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Original Article

A STUDY ON COVERAGE UTILIZATION AND QUALITY OF MATERNAL CARE SERVICES

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ABSTRACT

The objectives of the study were yo assess the utilization of various maternal services and to compare the quality of services provided by doctors and health workers in terms of components and advice received by pregnant women during antenatal period. It was a Cross-sectional Study conducted in a village on the border of Chandigarh (U.T.) and Mohali (Punjab). All the women who had delivered in the past three years in the village Palsora were included in the study. 92.4% of the pregnancies were registered, 53.2% of which received antenatal care by a Doctor and 46.8% by a health worker. The measuring of blood pressure was significantly higher by the doctor than the health workers who recorded weight more significantly. The advice provided by doctors was significantly higher than health workers regarding diet, danger signs, newborn care, family planning and natal care.

Key words: Antenatal care (ANC), Health worker (HW), Reproductive and child health, (RCH), Postnatal Care (PNC)

INTRODUCTION

The National Population Policy 2000 (NPP-2000) envisages the goal of 100 percent registration of pregnancy, 80 percent institutional deliveries and 100 percent deliveries to be conducted by trained staff/birth attendant by the year 2010[1]. Reproductive & child health programme[2] recommends that as a part of antenatal Care, women should get registered & receive at least three antenatal checkups which include weight and height measurement, blood pressure records, abdominal examination along with General Physical Examination (GPE) and investigations to detect any complication. It also includes provision of two doses of tetanus toxoid vaccine, 100 tablets of Iron and Folic Acid (IFA) prophylactically to prevent anemia, dietary advice, intranatal and postnatal care which includes, new born care, family planning etc. The reproductive age group (15-45 years) owing to their vulnerability deserves special attention. Because of the universality of marriage & social pressure to bear children early, women are subjected to added risk of morbidity & higher mortality[3]. With a paradigm shift in approach from "Top Down" to "Grass root level Micro planning" in the Reproductive & Child Health Programme[2], it is imperative to assess the felt needs of the population for providing the appropriate and optimum range of maternal health services. Hence the present study was carried out to know the prevalence of utilization of antenatal services and to compare the quality of services provided by doctors and health workers.

MATERIAL AND METHODS

The study was carried out in village PALSORA, with a population of approximately 3500. This village is a part of field practice area of Rural Health Training Center (RHTC) of Department of Community Medicine, Govt. Medical College & Hospital, Sector-32, Chandigarh and is

situated at the border of Chandigarh and Mohali .The respondents were all the mothers who had given a birth in the preceding three years (i.e. birth in the period from September 2002 to September 2005).

A predesigned pretested questionnaire was used to collect the desired information about utilization of the specific components of antenatal and postnatal care.

OBSERVATION AND DISCUSSIONS

Of the 307 women who had delivered a child in the past three years, majority were Hindus (73.3%), in the age group of 20 – 34 years (86.3%), and illiterate (46.6%). Birth order was 1 & 2-3 in 35.2% and 55.0% respectively.

Table 1: Antenatal Care Indicators

Antenatal Care Indicators	Present Study	NFHS-II	
		PUNJAB	INDIA
% of women who received at least one Antenatal checkup	92.2	74	65.4
% of women who received at least 3 Antenatal checkup	77.2	57	43.8
% of women who received Antenatal checkup in first trimester	30.0	42.6	33
% of women who received 2 or more Tetanus toxoid	90.6	89.9	66.8
% of women who received 100 IFA tablets	53.1	64.2	47.5

92.4% i.e. 283, of the women who delivered during the study period, had received antenatal checkups during their pregnancy. As per the NFHS-2[4] data, only 65.4% of the women in India received at least one antenatal check up. This is in comparison to a study by Sinha Babu et al[5] (99.2%), where as in a study by Bartati Banerjee[6], the utilization of antenatal services was 64.25%. The registration of antenatal cases was 57.2% in a study by Ranjan Das[7] et al, whereas it was 95% in a study by Sunder Lal[8] et al.

