



AN EPIDEMIOLOGICAL INVESTIGATION OF ANC SEEKING PATTERN FOR PREGNANT WOMEN COMING IN IMMUNIZATION CLINIC OF CHC MURADNAGAR IN GHAZIABAD

Dr Narendra Singh

Professor, Department of Community Medicine, ESIC, Faridabad, Haryana

Dr Susmita Thakur*

Tutor, Department of PSM, PMCH, Dhanbad, Jharkhand, 826005
*Corresponding Author

ABSTRACT

Background: ANC visits during antenatal period provide an opportunity which is not only important but also detrimental to the pregnancy and its outcome including maternal health post-partum, immediate context and long term context. This study was done to 1) Establish the SES conditions of the females seeking ANC in CHC Muradnagar. 2) Establish the extent of ANC being delivered under the Norms of Government of India (GoI) 3) Establish the reasons behind the gaps if any found between health care service delivery and its utilization if any.

Methodology: A hospital based cross sectional observational study was done in CHC Muradnagar on patients coming to the immunization clinic. Study was done from October 2017-April 2018.

Results: A total of 209 females participated in this study out of which majority were housewives (94.4%). We saw during ANC majority (95%) being given IFA tablets (180 tabs) and TT first dose being administered. The hemoglobin levels were checked for also for all females while majority (46%) had their 2 ANC done.

KEYWORDS :

India has achieved tremendous success in halting the steep rise in mortality rates of mothers, MMR has declined from 212 in 2007-2009 to 167 in 2011-2013. (1) Though the decline is obvious and healthy, yet we need more decline in terms of MMR for us to near our Sustainable Development Goals (SDGs) (2). India has wide variations of MMR across the country with 300 in Assam while 61 in Kerala. Uttar Pradesh is placed at the top in northern part of the country with MMR of 285 maternal deaths per 100,000 live births. (1)

Of the reported cause of deaths 38% were from hemorrhage, 11% due to sepsis and 5% was from obstructed labor (1), majority of these can be prevented if timely intervention in the form of quality ANC can be done for all pregnant women registered for ANC in Tertiary care institutions, deliver according to norms and appropriate post-natal care.

ANC visits during antenatal period provide an opportunity which is not only important but also detrimental to the pregnancy and its outcome including maternal health post-partum, immediate context and long term context as it provides ample time and space for counselling to prepare for birth, making the timely decision, reaching the right place for delivery and managing the health of both baby and mother after delivery. It is well known and widely accepted that use of maternal health services reduces maternal morbidity and mortality (3, 4, 5, and 6).

NFHS -4 data paints a grim picture regarding ANC care as only 31.1% of pregnant females accessed full Antenatal Care which includes not only timely visits but also the quality of services being given on those visits like, Immunization, counselling, lab screening, testing etc. Utilization of maternal health services is influenced by multiple factors and this required focused attention. (7)

Studies done across country have demonstrated in India that Health System including the environment in which services are being delivered along with socio economic factors of the beneficiaries are responsible for a Quality ANC, as demonstrated in other studies seeking the percentage of institutional delivery in the basis of socio economic status where it was shown that only 13% of females going for institutional delivery were from low SES [6, 8]. It has also been shown that ANC is the gateway for other healthy behaviors adopted during and after pregnancy, like institutional delivery, providing newborn care, exclusive breastfeeding, complimentary feeding and many more. Utilization of antenatal care can be affected by large number of factors

including socio-demographic factors and economic factors such as age of the woman, education, work status, parity, income, accessibility and availability of maternal and child health services etc. (9,10,11)

Studies done in Uttar Pradesh exploring the epidemiology and other sociodemographic factors for quality ANC according to the GoI norms are non-existent in context of Community Health Care settings. With an Aim to understand the various determinants and associated existing indigenous picture in community health care setting a study was done to 1) Establish the SES conditions of the females seeking ANC in CHC Muradnagar. 2) Establish the extent of ANC being delivered under the Norms of Government of India (GoI) 3) Establish the reasons behind the gaps if any found between health care service delivery and its utilization if any.

METHODOLOGY

This study was conceptualized in Department of Community Medicine, Santosh Medical College and Hospital. After an IEC clearance from the IRB of the University, the study progressed.

This study was a cross sectional observational study done in Hospital Setting.

Study was started in October 2017 and data collection was done till April 2018.

