



## **UTILIZATION OF ANTENATAL CARE SERVICES IN A RURAL FIELD PRACTICE AREA IN COASTAL PART OF SOUTH INDIA**

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### **ABSTRACT**

**Introduction:** Utilization of services during pregnancy will lead to further utilization of additional maternal services. The utilization of these services is not universal which was reflected during National Family Health Survey 3.

**Objective:** To evaluate the utilization of antenatal care services among mothers in south India.

**Methods:** The present community based cross sectional study was conducted among rural mothers who had delivered one year back and accompanied their children for immunization at the rural health centres. A semi-structured Proforma was used and detailed information regarding sociodemographic details and utilization of antenatal services was collected.

**Results:** The study included a total of 300 antenatal mothers. Majority of the antenatal mothers had their antenatal checkups in private set-ups (n=257, 85.7%) and had their first antenatal check up in the first trimester (n=262, 85.3%). Around 95% of the study subjects had consumed more than 100 Iron and Folic Acid tablets.

**Conclusion:** Utilization of antenatal care is much higher in the present study as compared to other available literature for the entire country. Consistent and focused efforts are needed to sustain and consolidate the good coverage and utilization of antenatal services.

**Keywords:** Antenatal care, Iron and Folic Acid, Utilization

### **INTRODUCTION**

Maternal Health improvement was the main focus of Millennium Development Goals as there are around 800 maternal deaths occurring globally on a daily basis, of which 99% of the cases are reported from developing countries.<sup>1</sup>

Even though pregnancy is a normal process, 15% of it might land up in complications and hence care during delivery is of prime importance.<sup>2</sup>

After assessing the need for antenatal care, WHO (World Health Organization) endorsed a minimum of four focused antenatal check-ups which was later adopted by developing countries including India.<sup>3</sup> Utilization of services during pregnancy will

lead to further utilization of additional maternal services like institutional delivery and seeking assistance for complications during delivery and postnatal period.<sup>4</sup>

The utilization of these services is not universal which was reflected during National Family Health Survey 3 where only 37% of pregnant women had more than four visits<sup>5</sup>. Few studies conducted across India have also shown lower utilization rates.<sup>6,7,8</sup>

The present study aimed at assessing the utilization pattern of antenatal services among pregnant mothers in a rural field practice area.

## MATERIALS AND METHODS

The present community based cross sectional study was conducted in rural field practice area of Department of Community Medicine, Kasturba Medical College, Manipal, over a period of three months.(January to March 2012) The study included all mothers who had delivered one year back and accompanied their children for immunization at the rural health centres and consented to be part of the study. Mothers from outside field practice area were excluded. Considering the utilization of antenatal services at 37%<sup>5</sup>, relative precision of 15% with a power of 80% and 95% Confidence Interval sample size was calculated at 300.

Approval was obtained from Institutional Ethics Committee, Kasturba Medical College, Manipal before commencement of the study. Written informed consent was obtained from the participants after explaining in details of the study.

A semi-structured Proforma was used and detailed information regarding sociodemographic details and utilization of antenatal services was collected. The collected data was analyzed using Statistical Package for Social Sciences (SPSS) 11.5. Results are expressed in percentages and proportions.

## RESULTS

**Table1: Baseline characteristics of the–antenatal mothers (N=300)**

Socio-demographic details	Number (%)
<b>Age of the participant(years)</b>	
15-19	006 (02.0)
20-34	276 (92.0)
$\geq 35$	018 (06.0)
<b>Education</b>	
Illiterate and primary	06 (02.1)
Middle and High school	184 (61.3)
PUC and above	110 (36.6)
<b>Religion</b>	
Hindu	232 (77.3)
Muslim	060 (20.0)
Christian	008 (02.7)
<b>Birth Order</b>	
1 <sup>st</sup>	176 (58.6)
2 <sup>nd</sup> -3 <sup>rd</sup>	121 (40.3)
$\geq 4$	003 (01.1)

This study included a total of 300 antenatal mothers. Most ( n=276,92%) of the participants were in the age group of 20-34 years. Only 6% of the participants were above the age group of 35 years. Majority ( n=184,61.3%) of the participants had finished middle and high-school followed by Pre university education and above(n=108,36%).More than half of the study participants were primis (n=176,58.6%) as depicted in table 1.

**Table 2: Utilization of Antenatal facilities by the study subjects (N=300)**

Antenatal details	Number (%)
<b>Source of antenatal checkup</b>	
Private	257 (85.7)
Government	043 (14.3)
<b>First Antenatal check-up</b>	
First Trimester	262 (85.3)
Second and Third Trimester	038 (14.6)
<b>No. of antenatal checkups</b>	
$\leq 4$	007 (02.3)
4-8	025 (08.3)
$>9$	268 (89.3)
<b>No. of tablets consumed during pregnancy*</b>	
$\leq 100$	017 (05.8)
$>100$	278 (94.2)

\*Information available for 295 subjects

Majority of the antenatal mothers had their antenatal checkups in private set-ups (n=257, 85.7%) and had their first antenatal check up in the first trimester (n=262,85.3%). Around 95% of the study subjects had consumed more than 100 Iron and Folic Acid tablets. As shown in table 2.

## DISCUSSION

This study was conducted to assess the utilization pattern of antenatal services among pregnant women in a rural field practice area. The government has started various programmes under NRHM/RCH (National Rural Health Mission/Reproductive and Child Health) to provide services to pregnant mothers both at the grass root (community) and institutional level. It aims at keeping pregnant women healthy, providing preventive care and detection and treatment of life threatening problems. Antenatal care can be improved by increasing awareness among beneficiaries, making services accessible and most importantly making services affordable.<sup>2</sup>

Public healthcare utilization in India is low, as identified during National Family Health Survey-3 (NFHS-3) where 32% of people utilized public health care facilities while private healthcare utilization was 68%.<sup>9</sup> Mirroring the findings of the above study, the present study identified that most of the mothers' preferred private set up for antenatal care while utilization of public health services was minimal. The reason may be due to higher literacy rate in the region, high socioeconomic status of the people and availability of plenty of private health care facilities in the area.

WHO (World Health Organization) has recommended a minimum of four check-ups during antenatal period. It has been reported that only 64% of the antenatal mothers receive this minimum number of recommended checkups and 83% of

mothers received at-least one antenatal checkup.<sup>10</sup> Government of India has also implemented the same as a part of RCH (Reproductive and child health) Programme<sup>11</sup>. According to NFHS (National Family Health Survey- 3) around two third of the mothers had more than four antenatal visits across the country. Karnataka scores lower in antenatal coverage as compared to other south Indian states though it ranks higher in comparison to the national scenario<sup>5</sup>. According to observation in our study around 97% of the pregnant women had more than four antenatal check-ups and all of the mothers had at least one antenatal check-up. This is in congruence with the findings of DLHS (District Level Household Survey-4) findings conducted in our district in the year 2012-1013.<sup>12</sup> But other studies from different parts of India study report lower antenatal coverage.<sup>6,13,14</sup>

Ideally the first visit during pregnancy must be done within twelve weeks. It helps in planning for the pregnancy and identifying future risk factors in order to prevent complications.<sup>2</sup> Less than half of the mothers had their initial antenatal checkup before twelve weeks and a quarter of them had first antenatal checkup at fourth and fifth month nationally but more mothers had their first antenatal checkup within first trimester according to NFHS 3 data for Karnataka.<sup>5</sup> In Udupi district, around 90% of the subjects had their initial antenatal checkup within first trimester.<sup>12</sup> Similarly in the present study 85% of the participants had their initial checkup within twelve weeks.

According to National nutritional anemia prophylaxis Programme Iron and Folic Acid Tablets should be provided for at least 100 days for antenatal women. It is considered as one of the most cost effective measure to control anemia in antenatal period.<sup>2</sup> According to NFHS 3 data, only a fifth of women had consumed IFA during pregnancy for recommended duration nationally, while the proportion was little higher in Karnataka (NFHS 3).<sup>5</sup> In contrast to the NFHS findings it was observed in our study that more than 90% of the participants had consumed IFA tablets for more than 100 days.

## CONCLUSION

Utilization of antenatal care is much higher in the present study as compared to other available literature for the entire country. Consistent and focused efforts are needed to sustain and consolidate the good coverage and utilization of antenatal services in the rural field practice area.

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