Table 2: Appropriateness of Physical Examination by Provider

Component	All (N=237)	Doctor (N=126)	Health Worker (N=105)	p- value
	No. (%)	No. (%)	No (%)	
Weight measurement x 3	153 (64.1)	74 (58.7)	79 (75.2)	0.008 (S)
Blood Pressure exam. x 3	105 (44.3)	74 (58.7)	30 (28.6)	0.0000 (S)
Abdominal Examination x 3	152 (64.1)	83 (65.9)	70 (66.7)	0.89 (NS)

A total of 237 (77.2%) mothers received 3 or more Antenatal Checkups during their pregnancy. According to NFHS-2[4] only 43.8% of the women received at least three antenatal checkups (Table 1). Ranjan Das[7] et al reported three or more antenatal visits in 62% of the registered cases whereas it was 27.7% in a study by Sunder Lal[8] et al. In a study by Agarwal[9] et al 23% of the registered antenatal women had three to four visits. In the present study, out of the 237 mothers who received three or more Antenatal checkup's, 126 (53.2 %) mothers received antenatal Care by Doctors & 105 (46.8%) mothers received antenatal care by a health worker i.e. ANM etc. The data collected from these mothers was used for analysis for quality of care (Fig. 1).

The ANC visits for 3 or more time was 81.9% for doctor as a provider as compared to 82.0% in case of health worker. In General Physical Examination (GPE), doctors had measured blood pressure in 58.7% pregnant mothers, which is significantly higher ($p<0.0001$) than health workers. But weight measurement by health workers was significantly (p=. 008) higher than doctors. Abdominal examination was done by both in two out of three women (Table 2). The advice provided by doctors was significantly higher than HW regarding diet (p=.0001), danger signs (p=.0001), newborn care (p=.0001), family planning (p=.0001) & natal care (p=.0001).

In the present study, 90.6% of the pregnant females had received two doses of tetanus toxoid, 66.8% of mothers had received two doses of Tetanus toxoid according to NFHS- 2[4], and where as in a study by R.Talwar[10] only 54.6% had received tetanus toxoid. In another study by

Sunder Lal[8] et al and by Ranjan Das[7] et al two doses of tetanus toxoid were received in 94.8% and 93.2% mothers.

Though IFA was given to majority of the women in the present study, but only 53.1% had received it for three months. 47.5% of the mothers received 100 IFA tablets as per NFHS – 2[4]. In a study by Sunder Lal[8] et al, 100 tablets of IFA were given in 5.8% women. A similar study by Ranjan Das[7] et al showed IFA consumption of 1.7% for more than 100 tablets.

Table 3: Quality of ANC in Term of Advice by Provider

Component	Doctor		Health Worker		p-value
	No	%	No	%	
Diet advice	124	98.4	75	71.4	0.0001(S)
Danger Sign	112	88.9	33	31.4	0.0001(S)
New Born Care	107	84.9	39	37.1	0.0001(S)
Family Planning Advice	73	57.9	29	27.6	0.0001(S)
Delivery Care Advice	112	88.9	37	35.2	0.0001(S)
TT Immunization	124	98.4	101	96.2	0.29(NS)
IFA given	120	95.2	99	94.3	0.35(NS)
IFA Consumption	100	83.3	80	80.8	0.5(NS)
Quantity (100 tablet of IFA)	79	65.8	67	67.7	0.86(NS)
Delivery at Hospital	60	47.6	32	30.5	0.008(S)

The Institutional deliveries were more in cases, where ANC was provided by a doctor (47.6% Vs 30.5%), (Table 3). One third (34.6%) of births in this area took place in health facilities and two-third were home deliveries.

