 84.2% of the lactating mothers expressed that the child was immunized.





**Table 106: Reason for non vaccination of new born child: responses of Lactating Mothers**

Districts	Respondents	Reasons						
		Unaware	Health worker did not come at home	Child was sick	Vaccination causes fever	Family Restrictions	Not important	Child is small right now
Baran	30	12 (40.0)	9 (30.0)	2 (6.7)	0 (0.0)	1 (3.3)	1 (3.3)	5(16.7)
Barmer	130	44(33.8)	53 (40.8)	3 (2.3)	5 (3.8)	19(14.6)	2 (1.5)	4 (3.1)
Dungarpur	21	10 (47.6)	6 (28.5)	1 (9.5)	1 (4.8)	0 (0.0)	1 (4.8)	1 (4.8)
S. Madhopur	11	5 (45.4)	6 (54.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Tonk	12	3 (25.0)	5 (41.7)	1 (8.3)	3 (25.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	204	74 (36.2)	79 (38.7)	8 (3.9)	9 (4.4)	20 (9.8)	4 (1.9)	10(4.9)

204 lactating women with unimmunized child came out with wide and varied reasons where once again dependence – “no health worker came at home” (38.7%) and lack of knowledge and unawareness (36.2%) were put as the main reason. Only mothers (25%) of Tonk attributed it to consequent fever and therefore avoided vaccination.

**Table 107: Reason for non vaccination of new born child: responses of Mothers-In-Law**

Districts	Respondents	Unaware	Health worker did not come at home	Child was sick	Vaccination causes fever	Superstition	Child is small right now
Baran	21	5 (23.8)	5 (23.8)	2 (9.5)	1 (4.8)	0 (0.0)	8(38.1)
Barmer	86	25 (29.1)	43 (50.0)	1 (1.2)	4 (4.7)	10(11.6)	3(3.5)
Dungarpur	13	8 (61.5)	3 (23.0)	1 (7.7)	1 (7.7)	0 (0.0)	0(0.0)
S. Madhopur	9	5 (55.5)	3 (33.3)	1(11.1)	0 (0.0)	0 (0.0)	0(0.0)
Tonk	10	4 (40.0)	5 (50.0)	0 (0.0)	1 (10.0)	0 (0.0)	0(0.0)
Total	139	47 (33.8)	59 (42.4)	5 (3.6)	7 (5.0)	10 (7.2)	11(7.9)

The reasons posed by mothers-in-law were no different with 42.4% accusing health workers for not turning up another 33.8% simply assigning it to their unawareness.





**Table 108: Place of delivery and relation with child immunization: responses of Lactating Mothers**

District	No of respondents	Place of delivery	
		Home	Health Facility
Baran	244	13 (5.3)	231 (94.6)
Barmer	146	89 (60.9)	57 (39.0)
Dungarpur	289	41 (14.1)	248 (85.8)
Sawai Madhopur	198	27 (13.6)	171 (86.3)
Tonk	213	50 (23.4)	163 (76.5)
Total	1090	220 (20.1)	870 (79.8)

Practice of immunizing the child was more among those lactating women who had institutional delivery (79.8%).

**Table 109: Practice of taking child to health facility: responses of Lactating Mothers**

Districts	Respondents	Check up		Total	Growth Monitoring (weighing)	
		Yes	No		Yes	No
Baran	274	81 (29.6)	193 (70.4)	274	207 (75.5)	67 (24.5)
Barmer	276	82 (29.7)	194 (70.3)	276	65 (23.6)	211 (76.4)
Dungarpur	310	195 (62.9)	115 (37.1)	310	182 (58.7)	128 (41.3)
S. Madhopur	209	80 (38.3)	129 (61.7)	209	115 (55.0)	94 (45.0)
Tonk	225	118 (52.4)	107 (47.6)	225	161 (71.6)	64 (28.4)
Total	1294	556 (43.0)	738 (57.0)	1294	730 (56.4)	564 (43.6)

Overall 43.0% lactating mothers took their new born to the health centre for check up (maximum in Dungarpur – 62.9). Practice of not having initial check up was 57.0% overall which was considerably high in Baran (70.4%) and Barmer (70.3%) district.

Practice of regular growth monitoring was 56.4% and it was best found in Baran (75.5%) & Tonk (71.6%).

The views of mothers-in-law also supported the same.



