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# Utilization of ANC Services in Field Practice Area of RHTC Naila, Jaipur

**Dr. Prerna Gupt**
III Year Resident, Department of Community Medicine, SMS Medical College, Jaipur, Rajasthan, India
**Dr. Kusum Lata Gaur**
Professor &WHO Fellow IEC, Department of Community Medicine
SMS Medical College, Jaipur, Rajasthan, India
**Dr. Rajveer Kuldeep**
Assistant Professor, Department of Respiratory Medicine, JLN Medical College, Ajmer, Rajasthan, India
**Dr. Mahesh C. Sharma**
PMO, R. K. Joshi District Hospital Dausa, Rajasthan, India
**Dr. Afifa Zafer**
Professor, Department of Community Medicine, SMS Medical College, Jaipur, Rajasthan, India
**Dr. R. K. Manohar**
Professor and Head, Department of Community Medicine, SMS Medical College, Jaipur, Rajasthan, India

***Abstract:***
*Background: Utilization of Ante natal care (ANC) services is poor in the rural areas, causing increased maternal morbidity and mortality.*
*Objective: To assess the utilization of antenatal care services in the field practice area of RHTC Naila in Jaipur district of Rajasthan.*
*Materials and Methods: A community based cross sectional descriptive type of observational study was carried out in the field practice area of RHTC Naila in Jaipur district of Rajasthan. 30 Cluster sampling technique was used to cover whole field practice area of RHTC. 450 mothers having children < 1 year in the selected clusters were interviewed. Information about the ANC services utilization and relevant socio-demographic data were also collected. To find out associating factors appropriate tests of significance were used.*
*Results: Out of total 450 mothers 93.56% had utilized ante-natal services of health department but adequate ANC services were found to be utilized only by 13.13%. Reason behind utilizing ANC services was safety followed by other reasons like vaccination, IFA tablets, investigations, previous caesarian etc. Reason behind not utilizing ANC services was tradition of family followed by no problem during pregnancy.*
*Conclusion: Status of utilization of ANC services was very good but it is not done adequately. This ANC utilization is associated with caste, type of family, education and occupation.*

***Key words****: ANC, Vaccination, IFA tablets and caesarian*

## 1. Introduction

Pregnancy and child birth are natural and continuous processes in which many women are at risk for developing complication during pregnancy and child birth. World Health Organization (WHO) estimates suggested that 88 to 98 percent of all pregnancy related deaths were avoidable if all women would have access to effective reproductive health services[1].
World Health Organization[2] recommended that all pregnant women should have at least four antenatal care (ANC) visits, starting from as early as possible, for normal pregnancy. The objective of this is to monitor pregnant women regularly during their pregnancy, so that the risk factor can be identified.[3] Two of the key MDG goals[4] i.e. Reduction of childhood mortality and improving Maternal health, are related with ANC utilization. Antenatal care coverage of the world is 72%, industrialized countries 98%, developing country 28% (WHO, 2003).[5]
India has the dubious distinction of having the highest estimated number of maternal deaths (136,000) in any country.[6] Current maternal mortality in India is 254 per 100,000 live births.[7] Rajasthan is the largest state (in terms of area)in India with a maternal

mortality ratio (MMR) of approximately 318 per 100 000 live births, the state of Rajasthan contributes significantly to India's burden of maternal deaths.[8]

Knowing the current status of ANC coverage reasons for inadequate utilization of these services may facilitate to increase ANC coverage thus reduces maternal mortality. So this present study was undertaken to assess the utilization of Ante-natal care services and reasons for inadequate utilization in the field practice area of RHTC Naila, attached to SMS Medical College, Jaipur

**2. Materials and Methods**

A community based cross sectional descriptive type of observational study was carried out in the field practice area of RHTC Naila attached to department of Community Medicine, SMS Medical College, Jaipur. 30 Cluster sampling technique was used to cover whole field practice area of RHTC. Data collection for this study was carried out from 1st July 2012 to 31st Dec 2012.

*2.1. Calculation of sample size*

Sample size was calculated 374 subjects at allowable error of 20% at 95% confidence interval and design effect of two, assuming 35.24 % non utilization of ANC services[9] ( i.e. P=35.24%).

- Sample size = 4PQ/L2, here Q = 100 - P = 64.76%, L = Error (20% of P) = 7%
- Therefore, 4*35.24*64.76/7*7 = 187 but Design effect=2 so SS= 187 * DE = 187*2 = 374

So for the study purpose, 15 mothers from each cluster i.e. total 450 mothers of children < 1 years residing ≥ one year and willing to participate were surveyed from 30 clusters all the mothers were interviewed using a predesigned, pretested, semi-structured interview schedule. Relevant information about the ANC services utilization was recorded along with the socio-demographic data. Information was cross-checked with the available records to minimize the recall bias.

