

Antenatal Care and its associates: A community based cross sectional study

Dr. Mahendra Khanna,¹ Dr. Goverdhan Meena², Dr. Paddma Khanna³,
Dr. Naveen Kumawat⁴ and Dr. Suresh Kewalramani⁵

¹ Senior Demonstrator, Department of PSM, SMS Medical College, Jaipur (Rajasthan) India

² Professor, Department of PSM, SMS Medical College, Jaipur (Rajasthan) India

³ Professor, Senior Medical Officer, State Government of Rajasthan, India

³ First Year Resident, Department of PSM, SMS Medical College, Jaipur (Rajasthan) India

⁴ Assistant Professor, Department of PSM, SMS Medical College, Jaipur (Rajasthan) India

Abstract— About 67,000 women in India die every year due to pregnancy related complications. So this present study was carried out on 300 mothers of field practice area of RHTC Naila, to find out status of ANC visit and its associates. In this community based cross sectional study 300 mothers were selected who had delivered within one year. It was found in this present study 86.33% of mothers had 3 or more than 3 ANC visits and only 13.67% mothers who had ANC visit for once or twice. And 94% beneficiary had received at least 100 IFA tablets mean IFA tab received by pregnant were $124 \pm 32SD$. ANC service utilization by mothers was found to be associated with educational status of beneficiaries, place and mode of last delivery but not with other studied variables. ANCs adequately covered was maximum in SC i.e. 89.57% followed by OBC, ST and General caste. Mothers who had Institutional delivery had used ANC more adequately than who had delivery at home (96.95% v/s 0%). Adequately covered ANC was significantly more in normal delivery than LSCS (93.12% v/s 83.33%). IFA tablet consumption by mothers was found to be associated with type of person registered their last delivery. Adequately number (≥ 100) IFA tablets were consumed by significantly more proportion of mothers who were registered by ASHAs than by AWW and ANM.

Key words: Mothers, Antenatal (ANC) Visits, Associating Factors,

I. INTRODUCTION

MMR in India during 2004-2006 was 254 per 100,000 live births with wide geographical variations, which slightly declined to 212 per 100,000 live births in 2007-2009 (SRS 2009).¹ goals of MMR less than 100 per 100,000 live birth. Eight socioeconomically-backward states: Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan, Uttaranchal, and Uttar Pradesh, accounted for majority of maternal deaths in India.² The main causes of MMR are known, and more than 80% of maternal deaths could be prevented or avoided through either increasing the institutional deliveries or by improving the quality of care provided to the women.³⁻⁷ About 67,000 women in India die every year due to pregnancy related complications

So this present study was carried out to find out status of ANC visit and its associates in field practice area of RHTC Naila, attached to SMS Medical College, Jaipur (Rajasthan) India

II. Methods

A community based cross-sectional observational study was carried out on 300 mothers who had children below one year residing in identified villages of field practice area of RHTC Naila Jaipur.

Out of 27 villages of field practice area of RHTC Naila 10 villages was selected through simple random technique. Now from every village identified, 30 eligible mothers was identified to include in the study. For selecting mothers from each of identified village every house will be surveyed till desired number of mothers achieved from that village

Data were collected from identified mothers in predesigned semi structured performa. Data thus obtained were entered in MS Excel 2007 worksheet. Significance of difference in proportions was inferred by Chi-square test and significance of difference in means was inferred by unpaired 't' tests. For significance 'p value' equal or less than 0.05 was considered significant.

