Research Article

Utilization of antenatal care in rural area

Rajeev Kumar, Barun Kant Dixit, Vivechana Deora

Department of Community Medicine, Teerthanker Mahaveer Medical College & Research Centre, Moradabad, Uttar Pradesh, India.
BHMS Student, Vasundhra Raje Homeopathic Medical College and Hospital, Gwalior, Madhya Pradesh, India.
Teerthanker Mahaveer College of Paramedical Sciences, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India.
Correspondence to: Vivechana Deora, E-mail: vivechana84@gmail.com

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Abstract

Background: Women have many serious complications with various health hazards during their pregnancy, so routine checkups are compulsory for them.

Objective: To study the association of pregnancy and use of provided antenatal care medium by women in respect to their awareness.

Materials and Methods: The cross-section study was conducted during January 5, 2015 to January 5, 2016. A total of 100 pregnant mothers have been selected, from three villages namely Akabarpur, Kutukbur, and Bachhamai Kaurar'a Buzurga in district of Firozabad, UP, for a study of utilization of antenatal care. A close-ended schedule was prepared in Hindi for query of selected pregnant women. All queries were clarified to explain the question so that pregnant mothers may answer clearly. After collecting data, statically analysis was performed by Excel software.

Result: The pregnant women who applied for checkups were only 40%. Hb test of antenatal was only 36%. 64% ladies used 100 tablets, IFA. Extra diet was taken by 20% women.

Conclusion: In this study, we found a very poor ratio of the services and their use in rural areas for antenatal care of women due to illiteracy and less of awareness.

KEY WORDS: Antenatal care, sociodemographic determinant pregnancy, iron tablets and awareness, maternal health

Introduction

There are so many programmer's run by our government but it is very unfortunate in our rural areas that because of lack of knowledge, illiteracy, and lack of medium to provide the information to them, it is not easy to maintain proper antenatal care (ANC) for women of these areas. Meaning of the word "antenatal" is the care of pregnant mother. Of course this care must be in the beginning of pregnancy up to the birth of the baby.[1]

During the pregnancy period, the child and mother are really as a single unit because the child gets his nutrition from his mother in antenatal period. During this period fetus is the part of mother.[1] Well-developed fetus inside the mother's uterus will give birth to a healthy baby. Premature birth and abortion can be minimized with the improvement of the health of mothers, STD disease and fetus, taking drugs during pregnancy has been seen harmful for health of the both mother and fetus. ANC helps for the care of the mother and to get immunization TT vaccine and IFA tablets.[2]

The main aims of ANC service were (1) to provide safe motherhood and maternal care; (2) to be aware, to protect, and to maintain the health of mother during pregnancy; (3) to tell the complications and prevent them; (4) to minimize the mortality and morbidity of antenatal mother; (5) to remove the dread and anxiety about the delivery; (6) to tell the mother about child care, nutrition and personal hygiene, and environmental sanitation.[3]

In India in spite of effects by government and NGOs on ANC for healthy mother and baby still the status of health service is very poor in most of the urban and rural areas.[3,4] Poor pregnancy outcome that can result from an underutilization of maternal services which are further amplified by gender discrimination both before and after birth. In India, there is a

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tradition that women eat food after her husband eats even during pregnancy also.[2,5] Hence they will get less nutritious food.[5]

Most maternal deaths are preventable, the low status of women in the society coupled with their low literacy levels prevent the women take ANC even if services are available. There is an inverse relationship between lifetime risk of maternal death and the availability of trained health worker during pregnancy.[6,4] In developing countries, maternal malnutrition effects not only mothers health but also fetus as well as newborn infants. So fetal and infant deaths are seen more than developed countries.[7] All these deaths can be prevented if proper ANC is available to the mothers. For the good health of mothers Government of India in 1992 launched the National Child Survival and Safe Mother Hood (CSSM) Program.[8,9]

Fifty years ago, the main purpose of ANC was the prevention to maternal mortality. But now aim is to save pregnant mother and fetus.[10] It is the duty of government of every country to provide the best health service for everyone. So North American Government at the time of Second World War thought "Affirm the dignity and worth of the individual & families in same of the poor's and communities of the world and was named "CARE." This care word is now international a group of ten countries, who are the members of this group.[11]

The constitute of care international is the secretariat of Brussels. In present time care is working in near about 70 countries as largest and in dependent program of the world. Care was started on March 6, 1950 in India. Then the indo care agreement was signed between the Government of

