



RESEARCH ARTICLE

UTILISATION OF ANTE NATAL CARE (ANC) SERVICES BY MOTHERS IN A RURAL BLOCK OF HARYANA, INDIA

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ABSTRACT

**Introduction:** Antenatal care (ANC) refers to the care of the woman during pregnancy. The primary aim of antenatal care is to achieve at the end of the pregnancy, a healthy mother and a healthy baby. The maternal mortality and morbidity continue to be high despite the existence of national programs for improving maternal and child health in India. This could be related to several factors, an important one being non-utilization or under-utilization of maternal health-care services.

**Objectives:** The present study was conducted to find out the utilization of ANC services among women with children less than 1 year of age in a rural block of Haryana.

**Methods:** A population based cross sectional study was conducted among 210 mothers with children less than 1 year of age living in Lakhna Majra block of Rohtak district, Haryana during Nov & Dec 2016. 30 X 7 cluster sampling technique used by WHO for coverage evaluation surveys was used in our study as the sampling technique. The survey on ANC services utilisation was done in each selected cluster on 7 eligible mothers to find out the immunization coverage of the children living in that area. Collected data were analysed using frequency distribution and proportions.

**Results:** Majority (90.9%) of the mothers were above 20 years of age. MCP card was available with 86.2% of mothers. All mothers had taken the first dose of TT and 97% of them received TT2/Booster dose. 92.3 % mothers consumed IFA tablets though not regularly. All the mothers had at least one antenatal visit during their pregnancy. Majority (96.66%) of the mothers had institutional deliveries. 3.34% deliveries were still being conducted at home. Delivery of majority (96.66%) of the study subjects was attended by health staff. Still 3.33% deliveries were attended by untrained persons.

**Conclusion:** Utilization of antenatal care (ANC) services and promotion of institutional deliveries should be increased by enhancing awareness among females by strengthening IEC activities by health workers.

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INTRODUCTION

Antenatal period starts from the time of conception to the onset of labour. It is a stressful period both for mother and child. The health of the pregnant female & outcome of pregnancy is highly dependent on the antenatal care received by the pregnant woman. Antenatal care (ANC) refers to the care of the woman during pregnancy. The primary aim of antenatal care is to achieve at the end of the pregnancy, a healthy mother and a healthy baby. (Park, 2013) A large number of studies conducted among pregnant women, revealed more risk of having low birth weight babies among mothers who did not receive good quality ANC and there is clear association between infant mortality and lack of good quality ANC. (Nair et al., 2000; Ghosh,

Rohini, 2012) In India, every year 28 million pregnancies take place with 67,000 maternal deaths, 1 million women left with chronic ill health and 1 million neonatal deaths. (Government of India) Maternal mortality ratio in India is 167/100000 live births (Sample Registration System, 2010) and neo natal mortality rate is 29/1000 live births. (Sample Registration System, 2010) The maternal mortality and morbidity continue to be high despite the existence of national programs for improving maternal and child health in India. This could be related to several factors, an important one being non-utilization or under-utilization of maternal health-care services. Hence, a good care of women during pregnancy is important to achieve a healthy mother and healthy child at the end of pregnancy. The present study was thus carried out in a rural block of Haryana to find out the utilization of ANC services among women with children less than 1 year of age.

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## Methods

**Setting:** The study was conducted in block Lakhan Majra, which is a rural field practice area attached to Department of Community Medicine, PGIMS Rohtak. It was conducted during Nov. & Dec. 2016.

**Study Design:** Population-based cross-sectional study.

**Study Subjects:** Mothers with children less than one year of age

**Sample Size:** 210 eligible mothers

**Sampling technique:** 30 X 7 cluster sampling technique used by WHO for coverage evaluation surveys. For the purpose of the study, the population of Lakhan Majra block was divided into 30 clusters using cluster sampling method. Then survey on ANC services utilization was done in each selected cluster. In each cluster, seven eligible mothers were studied to find out the ante natal care services utilization by mothers living in that area (i.e. the population being surveyed).

### Sample selection

A central location was selected in each village or town such as a market, a temple or a chaupal. The location was selected in such a way so that it was approximate geographical centre of the village preferably away from any health post located in the area as the utilization of ANC services was expected to be better around health post area. Randomly, a direction was chosen from the selected location. In this direction, first house was randomly identified. The house having door very near to the house covered earlier was identified as the next house & so on till the desired sample was covered. In this way seven mothers were included from each cluster after obtaining verbal informed consent.

### Data collection

The selected mothers in each cluster were interviewed using a pre-designed, semi-structured schedule containing questions on antenatal care received and delivery practices adopted.

**Statistical analysis:** Data were analysed using frequency distribution & proportions.

## RESULTS

A total of 210 eligible mothers participated in the study. Table 1 reveals that majority (90.9%) of the mothers were above 20 years of age. Mother and child protection (MCP) card was available with 86.2% of them. Considering the coverage of tetanus, it was found that all mothers had taken the first dose of TT and 97% of them received TT2/Booster dose. All mothers were provided Iron and folic acid (IFA) tablets but 92.3 % mothers consumed IFA tablets though not regularly. All the mothers had at least one antenatal visit during their pregnancy. Majority (96.66%) of the mothers had institutional deliveries. 3.34% deliveries were still being conducted at home.

When the sources of utilisation of ANC services were analysed, it was found that 86.19% mothers went to sub centre for their TT dose, whereas, 9.05%, 3.33% and 1.43% availed TT from anganwadi centres, private and government hospitals

respectively. For IFA tablets, all the mothers availed it from the sub centre only (Table 2).