III. Results

In this present study, out of these 300 mothers majority (204 i.e. 68%) of mothers had more than 3 ANC visits and 55 (18.33%) had 3 ANC visits and 30 (10%) had 2 ANC visits and 11 (3.67%) had only one ANC visit in their ANC period. So Present study indicate that the percentage of mothers who had 3 and more than 3 antenatal visits were 86.33%. There were 41 (13.67%) mothers who had ANC visit for once or twice. (Fig 1)

In the present study 94% mothers had received at least 100 IFA tablets and remaining 6% had received less than 100 IFA tablet. Mean IFA tab received by pregnant were $124 \pm 32SD$. (Fig 2)

Figure 1

Number of ANC visits wise distribution of Mothers

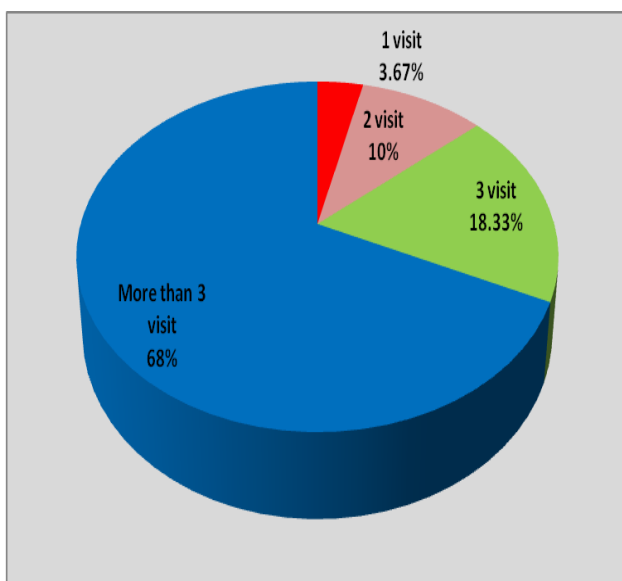
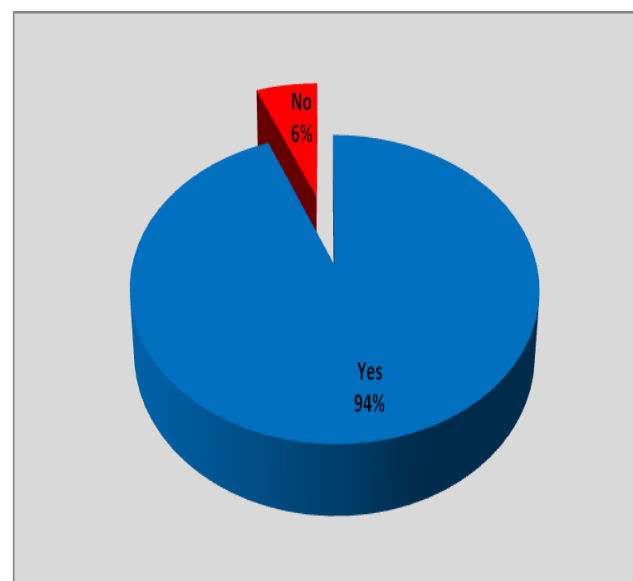


Figure 2

IFA tablet consumption wise distribution of Mothers



It was also revealed that ANC service utilization of mothers was found to be associated with educational status of beneficiaries, place and mode of last delivery but not with other studied variables like age of beneficiaries, age at marriage of beneficiaries, caste, religion, occupation, socioeconomic status of beneficiaries. (Table 1)

Table 1
Associating Factors with ANC Utilization by Mothers

Type of Variables		ANC Utilization by Mothers		Test of Significance		Association
		<3 ANC visit (N=41)	3 and above ANC visit (N=259)	P Value	LS	
Age (Mean ± SD) in Years		23.51±1.90	23.63±1.97	-0.334 0.716	NS	No
Age at marriage (Mean ± SD) in Years		18.85±1.39	18.71±0.86	0.878 0.381	NS	No
Caste	General	10	48	2.391 0.767	NS	No
	OBC	6	36			
	SC	12	103			
	ST	13	72			
Religion	Hindu	40	255	0.058 0.810	NS	No
	Muslim	1	4			
Type of Family	Nuclear	18	116	1.698 0.428	NS	No
	Three Generation	8	32			
	Joint	15	111			
Education	Illiterate	12	34	9.80 0.007	S	Yes
	Up to Secondary	24	162			
	>Secondary	5	73			
Occupation	House wives	34	182	3.161 0.075	NS	No
	Working	7	77			
SES	SES Class II	1	12	1.969 0.792	NS	No
	SES Class III	19	143			
	SES Class IV	18	88			
	SES Class V	3	16			
BPL Card	Yes	4	19	0.051 0.822	NS	No
	No	37	240			
Delivery Registration By	ANM	4	67	5.841 0.054	NS	No
	AWW	10	65			
	ASHA	27	127			
Place of Delivery	Home	5	0	83.225 <0.001	S	Yes
	Hospital	9	286			
Type of Delivery	Normal	19	257	1.763 0.184	S	Yes
	LSCS	4	20			