Table 1: Pregnant women registered with CHCs

	Yes (%)	No (%)
Registration	40 (40)	60 (60)
Check ups	44 (44)	56 (56)
Anemia test	36 (36)	64 (64)
TT vaccine	80 (80)	20 (20)
Knowledge of five clear	32 (32)	68 (68)

Table 2: Distribution of pregnant women according to occupation

Occupation	No.	%
Service	16	16
Business	12	12
Farmer	24	24
Laborer	40	40
Others	8	8

Table 3: Distribution of pregnant women according to monthly income

Per month income	No.	%
2000	36	36
2000–4000	56	56
4000–above	8	8

Table 4: Distribution of pregnant women according to type of family

Type of family	No.	%
Joint	42	42
Nuclear	58	58

Table 5: Distribution of pregnant women according to education

Education	No.	%
Primary	24	24
Junior high school	10	10
High school	20	20
Intermediate	12	12
Graduate	2	2
Illiterate	32	32

Table 6: Distribution of pregnant women according to height

Height	No.	%
5 Feet	32	32
5F1"	16	16
5F2"	32	32
5F3"	20	20

Table 7: Distribution of pregnant women according to age

Age	N	%
18–22	28	28
22–26	36	36
26–30	24	24
30–34	12	12

Table 8: Distribution of pregnant women according to place of checkups

Helper and place of antenatal checkups	N	%
TBA	10	10
ANM	32	32
Government hospital	10	10
Private hospital	28	28
Others	20	20

Table 9: Distribution of pregnant women according to antenatal checkups

Antenatal checkups	N	%
Weight	20	20
Blood pressure	20	20
Swollen in feet	25	25
Edema	25	25
Stomach test	6	6
Eye test	4	4

Table 10: Distribution of pregnant women according to extra diet

Extra diet	N	%
Usual diet	64	64
Less than usual diet	16	16
Extra one diet	20	20

Table 11: Distribution of pregnant women according to tetanus vaccination

No of doses of tetanus vaccination	N	%
One	42	42
Two	58	58

Table 12: Problems faced during ANC stage in women

Problems	N	%
Swelling of legs	24	24
Headache	20	20
Fetal malpresentation	12	12
Bleeding	16	16
Fatigue	22	22
Other	6	6

Table 13: Preparation before delivery

Preparation	N	%
Clean place	20	20
Clean cotton cloth	16	16
New thread and blade	12	12
Money	12	12
Vehicle	8	8
All	32	

India and care. Since then Care India is supporting many programs such as nutrition and immunization of pregnant mother and midday meal.[12]

Care India is also working in partnerships with Government of India, Government of the state and non-government organization (NGO's) and also with Community Based Organization (CBOS) and project participants.[11,12] Due to lack of aforementioned literature, so we were planned a study to find out the actual ratio of use of these programs by rural population.

Materials and Methods

A total of 100 pregnant mothers were selected from CHC nearest the village Akabarpur, Kutukbur, and Bachhamai Kaurar'a Buzurga in district Firozabad for a study of utilization of ANC from January 5, 2015 to January 5, 2016. The chosen 100 pregnant mothers meet every pregnant female door to door. Under first trimester, pregnant females were chosen and were asked questions.

A close-ended schedule was prepared in Hindi for interview of selected mothers and asked orally. I went to the village and collected two or three pregnant mothers and revised each question and explained; all queries were clarified and the details were collected and statistical analysis was carried out using ms-excel.

Result

Income of pregnant women's families is very low. Per month income of 36% families is Rs. 2000 and up to Rs. 4000 for 56% families. Only 8% people's income is more than Rs. 4000. Education of these women is very poor. 32% women are illiterate. Only 2% are graduated.

Women who were from lower income group and have lower education, were more likely to have not 40%, women registered their pregnancy. Pregnant women's highest % is among age group 22–26, 36% and lowest percentage is

Table 14: IFA tablets taken and place of delivery

IFA tablets	Fill consumption	More than half	Less than half	N	%	
100 tablets	24	40	0	64	64	
200 tablets	18	8	0	26	26	
More	10	0	0	10	10	
Total No.	52	48	0	100	100	
%	52	48	0	100		
Place of Delivery	**Trained Dai**	**Untrainded Dai**	**Nurse**	**Doctor**	**N**	**%**
Home	4	2	0	0	12	12
RHC	0	0	5	10	14	14
Nursing Home	0	0	0	40	40	40
Govt. Hospital	0	0	0	34	34	34
Total (No)	4	2	5	89	100	100
%	4	2	5	89	100	

among age group 30–34, 12%. 32% pregnant women's height is up to 5 feet same is 5F2".