Data of all females coming for ANC in CHC Muradnagar's Immunization Clinic was reviewed from the ANC register available. An age limit of 18-45 years was decided to include the pregnant females. We included all females who gave their consent for participating in the study while those who were not willing to participate in the study and were having any severe complications. A questionnaire was designed in the Department of PSM which incorporated questions from SES, Education level, Being Approached by SAHIYA etc. All components of a quality ANC according to GoI norms like Number of ANC, Check up by Doctors during ANC, Screening of Diseases like Hepatitis B, HIV, STIs, Thyroid, Anemia etc., Lab testing for other ailments, Routine Ultrasound etc. were checked for. The questionnaire was pretested in the Hospital before proceeding for data collection in CHC Muradnagar. Data collection was done using hard copy questionnaire which was later entered in an MSOffice excel sheet.

Data thus collected was analyzed using SPSS version 21.0.

Standard measures of central tendency was used to evaluate the results while p value of less than .05 was considered to be statistically significant.

RESULTS

We in our study saw 209 females coming for participating in the study , with age of 16- 34 , mean of 23.53±3.45 , while family income reported were in the range of INR 3000- 14000 per month , mean of INR 5770 per month ± 2913.75 . We had more than 70% as Hindu clients while 28% were Muslims and 1% were Christians while rest were Sikhs. We had more housewives coming to us while rest were either working as farmers, laborers. Some (48, 22%) participated but were willing to share some personal details only . They however were not reluctant in giving their medical history. Only 49 (22%) were mobilized by some ASHA for coming in this center to get their ANC Check Ups while others 160 were here on their own . Females from different socioeconomic profile came for their ANC check ups , majority of them being illiterate or educated up to primary level (Up to class 5) (Table 1) We were looking for the quality of ANC check up being done according to the GoI norms (Table 2) . Majority of females were given TT shots which came down when we counted the dosing of TT into First TT , Second TT and Booster TT (Table 2) . Majority of the females came for ANC were having more than 2 ANC's while almost all got 180 IFA tablets . (Table 2) While other components were not seen in such majority like Calcium Tablets , Hepatitis screening , Routine USG checks, Thyroid Abnormality screened etc (Table 2) . A Chi square test also gave us the relationship between Number of ANC check ups and other factors like Anemia Status , Age and Parity Status . Out of these we saw a p value less than .05 in Anemia status and Parity Status with ANC check Ups . (Table 3)

Age in years	115	71.4
<30 years		
>30 years	46	28.6
Women occupation	9	5.5
Employed		
Housewives	152	94.4
Women Education	70	43.5
Illiterate		
Primary	76	47.2
Secondary	15	9.3
Total monthly income of household (Rs)	137	85
1,000-10,000		
>10,00	24	15
Parity	40	24.8
Primi gravida		
Multigravida	121	75.2
Abortions	52	32.3
Yes		
No	109	67.7
Still births	157	97.5
No		
Yes	4	2.5
Child deaths	7	4.3
Yes		
No	154	95.7
Family planning practice	37	23
Yes		
No	124	77

*Some Participating females were not comfortable sharing their personal data but were willing to tell about medical details and willing to participate in the study too.

Table-1: Socio Demographic and Maternal Child Health Characteristics of women tending antenatal care

Variables	Frequency (n=161)*	%
-----------	--------------------	---

Table 2. Checking the quality of ANC

Indicators	Total	N =209	Percentage
1. Total number of pregnant women registered for ANC, All were checked by Doctors	209		100%
2. Out of the total ANC registered, number registered within 1st trimester (within 12 weeks)	96		45.93
3. Number of PW given TT1	200		95.69
4. Number of PW given TT2	186		89.00
5. Number of PW given TT Booster	1		0.48
6. Number of PW given 180 Iron Folic Acid (IFA) tablets	200		95.69
7. Number of PW given 360 Calcium tablets	98		46.89
8. Number of PW given one Albendazole tablet after 1st trimester	3		1.44
9. Number of PW received 2 or more ANC check ups	97		46%
10. Number of PW given ANC Corticosteroids in Pre Term Labour	0		0.00
11. New cases of PW with hypertension detected	2		0.96
12. Out of the new cases of PW with hypertension detected, cases managed at institution	2		0.96
13. Number of Eclampsia cases managed during delivery	0		0.00
14. Number of PW tested for Haemoglobin (Hb)	200		95.69
15. Number of PW having Hb level<11 (tested cases)(7.1 to 10.9)	150		71.77
16. Number of PW having Hb level<7 (tested cases)	40		19.14
17. Number of PW having severe anemia (Hb<7) treated	28		13.40
18. Number of PW tested for blood sugar using OGTT (Oral Glucose Tolerance Test)	6		2.87
19. Number of PW tested positive for GDM	0		0.00
20. Number of PW given insulin out of total tested positive for GDM	0		0.00
21. Number of PW tested using POC test for Syphilis	0		0.00
22. Out of above, number of PW found sero- positive for syphilis	0		0.00
23. Number of pregnant women tested for Syphilis	0		0.00
24. Number of pregnant women tested found sero- positive for Syphilis	0		0.00
25. Number of syphilis positive pregnant women treated for Syphilis	0		0.00
26. Number of babies diagnosed with Congenital Syphilis	0		0.00
27. Number of babies treated for congenital Syphilis	0		0.00
28. Number of Females Screened with USG	30		14.35%
29. Number of Females Screened for Thyroid Abnormality	10		4.78%
30. Number of Females Screened for Hepatitis	40		19.13%