It was found that maximum proportion of adequately ANC covered was in SC i.e. 89.57% followed by OBC, ST and General caste. Likewise significantly more proportion of Institutional delivery had used adequate ANC services than mothers who had delivery at home (96.95% v/s 0%). When mode of delivery and ANC service utilization was analyzed it was found that proportion of adequately covered ANC was significantly more in normal delivery than LSCS (93.12% v/s 83.33%).(Table 1)

IV. Discussion

This present study observed that 86.33% of mothers visited for ANC more than three times and only 13.67% mothers had ANC visit for once or twice. There was tremendous increase in the rate of mothers seeking antenatal care visits, which can be made out through the current observation of the studies when they are compared with observations made previously. In the annual report of maternal health programme (2013-2014) it was found that mother who had more than 3 ANC visit was only by 50.4% in DLHS-2 (2002-2004) 49.8 in DLHS-3 and 68.7 in CES (2009).⁸ Other studies had reported almost similar observations as that of present study. According NFHS-III (2005-2006)⁹ of India, mother who had at least 3 antenatal visits for their last birth was 73.8% for urban areas. Sharad D. Iyengar et al. (2009)¹⁰ in his study showed that seventy percent of women with more than four ANC visit, served by skilled attendants during child birth. Sharma et al. (2009)¹¹ in his study found that 82% of mothers had more than three ANC visits.

In this present study 94% beneficiary had received at least 100 IFA tablets and remaining 6% had received less than 100 IFA tables on further analysis mean IFA tab received by pregnant woman were 124. well comparable observations were of NFHS-3 fact sheet Rajasthan⁹. According to Sharad Iyenger et al. (2009),¹⁰ iron and folic acid tablets reached to 98% of women however 13% consumed tablets for 90 days or more. Observations made by other studies were well in resonance with the findings of present study.

Say L et al (2007),¹² in his studies showed that there is wide variation in the use of maternal health care. Methodological factors (inaccurate identification of population in need or range of potential confounders controlled for) played a part in this variation. Differences were also caused by factors relate to health care users (eg clinical availability etc) or by an interaction between such factors (eg perceived quality of care). Variation was usually framed by contextual issues relating to funding and organizing of health care or social or cultural issues. This review demonstrated variation in the use of maternal health care across population both within and between 23 developing countries. In his study he showed that factors related to place of residence and socioeconomic status account for variation in use of maternal health care. Women's age, ethnicity, education, religion, culture clinical need for care, decision making power, costs location, quality of health care service plays important role. These factors interact in different ways to determine use of health care. He also concluded that in India, affluent rural women are unwilling to invite health workers at home.

Shabana Roze Chowdhury et al. (2013),¹³ showed that, despite this free provision of facility based care, there was no marked increase in women's use in institutions. The reasons are multidimensional: regional and social disparities continue to plague coverage and use of health services.

Abeje G. et al. (2014)¹⁴ in his study concluded that age at first marriage, educational status of the women and gestational age at first ANC visit are independent predictors of delivery service utilization.

Hence intensifying education for women and behavior change communication (BCC) intervention to increase early initiation and uptake of ANC service use in the first trimester and delayed marriage are recommended to promote institutional delivery service utilization.