40% heads of pregnant women were laborers and 24% heads are farmers. Service men were 16%, 20% are businessmen and others. Joint family paid attention at the 42% pregnant ladies, who went to hospital, rest were nuclear families who went to hospitals in rare cases. 52% pregnant women went to in Government Hospital for medical test. 28% in private hospital and 20% had no awareness.

40% women were interested in checkups. Woman during ANC stage face many problems of which 24% have swelling in legs, and 16% have bleeding. Of the 100 pregnant women, 25% women included stomach test and 25% edemas while 20% each weight and blood pressure. Only 36% women went to laboratory for anemia test. 80% women had taken TT immunization.

During antenatal period, 64% women were given 100 IFA tablets. Of them 24% women consumed full tablets, 26% women were given 200 tablets whereas 8% women consumed more than 200 tablets. During the antenatal period 64% women took usual diet, 16% women took less than usual diet whereas 20% women took extra diet.

Discussion

In this study we found that in rural areas main drawback of the use of these ANC programs by population was low socioeconomic status, illiteracy, lack of immunization, and minimum visit of ANC. Our study was correlated with the study of UP and Bihar as many as 70% of women did not receive any antenatal checkup during pregnancy. While in few areas women's education consistently showed a positive association with antenatal checkups.[6,7]

Only 16.3% of pregnant females had minimum three ANC visit. Less than a quarter (23.6%) of them was visited at their home by a health worker for ANC checkups. Majority (83.7%) of the respondents received two doses of tetanus toxoid whereas about one-third (33.3%) of them consumed at least 100 iron and folic acid tablets.[2,5]

In rural part of the country the difference is not significant among women of different religion. The possible reason for low rate of ANC visit among Muslim women is the fact that Muslim women are less educated compared to their counterpart of other religion.[3,7,4]

Various reasons given by our respondents with respect to their preference for delivering with traditional birth attendants (TBAs), including greater accessibility, better interpersonal relationship, lower cost, greater convenience, and freedom to use traditional birthing position have also been documented in other studies.[1,7]

The physiologic iron requirements in the second half of gestation cannot be fulfilled only through dietary iron.[6] Frequency of low birth weight (LBW) babies was 42 (27.27%), 26 (24.07%), and 7 (4.38%) in mothers who underwent nil, 1–3, and ≥3 antenatal checkups, respectively. Relationship between iron and folic acid intake and pregnancy outcome in the form of LBW and normal birth weight babies was highly significant statistically ($p < 0.001$).[7]

The relationship between maternal hemoglobin concentration and pregnancy outcome in the form of still births ($p < 0.001$), as well as of LBW ($p < 0.001$) was found statistically highly significant. We also found that the relationship between parity and pregnancy outcome in the form of LBW and normal birth weight babies was statistically highly significant ($p < 0.001$).[8]

In Moradabad, almost 60% of rural women presented with bleeding gums.[9,2] In year 2005, Janani suraksha yojana' was implemented countrywide to reduce overall maternal mortality ratio and infant mortality rate by promoting institutional deliveries from all the sections of society.[10,1] In world the governments of the most countries are taking on high priority for provision of MCH CARE. The following studies are on the utilization of ANC services by pregnant women.

The report of District of Rajasthan shows that 56.2% women had received ANC; 10.95% and 41.90% gradually received one and two doses of TT vaccination. Most of the deliveries (84.28%) were conducted by unqualified hands at home by their relatives or by their neighbors. WHO (1991) reported that poor nutrition and health status of mother during pregnancy resulted in increased incidence of LBW babies. Maternal determinates of birth weight found that rise in maternal age favors gain in birth weight of about 13.5 g. They also noticed that mean birth weight decreases with parity and decrease about 27.8 g for every pregnancy. Mother addicted to either tobacco or alcohol will adversely affect birth weight is impaired by about 19 g if the previous pregnancy was a full-term delivery when compared to a group where pregnancy ended in abortion still birth or premature delivery. This study also showed the potential increases in birth weight by way of ANC visit and average increase was about 320 g.[11]

ICMR[12] reported that the poor nutrition status of pregnant women affects the cause and outcome of pregnancy in many ways. Promotion of maternal and child health has been one of the most important objective of the family welfare program in India. The Government of India took steps to straighten maternal and child health services as early as the first and second five-year plan (1951–1956 and 1956–1961). As part of the minimum needs program initiated during the fifth five-year plan (1974–1979), maternal health, child health, and nutrition services were integrated with family planning services to pregnant women, lactating mothers, and preschool children (KANIJKAR 1979).[13]

In Agra, ANC rate was found to be 18.57% immunization coverage, that is, two doses of TT were 62.85%. Home deliveries attended by untrained dais were 17.62%. 1994 in Karnataka's District Hassan here the utilization of ANC services are carried out with 96.5% mothers received at least three antenatal checkups and 98.2% mothers received TT immunization, 33.3% deliveries were conducted in government hospitals and 14% deliveries were conducted in private

hospitals. The deliveries that took place at home were 52.6%. The deliveries attended by trained staff were 43.3% in Delhi. The report of this survey were as follows: The mothers who have not received ANC was 20%, those who had received TT immunization was 67.7%, 65.4% mother had received IFA tablet, place of delivery at home was 54.6%. The birth attended by untrained workers was 54.6% of deliveries. In Jalabad district, the place of delivery at home was 71.8%. The place of birth in institution was 28.2%. The birth attended by untrained dais or by relatives or neighbors was 50% and births attended by health staff was 29.6%. Rural Madhya Pradesh reported that in all antenatal cases ANMs performed abdominal examination, administered TT injections, examined clinically for anemia, checked edema, blood pressure, provided with folic acid tablets, referred for urine and blood tests, and asked them to report after a month.[14]

In Mathura, Etah, and Almora districts of UP, the mothers who had not received any ANC was 58.1%, 98.87 %, and 34.9%, respectively. Mothers who received complete course of TT injections were 34.5% in Mathura, 33.1% in Etah, and 62.6% in Almora district. Deliveries that took place at home was 79.7% in Mathura, 90.4% in Etah, and 92.3% in Almora districts, respectively. Mothers initiated breast feeding after 24 h were 32% in Mathura. It was also observed that exclusive breast feeding was done in 48.3% and 12.5% cases for 6 months duration in Almora and Etah districts, respectively.[15]

In Agra district antenatal registration was 60% but less than one-fourth had adequate ANC, 55% mothers were given TT2/B of which about two-third deliveries were domiciliary and trained personal attends less than half of total deliveries, and 35.7% mother had received 9FA tablets during antenatal period of which only 6.8% consumed more than 100 tablets. About 30% mothers delivered within 2 years of their last child birth, whereas only 14% conceived before 18 years of age[16] following base line situation analysis in two selected blocks of Agra district CMCHN project which revealed that only 55.25% women delivered during last 1 year where registered during antenatal period and only 5.61% women were found to have received recommended three antenatal checkups, 68% women were found to have received TT immunization (irrespective of number of doses) among women who received antenatal checkups and only 14.47% have received them from any government doctor.[17]

After assessing quality of care in RCH services provided through government health services in rural areas of Agra district that 40.5% women registered whereas 66.7% received vaccination and only 3.8% had received IFA tablets, women who received three antenatal checkups were 2.7%, and qualified persons attended 33.3% deliveries.[18,19]

A study 80 selected cluster in urban and rural areas of Agra district and assessed that more than half of mothers (53.6%) got registered for AND services at one or the other health agency. The registration rate was higher in rural area than urban (54.8% and 51.1%, respectively).[20,21] following baseline situation analysis in 80 selected clusters in Agra district revealed that only 56.2% mothers had received two doses or booster of TT vaccine during their 9 months. Span of pregnancy and the coverage was higher (58.9%) in urban than in rural areas (54.8%)[22,23] while this study is not similar with the study of about one-eighth mothers had received only one dose of TT vaccine with only slight difference in rural and urban settings (12.5% in rural and 31.3% in urban), 31.1% mother had not received any TT vaccine (32.7% in rural and 27.8 in urban).[24] 51% Mothers were given 9 FA tablets whereas this % was 49.3% in rural areas and 23.7% mothers did not consume it. This % was higher in urban than rural (37.8% and 15.2%, respectively).[25,26]

The strength of the study is that it is very useful for the awareness of rural population for ANC and limitation of the study is that it is a small population study which was conducted only on few pregnant women of rural areas of Uttar Pradesh.

Conclusion

To increase utilization of ANC services in public, mass education, and awareness program should be advertised by posters, street shows, media, corner dramas, etc. Women from low income, uneducated, and slum areas should be targeted to minimize complications, to improve immunization, and self-care behavior. Some facts were highlighted for more and more utilization of ANC. Most useful services in the rural area should be volunteer key for Reproductive and Child Health Programme, the Integrated Child Development Services etc., while that is by government servants as TBA, ANMs, Doctors, MSWs, or NGOs.

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