**Table 110: Status of utilization of health facility: responses of Mothers-In-Law**

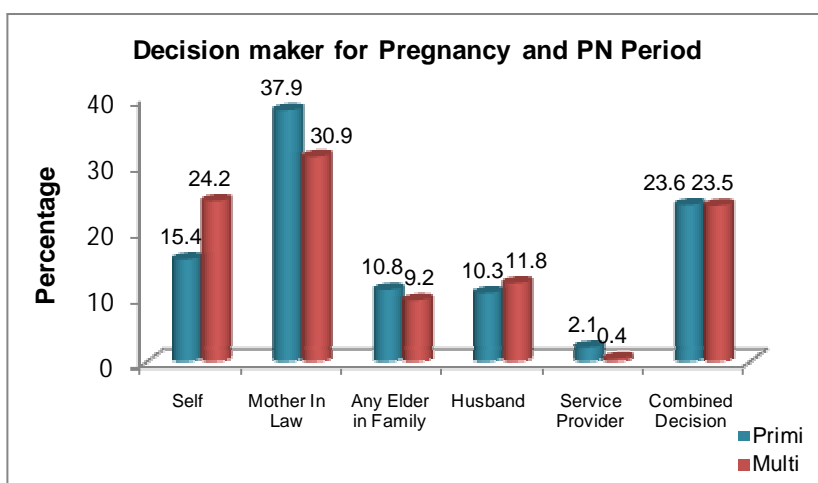
Districts	Respondent	Check up					Growth Monitoring(weighing)			
		Yes	No	Don't know	Will go now	No response	Yes	No	Don't know	No response
Baran	216	58 (26.9)	150 (69.4)	5 (2.3)	1 (0.5)	2 (0.9)	170 (78.7)	42 (19.4)	2 (0.9)	2 (0.9)
Barmer	204	57 (27.9)	145 (71.1)	1 (0.5)	0 (0.0)	1 (0.5)	44 (21.6)	157 (77.0)	2 (1.0)	1 (0.5)
Dungarpur	166	107 (64.5)	58 (34.9)	0 (0.0)	0 (0.0)	1 (0.6)	106 (63.9)	57 (34.3)	2 (1.2)	1 (0.6)
S. Madhopur	126	55 (43.7)	70 (55.6)	0 (0.0)	0 (0.0)	1 (0.8)	80 (63.5)	43 (34.1)	2 (1.6)	1 (0.8)
Tonk	186	109 (58.6)	51 (27.4)	21 (11.3)	0 (0.0)	5 (2.7)	128 (68.8)	46 (24.7)	8 (4.3)	4 (2.2)
Total	898	386 (43.0)	474 (52.8)	27 (3.0)	1 (0.1)	10 (1.1)	528 (58.8)	345 (38.4)	16 (1.8)	9 (1.0)

**Table 111: Decision makers for pregnancy and PN period: responses of Pregnant Women**

Districts	Respondents	Self	Mother- In-Law	Any Elder in Family	Husband	Service Provider	Combined Decision
Baran	PGP (52)	4 (7.7)	20(38.5)	3 (5.8)	10 (19.2)	0 (0.0)	15 (28.8)
	MGP (84)	6 (7.1)	23(27.4)	2 (2.4)	17 (20.2)	0 (0.0)	36 (42.9)
Barmer	PGP (25)	5 (20.0)	14 (56.0)	5 (20.0)	1 (4.0)	0 (0.0)	0 (0.0)
	MGP (96)	42 (43.8)	44(45.8)	4 (4.2)	6 (6.3)	0 (0.0)	0 (0.0)
Dungarpur	PGP (21)	4 (19.0)	11(52.4)	2 (9.5)	2 (9.5)	1 (4.8)	1 (4.8)
	MGP (96)	24 (25.0)	36(37.5)	14 (14.6)	20 (20.8)	1 (1.0)	1 (1.0)
S. Madhopur	PGP (45)	10 (22.2)	13(28.9)	6 (13.3)	2 (4.4)	1 (2.2)	13 (28.9)
	MGP (110)	30 (27.3)	22(20.0)	10 (9.1)	2 (1.8)	1 (0.9)	45 (40.9)
Tonk	PGP (52)	7 (13.5)	16(30.8)	5 (9.6)	5 (9.6)	2 (3.8)	17 (32.7)
	MGP (90)	13 (14.4)	22(24.4)	14 (15.6)	11 (12.2)	0 (0.0)	30 (33.3)
Total	PGP (195)	30 (15.4)	74(37.9)	21 (10.8)	20 (10.3)	4 (2.1)	46 (23.6)
	MGP (476)	115(24.2)	147(30.9)	44 (9.2)	56 (11.8)	2 (0.4)	112 (23.5)