CONCLUSIONS

In this present study 86.33% of mothers had 3 or more than 3 ANC visits and only 13.67% mothers who had ANC visit for once or twice. And 94% beneficiary had received at least 100 IFA tablets mean IFA tab received by pregnant were $124 \pm 32SD$. ANC service utilization by mothers was found to be associated with educational status of mothers, place and mode of last delivery but not with other studied variables. ANCs adequately covered was maximum in SC i.e. 89.57% followed by OBC, ST and General caste. Mothers who had Institutional delivery had used ANC more adequately than who had delivery at home (96.95% v/s0%). Adequately covered ANC was significantly more in normal delivery than LSCS (93.12% v/s 83.33%). IFA tablet consumption by mothers was found to be associated with type of person registered their last delivery. Adequately number (≥ 100) IFA tablets were consumed by significantly more proportion of beneficiary who were registered by ASHAs than by AWW and ANM.

CONFLICT OF INTEREST

None declared till now.

REFERENCES

1. India. Ministry of Home Affairs . Special bulletin on maternal mortality rate in India 2004-06: sample registration system. New Delhi: Office of the Registrar General, Ministry of Home Affairs, Government of India; 2009
2. India. Ministry of Home Affairs . Special bulletin on maternal mortality in India 2007-09: sample registration system. New Delhi: Office of Registrar General, Ministry of Home Affairs, Government of India; 2011
3. Rifat Jan, Rafiq M.R: Iftikhar Munshi, S.M. Saleem: Assessment of free referral services under JSSK in district Ganderbal Kashmir; A cross sectional study. Journal of evolution of Med and Dental Sci/eISSN-2278-4802 PISSN 2278-4748/Vol. 14, Issue 57; Page 9919, July, 2015.
4. Meely Panda, Shasarka Shekhar Panda, Rashmi Ranjan Das, Sushree Samisha Naik, Aparajita Paid: Janani Shishu Suraksha Karyakram: This scheme enough for a sick newborn with congenital disorder. Primary health care: open access Journal 2167-1079; volume 5/Issue 1; 2015
5. Vikas Kumar, Sunil Kumar Misra, Suneel Kumar Kaushal, Subhash Chand Gupta, Khan Amir Maroof. Janani Suraksha Yojana : Its utilization and perception among mothers and health care providers in a rural area of North India. International Journal of Medicine and Public Health. 2015;5(2):165-168
6. Janmenjoy Mondal, Dipta Kanti Mukhopadhyay, Sujishnu Mukhopadhyay, Apurba Sinhababu. Does Janani Shishu Suraksha Karyakram ensure cost-free institutional delivery? A cross-sectional study in rural Bankura of West Bengal, India. Indian Journal of Public Health. Year. 2015;59(42):279-285
7. Dr. Suresh Sharma. Janani shishu suraksha karyakram and its repercussions on out of pocket expenditure. International Journal of Current Research. September, 2015;7(9):20808-20815
8. Concurrent assessment of Janani Suraksha Yojana Scheme in selected states of India, 2008, Bihar, Madhya Pradesh, Orissa, Rajasthan Uttar Pradesh – UNFPA (May 2009)
9. Sharad D. Iyengar, Kirti Iyengar, and Vikram Gupta: J. Health population Nutr. 27(2):271-292; Apr. 2009

10. Sharma MP, Soni SC, Bhattacharya M, Dutta U, Gupta S, Nandan D: An assessment of Institutional delivery under JSY at different levels of health care in Jaipur district Rajasthan. *Indian J Public Health* 3: 177-82; Sept. 2009
11. International Institute for Population Sciences . National Family Health Survey (NFHS-3) 2005-06: India. Vol. 1. Mumbai: International Institute for Population Sciences; 2007. pp. 208–14. 436-46
12. Say L, Rainer: A systemic review of inequalities in the use of maternal health care in developing countries: Examining scale of the problem and importance of context. *Bull World Health Organ* 85(10):812-9; Oct. 2007
13. Shabana Roze Chowdhury, KR Nayar A: Multidimensional approach to child survival needed. *The Lancet* Volume 381 Issue 9864 Page. 374, 2 February 2013
14. Abeje G. Azage M. Setegen T: Factors associated with institutional delivery service utilization among mothers in Bahir city administration, Amhara region, a community based cross sectional study. *Rep. Health* 1186/1742-4755-11-22; Mar. 2014