Data thus collected was entered into Microsoft excel 2010 worksheet in the form of master chart. Then data were classified and analysed as per the aims and objectives with help of appropriate statistical software. Chi-square test was used wherever necessary.

**3. Results**

In the present study, out of total 450 mothers 421 i.e. 93.56% had utilized ANC services and only 65 i.e. 15.44% of mothers were given home visits. Among those who have visited health institutes for ANC, majority reported 1st time between 3 to 6 months of pregnancy and majority (81.47%) visited centre nearby out of that 178 (42.28%) at RHTC Naila and 165 (39.19%) at PHCs. Only 11 (5.46%) had reported 1st time at AWCs and 11 (2.61%) were attended by AWWs otherwise majority were attended by medical officers.

This study also reveals that only 103 (22.89%) registered below 3 months and 38 (8.44%) of mothers registered their pregnancy even after 9 months at the time of delivery or just before that.

Numbers of visits to health institutes were ranging from 1 to 7 with mean 3.62. Out of total mothers who had utilized ANC services, TT was given to all and general examination was done in 382 (90.73%) of mothers whereas per abdominal examination was done of only 151 (35.86%) of mothers. Likewise, weight, pulse and Blood pressure were taken of more than 90% of mothers while health education was given to only 59 (13.17%) mothers. Regarding investigation during ANC visits, hemoglobin, blood grouping and urine albumin and sugar was done for more than 90% of mothers whereas VDRL, HIV and HBs Ag was done for about 80% of mothers.

Thus out of total 450 mothers 93.56% had utilized ante-natal services of health department but adequate ANC services was found to be utilized only by 13.13% of mothers. Adequate utilization of services was considered, if the pregnant women had ANC registration (at any time during pregnancy), required TT injections, minimum three ANC visits, at least one home visit, once Weight taken, once Height Taken, once Pulse taken, once Blood pressure taken, at least once Blood for Hb, at least once Blood for Blood grouping, at least once Urine for Albumin, at least once Urine for Sugar and consumed minimum 100 iron folic acid tablets

Reason behind utilizing ANC services was majority said safety followed by other reasons like vaccination, IFA tablets, investigations, previous caesarian etc. And reason behind not utilizing ANC services majority (19 i.e. 65.52%) of mothers quoted tradition as a cause for not utilized ANC services whereas (11 i.e. 37.93%) of mothers were telling that they have no problem during this or in last pregnancies.

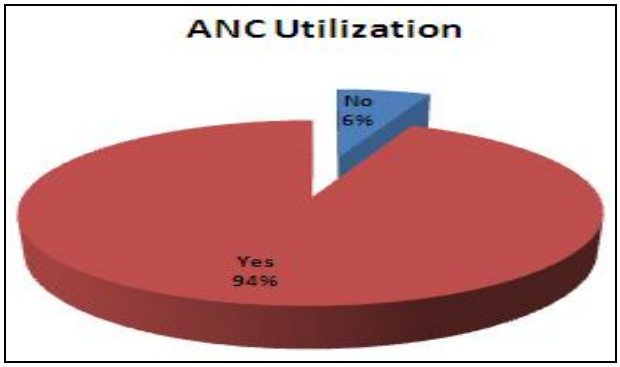


*Figure 1*

| S. No. | Variables related to ANC Services | No. | % |
|---|---|---|---|
| 1 | **Pregnancy Registration in ANC services utilization** | | |
| | No | 29 | **6.44** |
| | Yes | 421 | **93.56** |
| 2 | **Pregnancy Registration Month (n=450)** | | |
| | < 3 Months | 103 | **22.89** |
| | 3 to 6 Months | 292 | **64.89** |
| | 6 to9 Months | 17 | **3.78** |
| | ***>9 Months | 38 | **8.44** |
| 3 | **Type of ANC Visits (n=421)** | | |
| | Health Centre Visits | 421 | **100** |
| | Home Visits | 65 | **15.44** |
| 4 | **Month of 1st Visits (n=421)** | | |
| | < 3 Months | 103 | **24.47** |
| | 3 to 6 Months | 292 | **69.36** |
| | 6 to9 Months | 17 | **4.04** |
| | >9 Months | 9 | **2.14** |
| 5 | **Place of 1st Visits (n=421)** | | |
| | Anganwadi Centre | 23 | **5.46** |
| | Sub-centre | 11 | **2.61** |
| | PHC | 165 | **39.19** |
| | RHTC Naila | 178 | **42.28** |
| | Mahila Chikitsalay, Jaipur | 42 | **9.98** |
| | Private | 2 | **0.48** |
| 6 | **Person attended at 1st Visits (n=421)** | | |
| | AWW | 11 | **2.61** |
| | ANM | 40 | **9.50** |
| | MO | 324 | **76.96** |
| | Gynaecologist | 46 | **10.93** |