PGP-Primi Gravida Pregnant, MGP- Multi Gravida Pregnant

By and large the decision regarding care during pregnancy and post natal period and service seeking is dictated by the mother-in-law. But there was a change in trend in decision making from primi to multi gravid. With increasing parity, the





decision taking power of the pregnant mother increased, corresponding to a decline in decision making by mother-in-law. In case of primi gravida 37.9% of the pregnant women said that their mothers-in-law decided but in case of multi gravida only 30.9% of the pregnant women endorsed their decision. Similarly while only 15.4% of the primi gravida could decide about care, 24.2% of the multi gravida were the decision makers. Though slight differences are seen in the decision making of primi and multi gravid women, however, when “F” test is applied to check equality of variances in the responses of primi and multi gravid women no marked variation was seen as regards decision making about place of delivery. We are 95% confident about the result due to the value of F (statistics) = 3.15.

**Table 112: Decision makers for Pregnancy and PN period: responses of Lactating Mothers**

District		Decision maker					Total
		Self	Mother In Law	Elder person of family	Husband	Combined Decision	
Baran	Para I	3(4.7)	28(43.8)	3(4.7)	12(18.8)	18(28.1)	64
	Multi	14(6.7)	57(27.1)	13(6.2)	50(23.8)	76(36.2)	210
Barmer	Para I	12(19.0)	42(66.7)	7(11.1)	2(3.2)	0(0.0)	63
	Multi	83(39.0)	87(40.8)	13(6.1)	29(13.6)	1(0.5)	213
Dungarpur	Para I	16(19.0)	40(47.6)	21(25.0)	7(8.3)	0(0.0)	84
	Multi	57(25.2)	78(35.5)	42(18.6)	46(20.4)	3(1.3)	226
Sawai Madhopur	Para I	9(17.6)	11(21.6)	5(9.8)	2(3.9)	24(47.1)	51
	Multi	63(39.9)	32(20.3)	4(2.5)	5(3.2)	54(34.1)	158
Tonk	Para I	9(11.8)	21(27.6)	14(18.4)	15(19.7)	17(22.4)	76
	Multi	28(18.8)	28(18.8)	12(8.1)	38(25.5)	43(28.9)	149
Total	Para I	49(14.5)	142(42.0)	50(14.8)	38(11.2)	59(17.5)	338
	Multi	245(25.6)	282(29.5)	84(8.8)	168(17.6)	177(18.5)	956

Responses of the currently lactating mothers were no different as multi gravida (25.6%) stood out to be a little more confident in deciding for themselves as compared to the primi gravida (14.5%). “F” test to check the equality of variance of para I and multi para women. The value of F (statistic) = 1.855, which cause the acceptance of null hypothesis at 5% level of significance and shows no significant difference. Mothers-in-law stood as the most prominent decision makers for both, para I and multi para women.



**Table 113: Decision makers for Pregnancy and PN period: responses of Mothers-In-Law**

Districts	Respondents	Self	Pregnant women	Husband of Pregnant women	Anyone Elder in Family	Service Provider
Baran	PGP (41)	23 (56.1)	2 (4.9)	5 (12.2)	11 (26.8)	0 (0.0)
	MGP (43)	33 (76.7)	0 (0.0)	4 (9.3)	5 (11.6)	1 (2.3)
Barmer	PGP (10)	6 (60.0)	2 (20.0)	2 (20.0)	0 (0.0)	0 (0.0)
	MGP (65)	48 (73.8)	10 (15.4)	5 (7.7)	1 (1.5)	1 (1.5)
Dungarpur	PGP (8)	4 (50.0)	1 (12.5)	1 (12.5)	2 (25.0)	0 (0.0)
	MGP (41)	27 (65.9)	1 (2.4)	1 (2.4)	12 (29.3)	0 (0.0)
S. Madhopur	PGP (18)	10 (55.6)	0 (0.0)	1 (5.6)	6 (33.3)	1 (5.6)
	MGP (42)	21 (50.0)	8 (19.0)	1 (2.4)	10 (23.8)	2 (4.8)
Tonk	PGP (51)	30 (58.8)	1 (2.0)	3 (5.9)	16 (31.4)	1 (2.0)
	MGP (59)	32 (54.2)	4 (6.8)	11 (18.6)	11 (18.6)	1 (1.7)
Total	PGP (128)	73 (57.0)	6 (4.7)	12 (9.4)	35 (27.3)	2 (1.6)
	MGP (250)	161 (64.4)	23 (9.2)	22 (8.8)	39 (15.6)	5 (2.0)

PGP-Primi Gravida Pregnant, MGP- Multi Gravida Pregnant

Further, on being questioned regarding who takes the decision related to pregnancy, delivery and child care, 378 mothers-in-law opined that the decision rests with them irrespective of the number of times their daughter-in-laws have gone through the physiological process. The observations are in contradiction to the expressions of pregnant and lactating women.



### Service Providers

During the course of study the service providers perspective was also taken into account. The study included - ASHA (46), ANM (38) and AWW (48), from the villages and institutions visited as per the agreed sample size

An attempt was made to enumerate the reasons why the target population could not be reached. The possible reasons given by the group as a whole have been clubbed together.

**Table 114: Reasons for not providing health facilities to targeted population (ANC, PNC)**

Districts	Service Providers	Reasons						
		Couldn't contact	Refused services	Didn't believe on services	Services are out of reach	Couldn't take decision to have services	Dependence on family members for services	Due to Customs/beliefs
Baran	38	2(5.3)	2(5.3)	1(2.6)	3(7.9)	13(34.2)	9(23.7)	7(18.4)
Barmer	20	2(10.0)	4(20.0)	2(10.0)	1(5.0)	5(25.0)	6(30.0)	0(0.0)
Dungarpur	22	16(72.7)	1(4.5)	1(4.5)	1(4.5)	0(0.0)	3(13.6)	0(0.0)
S. Madhopur	29	16(55.2)	3(10.3)	0(0.0)	3(10.3)	2(6.9)	2(6.9)	3(10.3)
Tonk	23	20(87.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	1(4.3)	2(8.7)
Total	132	56(42.4)	10(7.6)	4(3.0)	8(6.1)	20(15.2)	21(15.9)	12(9.1)

\*There was only one respondent who from Baran who said that the services are not available

The principal reason that emerged out of the analyzed responses by and large focused around "could not contact" (42.4%) but then why the contact could not be established with beneficiary neither was recorded nor could be analyzed. However, the other reasons where the beneficiaries either refused, dependent on family members, restrained on account of customs and beliefs probably are facilitated by the factors like service availability, inaccessibility and refusal which have the potential of being addressed by the system. And that requires change in attitude and behavior of service providers besides strengthening the infrastructure and service availability. All this put in place and supported by an effective IEC/BCC to generate the demand, certainly will take care of the perceived gaps at beneficiary level; promoting and ensuring the continuum of care.



**Table 115: Reason of Non registration of pregnant females**

Districts	Service Provider	Reasons			
		Pregnant lady and her family members don't consider it important	Pregnant lady couldn't get in contact	All registered	Out of village
Baran	38	1(2.6)	27(71.1)	4(10.5)	6(15.8)
Barmer	20	17(85.0)	2(10.0)	1(5.0)	0(0.0)
Dungarpur	22	4(18.2)	16(72.7)	2(9.1)	0(0.0)
S. Madhopur	29	7(24.1)	21(72.4)	1(3.4)	0(0.0)
Tonk	23	3(13.0)	3(13.0)	14(60.9)	3(13.0)
Total	132	32(24.2)	69(52.3)	22(16.7)	9(6.8)

In order to ensure that services reach to every possible beneficiary for essential and emergency obstetric care enumeration and early registration had been the agreed approach. When probed as to why pregnant women are not registered, 52.3% of the service providers said that the expectant mother could not be contacted and as usual another 24.2% held the beneficiary or her family for not coming up for registration.

Further, when specifically questioned on why women do not turn up for ANC, the responses were the same repetition, that women did not consider it important (28.8%), they are scared and hesitant (13.6%) and service centers are not easily accessible (13.6%). Paradoxically, in Barmer, where 90% of service providers blamed beneficiaries for not considering ANC as important; interestingly none of them said that services are not within reach of beneficiary.

**Table 116: Reasons for reluctance towards ANC check ups**

Districts	Service Providers	Reasons						
		Not important	Service out of reach	Scared & hesitant	No one to accompany	Everyone come	Out of village	Don't come due to work
Baran	38	3(7.9)	4(10.5)	4(10.5)	9(23.7)	15(39.5)	1(2.6)	2(5.3)
Barmer	20	18(90.0)	0(0.0)	1(5.0)	1(5.0)	0(0.0)	0(0.0)	0(0.0)
Dungarpur	22	4(18.2)	5(22.7)	10(45.5)	0(0.0)	3(13.6)	0(0.0)	0(0.0)
S. Madhopur	29	12(41.4)	8(27.6)	3(10.3)	1(3.4)	4(13.8)	1(3.4)	0(0.0)
Tonk	23	1(4.3)	1(4.3)	0(0.0)	0(0.0)	17(73.9)	2(8.7)	2(8.7)
Total	132	38(28.8)	18(13.6)	18(13.6)	11(8.3)	39(29.5)	4(3.0)	4(3.0)



**Table 117: Reasons of Non Compliance of TT Vaccination.**

Districts	Service Providers	Reasons						
		Not important	Fear	Relatives restrict for it	No one to accompany	Superstition	Never happened / all occupied	Not able to contact
Baran	38	6(15.8)	6(15.8)	0(0.0)	4(10.5)	2(5.3)	16(42.1)	4(10.5)
Barmer	20	14(70.0)	1(5.0)	3(15.0)	1(5.0)	1(5.0)	0(0.0)	0(0.0)
Dungarpur	22	10(45.5)	2(9.1)	2(9.1)	3(13.6)	5(22.7)	0(0.0)	0(0.0)
S. Madhopur	29	7(24.1)	5(17.2)	6(20.7)	1(3.4)	0(0.0)	8(27.6)	2(6.9)
Tonk	23	1(4.3)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	17(73.9)	5(21.7)
Total	132	38(28.8)	14(10.6)	11(8.3)	9(6.8)	8(6.1)	41(31.1)	11(8.3)

According to the service providers (28.8%) beneficiaries did not consider it necessary to get themselves vaccinated with TT shots during pregnancy. Another 10.6% of them attributed it to fear of the beneficiaries. However, 31.1% reported that all the beneficiaries registered with them did get the TT shots. Restriction from the family members (8.3%) and relatives also played a role in non-compliance to TT vaccination.

**Table 118: Delivery practices**

Districts	Service Provider	Home	Hospital	Dai	Observing 5C's	Complicated referred to hospital
Baran	38	0(0.0)	31(81.6)	0(0.0)	0(0.0)	6(15.8)
Barmer	20	6(30.0)	11(55.0)	2(10.0)	1(5.0)	0(0.0)
Dungarpur	22	0(0.0)	22(100.0)	0(0.0)	0(0.0)	0(0.0)
S. Madhopur	29	2(6.9)	14(48.3)	0(0.0)	13(44.8)	0(0.0)
Tonk	23	0(0.0)	22(95.7)	0(0.0)	0(0.0)	1(4.3)
Total	132	8(6.1)	100(75.8)	2(1.5)	14(10.6)	7(5.3)

Right from the days CSSM 5 cleans are being promoted as a measure to reduce infection during delivery. Only 10.6% of the service providers could identify 5 cleans as an essential component of delivery. 75.8% felt that the preferred place of delivery among the pregnant women is hospital with 6.1% going for home delivery assisted by a dai (1.5%) or relatives.



**Table 119: Reasons for preferring home delivery**

Districts	Service Providers	Reasons				
		Customarily family practices	Distance	Transportation	Poor care at facility	No one to accompany
Baran	38	18(47.4)	6(15.8)	12(31.6)	1(2.6)	1(2.6)
Barmer	20	8(40.0)	5(25.0)	5(25.0)	2(10.0)	0(0.0)
Dungarpur	22	10(45.5)	1(4.5)	3(13.6)	4(18.2)	4(18.2)
S. Madhopur	29	12(41.4)	3(10.3)	6(20.7)	4(13.8)	4(13.8)
Tonk	23	13(56.5)	1(4.3)	0(0.0)	9(39.1)	0(0.0)
Total	132	61(46.2)	16(12.1)	26(19.7)	20(15.1)	9(6.8)

In response to the question from the service providers as to why people prefer home delivery 46.2% attributed the reason to customs and family practice. Lack of proper transport was another reason provided by the services providers (19.7%) for opting home delivery.

**Table 120: Reasons for non consumption of IFA tablets**

Districts	Service Providers	Forgetfulness	Relatives restrict for it	Side effects	Non-availability	Fear	Quality	Not important
Baran	38	8(21.1)	1(2.6)	20(52.6)	2(5.3)	3(7.9)	4(10.5)	0(0.0)
Barmer	20	6(30.0)	1(5.0)	8(40.0)	0(0.0)	3(15.0)	0(0.0)	2(10.0)
Dungarpur	22	2(9.1)	0(0.0)	20(90.9)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
S. Madhopur	29	2(6.9)	0(0.0)	24(82.7)	0(0.0)	0(0.0)	3(10.3)	0(0.0)
Tonk	23	2(0.0)	0(0.0)	22(95.6)	0(0.0)	1(4.3)	0(0.0)	0(0.0)
Total	132	18(13.6)	2(1.5)	94(71.2)	2(1.5)	7(5.3)	7(5.3)	2(1.5)

Over all reasons of non compliance of IFA tablets intake was mainly due to perceived side effects (71.2%). Second important reason was forgetfulness (13.6%).

**Table 121: Reasons of not taking extra diet & rest during pregnancy**

Districts	Service Providers	Reasons				
		Not important	Resources are not available	Household works	Complications in pregnancy due to overeating	Work would aid in easy delivery
Baran	38	11(28.9)	14(36.8)	12(31.6)	1(2.6)	0(0.0)
Barmer	20	4(20.0)	2(10.0)	7(35.0)	1(5.0)	6(30.0)
Dungarpur	22	0(0.0)	8(36.4)	13(59.1)	0(0.0)	1(4.5)
S. Madhopur	29	8(27.6)	8(27.6)	13(44.8)	0(0.0)	0(0.0)
Tonk	23	0(0.0)	0(0.0)	19(82.6)	2(8.7)	2(8.7)
Total	132	23(17.4)	32(24.2)	64(48.5)	4(3.0)	9(6.8)





Reasons of not taking extra diet & rest during pregnancy was mainly attributed to household work (48.5%).

**Table 122: Reasons of not availing child care facilities at health centre**

Districts	Service Providers	Reasons				
		Traditions & customs	Resources not available	Not important	Superstition	Everyone goes to hospital/ Use home medication
Baran	38	9(23.7)	7(18.4)	7(18.4)	5(13.2)	10(26.3)
Barmer	20	8(40.0)	1(5.0)	3(15.0)	8(40.0)	0(0.0)
Dungarpur	22	2(9.1)	4(18.2)	7(31.8)	8(36.4)	1(4.5)
S. Madhopur	29	11(37.9)	0(0.0)	1(3.4)	16(55.2)	1(3.4)
Tonk	23	0(0.0)	0(0.0)	0(0.0)	13(56.5)	10(43.5)
Total	132	30(22.7)	12(9.1)	18(13.6)	50(37.9)	22(16.7)

Superstition (evil eye/nazar) restricts the family/mother from taking the child to health facility according to 37.9% of the health workers. Another 22.7% attributed it to traditions and customs.

**Table 123: Reasons for denying colostrum to new born baby**

Districts	Service Providers	Reasons				
		Not suitable	Mother & child not fit for colostrum feeding	Not important	Feeding only after ceremony	Now every mother give her first milk to their child
Baran	38	7(18.4)	2(5.3)	13(34.2)	4(10.5)	12(31.6)
Barmer	20	12(60.0)	2(10.0)	3(15.0)	3(15.0)	0(0.0)
Dungarpur	22	7(31.8)	7(31.8)	7(31.8)	0(0.0)	1(4.5)
S. Madhopur	29	22(75.9)	1(3.4)	6(20.7)	0(0.0)	0(0.0)
Tonk	23	0(0.0)	6(26.1)	6(26.1)	0(0.0)	11(47.8)
Total	132	48(36.4)	18(13.6)	35(26.5)	7(5.3)	24(18.2)

The prime reason propounded by service providers for not feeding the baby with colostrum was the perception about unsuitability for the new born (36.4%) and another 26.5% of them said that it is not considered important by the mothers to feed the child with colostrum.