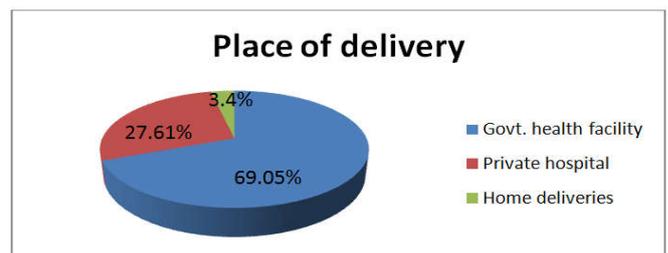
**Table 1. Age break up & Antenatal services utilisation by study subjects (n=210)**

Parameters		No. (%)
Age	<20 years	19 (9.1)
	>20years	191 (90.9)
Mother and child protection card available		181 (86.2)
TT 1		210 (100)
TT 2/Booster		204 (97)
IFA given		210 (100)
IFA taken		194 (92.3)
Antenatal visit (at least one)		210 (100)
Delivery	Govt	145 (69.04)
	Private	58 (27.62)
	Home	7 (3.34)

**Table 2. Source for TT immunization & IFA tablets (n=210)**

ANC service	Source			
	Sub-centre	Anganwadi centre	Private hospital	Govt. Hospital
Tetanus toxoid injection	181 (86.19%)	19 (9.05%)	7 (3.33%)	3 (1.43%)
Iron and Folic acid tablets	200 (100%)	0	0	0

As shown in figure 1, 69.05% of the mothers had delivered in Govt health facilities followed by 27.61% in private institutions, whereas, 3.4% had home delivery.



**Fig.1. Distribution of study subjects based on place of delivery**

Table 3 shows that delivery of majority (96.66%) of the study subjects was attended by health staff. Still 3.33% deliveries were attended by untrained persons.

**Table 3. Personnel attending the delivery (n=210)**

Deliveries attended by	Number	Percentage
Health staff	203	96.66%
Untrained persons	7	3.33%

## DISCUSSION

The present study was conducted to find out the utilisation of ANC services among mothers with children less than one year of age (n=210). In the present study, majority (90.9%) of the mothers were more than 20 years of age. This was comparable with the studies conducted by Gupta *et al.* (2015) and Dabade *et al.* (2013), where 96.7% and 76.7% of the mothers were above 20 years of age. In the present study, 86.2% of the mothers had mother and child protection (MCP) card with them. This was higher when compared to NFHS-4 (2015-16) Rohtak data, which showed that MCP cards were available only with 75.7% of the rural mothers in Rohtak. Regarding TT immunization coverage, in the present study all the mothers

had received first dose of TT and 97% had received TT2/Booster dose. This was high when compared to Dabade *et al.* (2013) study, where only 81.5% mothers received two doses of TT/ Booster dose. The results of present study were comparable with the NFHS-4 (National Family Health Survey-4, 2016) Rohtak data, in which 97.5% of the mothers were protected against tetanus. But this was very much high compared to the DLHS-4 Haryana (District Level Household Survey-4, 2013) data, in which 62.5% rural mothers in Haryana received single dose of tetanus toxoid injection. It was also observed in the present study that only 92.3% of the mothers consumed IFA tablets though not regularly in spite of the fact that all the mothers were provided with IFA tablets by the health facility. This was again high as compared to the Dabade *et al.* study, where 86.4% mothers consumed IFA tablets. It was appreciating to see that almost all of the mothers in the present study availed TT immunization and IFA tablets from the government facilities. The present study also revealed that only 3.33% of the mothers received antenatal services from private institutions but about 28% went for their delivery to private setups. This was comparable to the NFHS-4 Rohtak (National Family Health Survey-4, 2016) and DLHS-4 Haryana (District Level Household Survey-4, 2013) data, in which about 27% and 28% had gone for their delivery to private health institutions respectively.

A total of 69.05% of the deliveries were held in Govt health facilities followed by 27.61% in private institutions. Still 3.4% mothers had home deliveries. Majority (96.66%) of the study subjects were attended by health staff during their delivery and 3.33% were attended by untrained persons. This was contradictory with the Dabade *et al.* study (Dabade *et al.*, 2013), where majority (59.2%) of the deliveries were held in private set up followed by 31.1% in government health facilities and 9.7% home deliveries. Among these only 3.9% home deliveries were attended by untrained persons and rest all were attended by health staff. The results of present study are comparable to the NFHS-4 Rohtak (National Family Health Survey-4, 2016) data in which 70.2% mothers delivered at government health facilities and 2.7% delivered at home. Majority (97.8%) of the deliveries were conducted by health staff. But this was much higher when compared to DLHS-4 Haryana (District Level Household Survey-4, 2013) data in which 25% of the rural women had home deliveries and only 90% of the deliveries were attended by health staff and remaining by untrained persons. The difference in results of the present study in comparison with DLHS-4 Haryana (District Level Household Survey-4, 2013) data may be due to the fact that DLHS -4 survey was conducted in 2012-13 and it included the data of the whole state.

## Conclusion

The present study showed that the coverage of TT immunization was 97%. Three percent mothers did not receive

TT immunization despite UIP being in operation since 1985 which is not desirable. In addition, 3.33 % deliveries were conducted by untrained persons. Both these will put the life of mother as well as that of the new born baby to the risk of tetanus. Though all the mothers were provided with IFA tablets, only 92.3% were consuming IFA tablets& even the consumption was not regular. All this mandates for strengthening of IEC activities by health workers to motivate the mothers to consume IFA tablets and get immunized against tetanus, consume IFA tablets regularly and prefer institutional deliveries.

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