*Table 1: ANC Services Utilization according to Type of Services*
** includes 29 mothers not utilized ANC services*

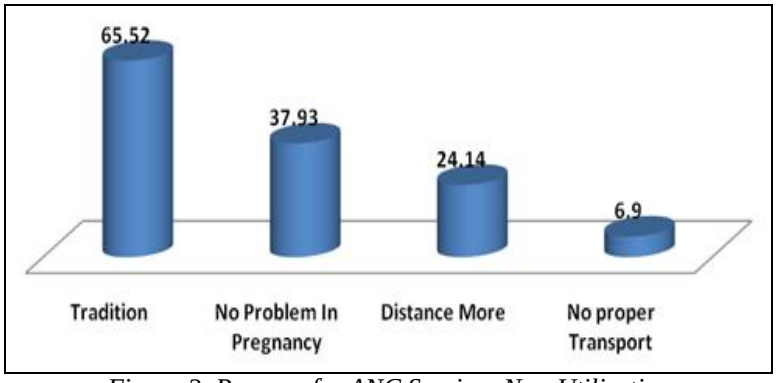


*Figure 2: Reasons for ANC Services Non-Utilization*

**4. Discussion**

In the present study, out of total 450 mothers maximum i.e. 421 (93.56%) who had utilized ANC services only 65 (15.44%) mothers were given home visits and among those who have visited health institutes for ANC, majority reported 1st time between 3 to 6 months of pregnancy and majority (81.47%) visited centre nearby out of that 178 (42.28%) at RHTC Naila and 165 (39.19%) at PHCs. Only 11 (5.46%) had reported 1st time at AWCs and 11 (2.61% were attended by AWWs otherwise majority were attended by medical officers.

Whereas National Family Health Survey (NFHS-3)[10] indicated that 20 % of pregnant women did not utilized ANC services and 75% utilized ANC services. Out of these 75% were attended by Doctors and remaining 25% by other health personals. Less than 50% registered their pregnancies in 1st trimester. More than 50% had equal to or more than 3 ANC visits, out of that 22% had 4-5 ANC visits. About 50% of women had less than 3 ANC visits. Iron Folic Acid (IFA) tablets were given to 65% of women and TT vaccination to 75% of women in their ANC visit. Ultra-sonography (USG) was done of only 24% of women in their ANC visit.

Antenatal care utilization (65%) in the developing countries is low when compared to that of the developed countries which is 97%[9]. This may be because of the same reason that field practice area of present study is attached with an apex medical college of the state.
In the present study, out of total mothers who had utilized ANC services, TT was given to all and general examination was done in 382 (90.73%) of mothers whereas per abdominal examination was done of only 151 (35.86%) of mothers. Likewise, weight, pulse and Blood pressure were taken of more than 90% of mothers while health education was given to only 59 (13.17%) mothers. Regarding investigation during ANC visits, hemoglobin, blood grouping and urine albumin and sugar was done for more than 90% of mothers whereas VDRL, HIV and HBs Ag was done for about 80% of mothers.
Kamal et all[11] reported that 52% of the pregnant women sought skilled ANC. Of the women who sought ANC, 57% entered for ANC at the fourth month or later. Singh A et all[12] reported that majority of the pregnant women (78.6%) visited the health center for antenatal care but home visit were given to only 1.7% women by health personnel. Three or more visits to the health center were made by only 34.9% of women. They also reported that in 31.6% women age at marriage was before 18 years. Age at first pregnancy was less than 20 years in 33.4% of women. Well comparable observations were made by Manihip C et all[13] , who reported that 51% of the respondents had at least one ANC visit. Among the users, 63% had availed ANC three times or more but only 28% attended during the first trimester.
Almost similar findings were reported by Gupta R S etall in their study conducted in Alwar , Rajasthan. They observed that TT immunization coverage was two third of the mothers and 71.4% of urban and 36.1% of the rural mothers received ANC >=3.[14]

**5. Conclusion**

Utilized ante-natal services of health department was found very good but quality of ANC services was adequate only in very few. **U**tilization of ANC services was significantly associated with caste, type of family, education and occupation.
Reason behind utilizing ANC services was safety followed by other reasons like vaccination, IFA tablets, investigations, previous caesarian etc. Reason behind not utilizing ANC services was tradition of family followed by no problem during pregnancy.

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