Table 3 Relationship between ANC checks and Other Quantitative factors

		ANC Number N=209				Total % 100%	p value
		1.00 24%	2.00 46%	3.00 27%	4.00 3%		
Age wise Category	Less Than 20	5 %	6 %	3 %	1 %	15 %	0.05
	21-24	16 %	25 %	16 %	2 %	59 %	
	24-30	3 %	14 %	5 %	0 %	22 %	
	Higher than 30	0 %	1 %	3 %	0 %	4 %	
Parity Status	0-1	2 %	14 %	8 %	0 %	24 %	0.041
	2-3	11 %	18 %	12 %	1 %	42 %	
	>3	11 %	14 %	7 %	2 %	34 %	
Anemia Severity	Very Severe Anemia	0 %	1 %	0 %	0 %	1 %	0.04
	Severe Anemia Hb <4.1-7.0	2 %	7 %	3 %	1 %	13 %	
	Mild Severe Anemia Hb >7.1-<11.00	18 %	34 %	22 %	2 %	76 %	
	Normal Hb>11.00	4 %	4 %	2 %	0 %	10 %	
Total	24 %	46 %	27 %	3 %	100 %		

DISCUSSION

As we peered into the quality of ANC check ups being done in CHC we saw the ANC check ups need more time, effort and patience. Major tests were being missed like Hypertension screening, USG etc. The heartening thing was that females are slowly but surely aware that these services are being offered in CHC and they are coming to attend them. They are themselves conscious of the fact that ANC check ups are important for a safe motherhood. Others studies done in Rural India set ups either in community or hospital set ups have shown similar results where more focus is on number of ANC check ups rather than evaluating the various components of the ANC (12,13,14). They too found that most females taking ANC check ups are coming from a rural background while their employment status mostly are house wives. They too found that females are now aware that ANC is important but they don't know every bit of it.

CONCLUSIONS

CHCs are vital cog in uniform health care service delivery in Rural hinterland of the country. ANC check up and MCH care forms the bulk of their work in most of the country, current scenario for achieving SDG targets need more focus on improving the quality of the ANC being done for every female client in the CHC. We saw in CHC some basic tests still not being done on a routine basis whereas they were given TT shots (First shot) in a routine manner. The intent to treat and care is there perhaps the capacity building part needs more emphasis on prioritizing the various components to get it right.

REFERENCES

1. Sample Registration System. Maternal Mortality Ratio Bulletin, 2011-13. Available from: http://www.censusindia.gov.in/vital_statistics/mmr_bulletin_2011-13.pdf. Accessed on 28 Dec 2019.
2. Sustainable Development Goals. Target and Indicators. Goal 3. Available from: <https://sustainabledevelopment.un.org/sdg3>. Accessed on 28 Dec 2019.
3. Pallikadavath S, Foss M SR. Antenatal care in rural Madhya Pradesh: provision and inequality. In: Chaurasia AR SR (Southampton: U of S, editor. Obstetric Care in Central India. 2004. p. 73-88. Google Scholar
4. Kesterton AJ, Cleland J, Sloggett A, Ronsmans C. Institutional delivery in rural India: the relative importance of accessibility and economic status. BMC Pregnancy Childbirth. 2010;10(1):30. Cross Ref Google Scholar
5. Stephenson R, Tsui AO. Contextual influences on reproductive health service use in Uttar Pradesh, India. Stud Fam Plan. 2002;33(4):309-20. Cross Ref Google Scholar
6. Vora KS, Mavalankar DV, Ramani KV, Upadhyaya M, Sharma B, Iyengar S, et al. Maternal health situation in India: a case study. J Health Popul Nutr. 2009;27(2):184-201. Cross Ref Google Scholar
7. National Family Health Survey 4, (2015 16). Ministry of Health and Family Welfare, Government of India, International Institute for Population Sciences. Available at: <http://rchiips.org/nfhs/pdf/NFHS4/India.pdf>. Accessed on 28 December 2019.
8. Khan ME, Hazra A, Bhatnagar I. Impact of Janani Suraksha Yojana on selected family health behaviors in rural Uttar Pradesh. J Fam Welf. 2010; 56:22. Google Scholar
9. Shah R, Belanger D. Socioeconomic correlates of utilization of maternal health services by tribal women in India. Canad Stud in Popul. 2011; 38:83-93.
10. