

ANC Coverage: Role of Health Care Provider

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Abstract

Introduction: Promoting women's health improves not only individual health but also the health of the family, community and the nation. As per Safe Motherhood Initiative all pregnant women must receive basic but professional antenatal care (ANC). However safe motherhood is still a dream in India as well as in the third world countries. Mothers who had not received good quality ANC were found to be more at risk of having low birth weight babies and there is clear association between infant mortality rate and lack of or poor quality ANC.

Aims/ Objectives: To evaluate current statuses of utilization of ANC services and evaluate the role of health care provider in providing appropriate antenatal care services among women living in rural area.

Materials & Methods: A community based cross-sectional design was adopted for the study with a total sample of 400 females delivered in last one year. A multistage random sampling technique was employed to draw the required sample size. Data was collected using semi structured, pretested questionnaire which had two sections, the tool was derived from questionnaire used for NFHS 3 survey and was modified according to the need of the study.

Results: A total of 313 (78.3%) females took antenatal and only 111 (27.75%) females made 3 or more visits before delivery. Out of total participants who visited doctors, 154 (95%) had basic investigations carried out but trends were dissatisfying for females who visited other health workers. Information regarding warning signs was very low among females who went to Anganwadi workers (12.7%) and TBAs (0%). Similarly participants who visited doctors and ANM consumed maximum iron tablets and had more institutional deliveries.

Conclusion: It was observed that quality of ANC given by doctors was significantly better than other health workers.

Keywords: Antenatal Care, Antenatal Coverage, Health care Provider, Rural India

I. Introduction

Inequalities in health and economic development influence the realization of human potential worldwide. The most essential obstacle in realizing human potential that can be recognized is the exclusion from social systems.¹The Universal Declaration of Human Rights (1948) safeguards the right to health but unfortunately this right is not met as many countries and especially in developing countries, many are excluded from health care systems.²

Motherhood is the basis of family life, which in turn is the backbone of all orders of society. Promoting women's health improves not only individual health but also the health of the family, community and the nation.³ As per Safe Motherhood Initiative all pregnant women must receive basic but professional antenatal care⁴.

Antenatal care is defined as comprehensive ante partum care programme that involves a Co-ordinate approach to medical care and psychosocial support that extends throughout ante partum period.⁵ However uptake of these services is far from universal even in settings where they are widely available and safe motherhood is still a dream in India as well as in the third world countries.⁶ Mothers who had not received good quality ANC were found to be more at risk of having low birth weight babies and there is clear association between infant mortality rate and lack of or poor quality ANC.⁷ Maternal mortality offers a litmus test of the status of women, their access to health care, and the adequacy of the health care system in responding to their needs.

In terms of maternal mortality rate the global burden is 290 deaths per 100,000 live births. In India it is 212 deaths per 100,000 live births and infant mortality rate is 50/1000 live births.⁸ Empirical evidence suggests that maternal care has improved in India over the last two decades, but progress has been slowing overall and uneven within the country.⁹ Wide disparities between different populations exist at the sub national level, both between and within Indian states, the latest MMR estimates show a gap of 309 deaths per 100,000 live births

between Assam (MMR 390) and Kerala (MMR 81).¹⁰ This gloomy situation is when promotion of maternal and child health has been one of the most important component of Family welfare programme.

There is an excellent pyramid of infrastructure for delivery of maternal and child health services through network of sub centres and PHC centres in rural India.¹¹ These are staffed by trained personnel (MPHW(F) who provide prenatal and postnatal care at the centre, who make home visits for pregnant women, help in child delivery and provide immunization services to the infants.¹² According to national guidelines, ANC services consist of a set of professional pregnancy checkups, tetanus and other immunisation, prophylaxis through iron and folic acid tablets, blood pressure check-up, advice and information regarding delivery methods and services, nutrition, and postnatal care. Quality ANC includes minimum of at least 4 ANC visits including early registration and 1st ANC in first trimester along with physical and abdominal examinations, Hb estimation and urine investigation, 2 doses of T.T Immunization and consumption of IFA tablets for 100 days and education regarding warning signs such as oedema, convulsions, fever, weakness etc. is given.¹¹ But despite the existence of these national programs for improving maternal and child health, maternal mortality and morbidity continue to be at higher side, at an unacceptable level.¹² In India only 52% females undergo three or more antenatal checkups and figures fall to 44% in rural population. Only 41% deliveries are conducted in institutions and just 22% females consume IFA tablets for 100 days.¹³

There are multiple reasons for this situation. Early marriages, malnutrition, illiteracy, ignorance, lack of health services, and unavailability of transport facilities are the major contributors. One of the most important reasons for the same is no acceptance or no utilisation/ underutilisation of maternal health care services¹² especially among the rural population due to either lack of awareness or access to health care services.¹⁴ Poor utilisation of services reflects cultural and socioeconomic constraints as well as perceptions regarding accessibility of facilities and quality of care.¹⁵ In Haryana, the scenario is not much different with 51% of women taking 3 antenatal visits and only 30% deliveries are institutional; moreover the utilization of services varies regionally in Haryana,¹⁶ In Haryana Maternal Mortality Rate is 153/100,000 live births.¹⁷ Most of these deaths can be averted even where resources are limited but, in order to do so, the right kind of information is needed. Keeping this fact in mind and to know the condition of this region, the present study was carried out to find out the current status of utilization of antenatal care services and to evaluate the role of health care provider in providing appropriate antenatal care services among women living in rural areas of Ambala district, Mullana.

II. Material & Methods

A community based cross-sectional design was adopted for the study. The sample size was calculated using data of NFHS-3 as per which the number of women reported of having three or more antenatal visits is 51%.¹⁶

It came out to be 368 using the formula: $n = Z^2 P(1-p)/e^2$

where, Z= level of confidence (1.96)

p = prevalence of utilization of antenatal care services

e = allowable error (10%)

To compensate for the non response, a survey of 400 individuals was conducted. The study was conducted from January 2012 to December 2012. A multistage random sampling technique was employed to draw the required sample size. Rural field practice area of Dept of Community Medicine serves 75 villages. In stage one Out of these 75 villages, 40 villages were selected randomly by using lottery method. Further in second stage from each of the selected village, list of all married women of 15-45 years who delivered a child in last one year was procured from Anganwadi workers (AWW's) of the respected villages and 10 females per village were selected by simple random sampling by lottery method. A written informed consent was obtained after the objectives were explained and all eligible women who were willing to participate were included in the study.

Data was collected using semi structured, pretested questionnaire which had two sections, the tool was derived from questionnaire used for NFHS 3 survey and was modified according to the need of the study. Section 1 included socio-demographic profile of eligible females and section 2 inquired about the details of the last pregnancy.

Strategy

A list of eligible women i.e. who had delivered during the reference period, in each of the selected villages, was prepared with the information obtained from local Anganwadi workers. The selected women were visited at their houses. Each woman was told about the purpose of the study. After taking her informed consent, data was collected by interview method as per the questionnaire. If any of the participants was not found during the 1st visit, 2nd visit was given next day but at some other time as per her convenience, if female was not

available even at the 3rd visit which was paid after 1 week then she was excluded and other eligible mother next in the list of concerned AWW was interviewed. Ethical clearance was obtained from the Institutional Ethics Review Committee. Data was analyzed using SPSS ver. 20.0 (SPSS Inc., Chicago, IL, USA).

III. Results

A total of 313 (78.3%) subjects took antenatal care out of 400 and only 111 (27.75%) females made 3 or more visits before delivery and 87 (21.8%) of females did not make any visit for antenatal checkup. On distributing women as per health provider visited by them 162(51.7%) of females visited doctors and 151(49.3%) of females visited other health workers (ANM, AWW, TBA) for antenatal checkups. [Table 1]

Association between health provider visited and quality of antenatal care was evaluated. Out of the participants who visited doctors 154 (95%) had basic investigations carried out but trends were dissatisfying for females who visited other health workers especially Anganwadi workers (AWW) (34.2%) and Traditional birth attendants (TBA) (38.4%). [Table 2]

Maximum information regarding warning signs was given by Doctors 145(89.5%), followed by ANM (Auxiliary Nurse Midwife), out of 68 females who went to ANM, 31(45.5%) were informed. Whereas, number was very low among females who went to Anganwadi workers, only 12(17.1%) said that they were informed and this figure was 0% for Traditional birth attendants. Scenario was similar in case of iron tablet consumption and place of delivery, participants who visited doctors and ANM consumed maximum iron tablets.[Table 3 & 4]

It was seen that females who visited doctors, maximum of them opted for institutional deliveries and very few opted for home delivery. Thus level of ANC given by doctors was significantly ($p<0.0001$) better than other health workers. [Table 5]

IV. Discussion

In the present study, the prevalence of taking minimum of one visit for Antenatal care was found to be 78.3% (313) females of total 400 of reproductive age group during their last pregnancy and 21.8% did not went for any visit for taking ANC.

In India, several studies have shown different rates of prevalence in different parts of the country. In a study conducted in Punjab by Kaur J et al. (2013)¹⁸ it was observed that only 42% of patients booked themselves for antenatal care. Rejoice P.R et al. (2011)¹⁹ in their study in scheduled caste women in India found that about one-fifth (19.8%) of women did not received any kind of antenatal care during their pregnancy period. Another study by Jat T R et al. (2011)²⁰ in Madhya Pradesh found that 61.7% of the respondents used ANC at least once during their most recent pregnancy. Mumbare S S et al.(2011)¹³ in their study found (35.24%) pregnant women had underutilized or not utilized the services. In present study, Maximum number of females (51.7%) visited doctors for taking Antenatal care. These findings were similar to a study conducted by Aggarwal N et al. (2011)²¹ In Chandigarh and Mohali which stated that 53.2% of females received visited doctors for ANC.

Present study intended to determine the role of type Health provider and quality of antenatal care services received by them during their last pregnancy. It was observed that the quality of care in terms of basic investigations being done, information about danger signs of pregnancy, amount of IFA tablets consumed and place of delivery was significantly better in females who visited doctors as compared to other health workers and it was found to be significant ($p<0.0001$) for all the variables. This has also been shown by study conducted by Aggarwal N et al. (2011)²¹ in Chandigarh. They reported that the advice provided by doctors was significantly higher than other HW in terms of examination, danger signs, diet, delivery care, newborn care, family planning etc.($p<0.001$). Similar trends have also been reported by Rani M et al. (2008)²² in their study. Another study conducted by Punia A et al.(2010)²³ in rural block of Jhajjar, Haryana reported that mother's preference for place of delivery or advice by health personnel was also significantly associated with place of delivery and institutional being maximum among females who visited doctors.

V. Conclusion

Type of health care provider was found to have significant association with quality of services being provided to pregnant females. Advices related to routine investigations & danger signs of pregnancy were given more by doctors (95%) as compared to other health workers. Amount of full 100 tablets of iron & folic acid consumption (25.9%) and rate of hospital delivery (93.2%) was also seen to be higher among females who visited doctors for ANC.

VI. Recommendation

There should be provision for improvement of competence, confidence and motivation of health workers (AWW, TBA) to ensure full range of antenatal care activities specified under NRHM. They should be given periodic training and regular monitoring is required to ensure better quality of services.

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Tables

Table 1. Type of health care Provider

Health provider	Frequency	Percent
Doctor	162	51.7
AWW	70	22.3
ANM	68	21.7
TBAs	13	4.1
Total	313	100.0

Table 2. Association between type of health care Provider and Investigations

Investigations carried out	Type of health care provider n (%)				Total
	Doctor	AWW	ANM	TBA	
Yes	154 (95.1%)	24 (34.2%)	63 (92.6%)	5 (38.4%)	246 (78.6%)
No	8 (4.9%)	46 (65.8%)	5 (7.4%)	8 (61.6%)	67 (21.4%)
Total	162 (100%)	70 (100%)	68 (100%)	13 (100%)	313 (100%)

p- value < 0.001

Table 3. Association between type of health care Provider and Information on warning signs

Information on warning signs	Type of health care provider n(%)				Total
	Doctor	AWW	ANM	TBA	
Yes	145 (89.5%)	12 (17.1%)	31 (45.5%)	0 (0%)	188 (60.1%)
No	17 (10.5%)	58 (82.9%)	37 (54.4%)	13 (100%)	125 (39.9%)
Total	162 (100%)	70 (100%)	68 (100%)	13 (100%)	313 (100%)

p- value <0.001

Table 4. Association between type of health care Provider and Iron Consumption

Iron consumption	Type of health care provider				Total
	Doctor	AWW	ANM	TBA	
YES	159 (98.1%)	47 (67.1%)	50 (73.5%)	0 (0%)	256 (81.7%)
NO	3 (1.9%)	23 (32.9%)	18 (16.5%)	13 (100%)	57 (18.3%)
Total	162 (100%)	70 (100%)	68 (100%)	13 (100%)	313 (100%)

p- value <0.001

Table 5. Association between type of health care Provider and Place of Delivery

Place of delivery	Type of health care provider n (%)					Total
	Doctor	AWW	ANM	TBA	No ANC	
Hospital	151 (93.2%)	19 (27.1%)	31 (45.5%)	5 (38.4%)	39 (15.9%)	245 (61.3%)
Delivery Hut	08 (4.9%)	27 (38.5%)	18 (26.4%)	0 (0%)	26 (32.9%)	79 (18.7%)
Home	03 (1.8%)	24 (34.2%)	19 (27.9%)	8 (61.5%)	22 (28.9%)	76 (19.0%)
Total	162 (100%)	70 (100%)	68 (100%)	13 (100%)	87 (100%)	400 (100%)

p- value <0.001