**Table 124: Reasons of not practicing exclusive breast feeding**

Districts	Service Providers	Reasons					
		Water necessary for quenching thirst	Janam Ghutti helps in digestion	Mother's milk not enough	Mother busy with work	Tradition	Now no one give these things
Baran	38	4(10.5)	5(13.2)	20(52.6)	0(0.0)	5(13.2)	4(10.5)
Barmer	20	5(25.0)	4(20.0)	9(45.0)	1(5.0)	1(5.0)	0(0.0)
Dungarpur	22	2(9.1)	7(31.8)	12(54.5)	0(0.0)	1(4.5)	0(0.0)
S. Madhopur	29	18(62.1)	1(3.4)	7(24.1)	3(10.3)	0(0.0)	0(0.0)
Tonk	23	6(26.1)	3(13.0)	8(34.8)	1(4.3)	0(0.0)	5(21.7)
Total	132	35(26.5)	20(15.2)	56(42.4)	5(3.8)	7(5.3)	9(6.8)

Variety of reasons were given on why exclusive breast feeding was not practiced. 42.4% of the service providers were of the view that not enough mothers' milk was produced and thus had to be supplemented. Similarly, the thought that water is necessary to quench the child's thirst was given as the reason by 26.5% of service providers.

**Table 125: Reasons of non compliance of vaccination in infants**

Districts	Service Providers	Reasons					
		Not important	Resources not available	No such facility in village	Fear	Forgetfulness	Vaccination causes fever
Baran	38	10(26.3)	5(13.2)	2(5.3)	10(26.3)	11(28.9)	0(0.0)
Barmer	20	9(45.0)	1(5.0)	0(0.0)	2(10.0)	7(35.0)	1(5.0)
Dungarpur	22	3(13.6)	2(9.1)	1(4.5)	3(13.6)	5(50.0)	2(9.1)
S. Madhopur	29	5(17.2)	2(6.9)	8(27.6)	4(13.8)	7(17.2)	5(17.2)
Tonk	23	0(0.0)	14(60.9)	0(0.0)	1(4.3)	7(30.4)	1(4.3)
Total	132	27(20.5)	24(18.2)	11(8.3)	20(15.2)	41(31.1)	9(6.8)

31.1% of the service providers considered forgetfulness on part of family/mother for non compliance of vaccination in infants, while 20.5% stated that they did not consider it important.



**Table 126: Barriers in low utilization of birth spacing practices**

Districts	Service Providers	Barriers					
		Lack of Awareness	Hesitation	Misconception about birth spacing methods	Fear	Desire for more children	Now everyone aware
Baran	38	7(18.4)	13(34.2)	2(5.3)	8(21.1)	7(18.4)	1(2.6)
Barmer	20	9(45.0)	1(5.0)	0(0.0)	2(10.0)	7(35.0)	1(5.0)
Dungarpur	22	5(22.7)	1(4.5)	10(45.5)	3(13.6)	2(9.1)	1(4.5)
S. Madhopur	29	5(17.2)	2(6.9)	20(69.0)	2(6.9)	0(0.0)	0(0.0)
Tonk	23	2(8.7)	0(0.0)	11(47.8)	2(8.7)	2(8.7)	6(26.1)
Total	132	28(21.2)	17(12.9)	43(32.6)	17(12.9)	18(13.6)	9(6.8)

Misconception about the birth spacing methods is one of the reasons given by service providers (32.6%) as a barrier in the utilization of birth spacing methods. 21.2% of the service providers said that lack of awareness is still a contributing factor in the non utilization of family planning methods besides fear and hesitation.

**Table 127: Major challenges in achieving targets (Health Care Delivery)**

Districts	Service Providers	Challenges				
		Resistance to change	Lack of education facility	Lack of transport and time	Economic condition	No problem faced
Baran	38	15(39.5)	5(13.2)	15(39.5)	2(5.3)	1(2.6)
Barmer	20	16(80.0)	1(5.0)	3(15.0)	0(0.0)	0(0.0)
Dungarpur	22	13(59.1)	1(4.5)	8(36.4)	0(0.0)	0(0.0)
S. Madhopur	29	15(51.7)	6(20.7)	5(17.2)	0(0.0)	3(10.3)
Tonk	23	11(47.8)	5(21.7)	1(4.3)	0(0.0)	6(26.1)
Total	132	70(53.0)	18(13.6)	32(24.2)	2(1.5)	10(7.6)

Major challenges in achieving targets (Health Care Delivery) were mainly due to the stubborn attitude and lack of understanding among people (53.0%).



**Table 128: Advocated media options for BCC/IEC by service provider**

Districts	Service Provider	Teacher/students/religious leaders/women group	Local artist	Camps	Sarpanch	Mass Media
Baran	38	28(73.7)	4(10.5)	2(95.3)	3(7.9)	1(2.6)
Barmer	20	18(80.0)	2(10.0)	0(0.0)	0(0.0)	0(0.0)
Dungarpur	22	16(72.7)	0(0.0)	5(22.7)	0(0.0)	1(4.5)
S. Madhopur	29	19(65.4)	3(10.3)	1(3.4)	4(13.8)	2(6.9)
Tonk	23	22(95.6)	1(4.3)	0(0.0)	0(0.0)	0(0.0)
Total	132	103(78.1)	10(7.6)	8(6.1)	7(5.3)	4(3.0)

40.2% of the service providers advocated women group as the best medium for BCC/IEC as female problems can be best understood and addressed by females themselves.



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## **Recommendations**



## Recommendations

- Communitization of health services need to be ensured for which multipronged approach for addressing the communication gaps to be adopted and community empowerment is to be ensured by giving the responsibility in planning execution and monitoring of health services at villages' level. Transferring the untied fund is not the solution of the problem.
- In Rajasthan, discontinuity and dropping out from the services at various stages from registration of pregnancy, ANC visits, PNC and Neonatal care is visible. Therefore strategies for ensuring the continuity in services need to be framed.
- Study observation revealed more case of ANC registration in second trimester. Those registered in second (39.5%) and third trimester (31.8%) could only have two antenatal visits. Community perception on disclosure of pregnancy needs to be changed and addressed in communication strategies.
- The practice of delaying the initiation of breast feed after 2-3 days is seen more when delivery was at home. ASHA needs to subscribe to a proactive role in educating mothers and their mothers-in-law.
- BCC strategy should be evolved based on the observation of this study and the experiences of field level services providers and program managers.
- As decision related to pregnancy, delivery and child care, rests with mothers-in-law so need is to enhance the knowledge of MIL, wherein specific strategies in relation to communication and counseling need to be forged.
- Introduction of JSY has changed the scenario of institutional deliveries but some of the districts still lag behind in this regard. District specific BCC strategies are needed to be developed for these districts for promoting JSY and ID. Barmer is one of those districts where all the parameters are not in favor of desired goals.
- Status of fully immunized child could not be derived from the current study but there is history of dropouts from routine immunization schedule. The unimmunized child came out with wide and varied reasons where dependence – “no health worker came at home” and lack of knowledge and unawareness were put as the main reason. To ensure the 100% coverage issues need to be addressed in BCC strategies.



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- To address the communication gaps only production of material is not the appropriate strategy, piloting the TIPS approach in which counseling and follow up is the key instrument for improving the practices. Department has resource of manpower in the field to be used for such activity only orientation and training needs to be provided as input for such activity.
- Counseling skills of service provider specially the doctors can make difference in utilization of services. Counseling is the best medicine for sustainable cure of preventable diseases.
- To obtain the specific observation on different issue like utilization of PNC services, care of neonates and feeding practices, exclusive breast feeding more studies need to be planned. Appreciative enquiry on Maternal and Child death should be initiated in block approach.
- VHSC members may be instrumental in improving the over all status of health in the villages. Services of VHSC members in BCC should be obtained for which enhancing the capacities of VHSC members in BCC is one of the core strategies.
- VHSCs members should be targeted to have active roles in propagating messages related to reproductive health.



### Limitations

1. The age at marriage could not be segregated as per legal cut off since the design had by default grouped women in > 20 , 20-30 and 30-45 yrs. Of age
2. The exclusivity of breast feeding for the entire period of 6 months cannot be ascertained as the question did not specify the period
3. The experiences of previous home delivery prompting a attitudinal change to go for Institutional delivery for the present pregnancy again cannot be correlated
4. The no. of TT injections received in present or past pregnancy, which would have helped in assessing of right practices on part of provider; again fall short of a correlation.
5. The practice of Immunization on part of family / mother and subsequent assessment of partial or full immunization could not be carried out again for defective design of questionnaire.

In view of the aforesaid limitations, it would be apt to explore the area with further field studies which should possibly answer to questions like

- a. What is the quality of PNC visits by ANM/ ASHA and does it build up a positive attitude facilitating care continuum
- b. Whether full Immunization has a relation to place of delivery
- c. Quality of ANC and PNC and its relation to mortality and reproductive morbidities
- d. The relation between education of mother in law and parity of women to Institutional delivery, exclusive breast feeding and child Immunization
- e. The scientific basis of rest with a direct correlation to involution period for uterus could avert a lot of reproductive morbidities, assessment of which requires detailed studies in the community.