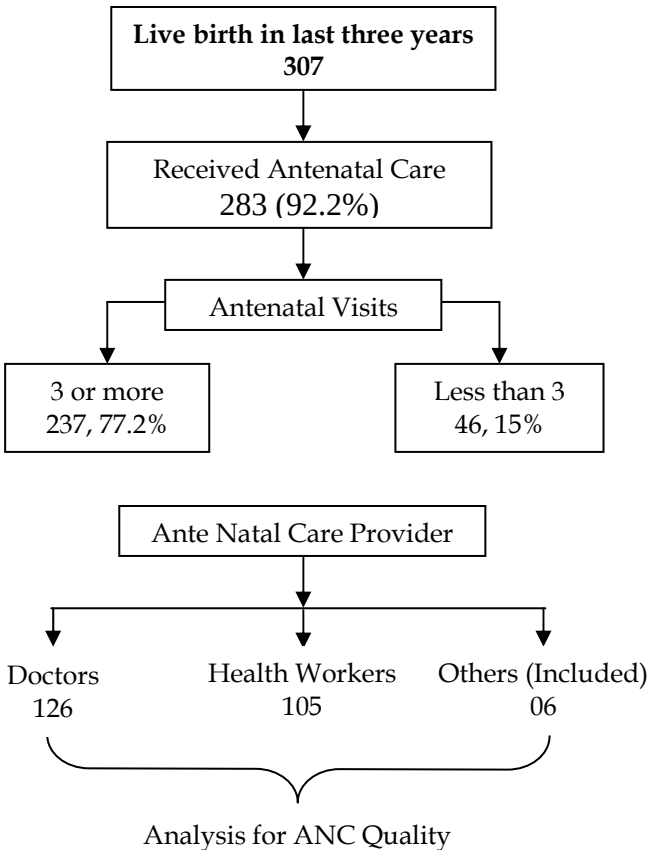

Figure 1 Flow chart of analysis for quality of care.

The proportion of births occurring in health facilities is higher for mothers with birth order one (44.4%) than mother with birth order 4 or more (16.7%). The reason for non-institutional delivery in majority was that institutional delivery was not considered necessary by respondents (67.2%). Studies by Sunder Lal et al and Ranjan Das et al reported institutional deliveries in 14.2% and 10.7% respectively.

Based on mother's reports, 6.2% (19) of infants born in this area in the past three years were delivered by caesarian section.

About three-fourth (74%) of non-institutional births were followed by a check-up within two months of delivery (Table 4). Among births that were followed by a check-up, around 80% check-ups took place shortly after birth (72% within two days & 7% within a week). The likelihood of a birth being followed by a postpartum check-up was higher for literate mothers than illiterate mothers and for mothers who had got antenatal check-up thrice.

In the postnatal component, abdominal examination, advice regarding family planning, breast feeding and baby care was provided in 76%, 29.8%, 71% and 59% respectively (Table 4).

Table 4: PNC of Non-Institutional Delivery (N=204)

Post-natal Care Availed	No.	%	Punjab	India
Total PNC Given	151	74	20.0	17
With in 2 day	108	71.5	28	14
With in a Week	10	6.6	56	31
After one week	33	21.9	16	55
Component of PNC CARE (n=151)				
Abdominal Examination.	115	76.2	86	38
Family Planning Advice.	45	29.8	35	27
Breast Feeding Advice	101	70.9	65	43
Baby Care Advice	89	58.9	58	46

CONCLUSIONS

Majority of the women in the present study were illiterate Hindus in the age group of 20-34 years, with a birth order of 2-3in 55%. 92.4% of the pregnancies were registered, 53.2% of which received antenatal care by a doctor and 46.8% by a health worker. As far as the quality of antenatal care, as provided by either a doctor or a health worker, it was observed that measurement of blood pressure during antenatal checkup was significantly higher in case of doctor as a provider, whereas weight measurement was significantly higher where health worker was the antenatal provider.

Regarding quality of antenatal care in terms of advice by the provider, it was observed that antenatal, intranatal and postnatal advice given by doctor, as antenatal provider was significantly higher than a health care worker.

Institutional deliveries were more in cases where a doctor (47.6%vs.30.5%) had provided antenatal care. Both doctor and health worker had provided tetanus toxoid and IFA tablets to approximately 95% of mothers.

Antenatal care services have traditionally been and still continue to be one of the most sought services at the subcentre level. The RCH[2] approach places special emphasis on client-oriented, need-based, high quality integrated services. Inbuilt mechanisms for assessment of quality of ANC coverage have been developed and incorporated into the routine reporting system. But these reports are not always reliable. Accountability at all levels should be ensured and random crosschecking by independent institutions be encouraged.

RECOMMENDATIONS

There should be provision for improvement of competence; confidence and motivation of ANM's, health workers to ensure full range of antenatal care activities specified under NRHM[11] programme. Attention should also be given to regular and sustained contact between health workers and antenatal mothers particularly through home visits to develop mutual confidence and thereby help remove prevailing misconceptions of mothers, women and other barriers of utilization of antenatal care services.

Awareness should be generated amongst the community members by holding mothers' meeting and extensive IEC programme inviting opinions and suggestions from the clients and encouraging enhanced community participation for bringing about a quantitative and qualitative change in the coverage of reproductive health programme; Support should also be obtained from local NGO's.

Last, but not the least the present study emphasizes the need for training and retraining of health functionaries, who by working at grass root levels can do a lot in improving the quality of antenatal services.

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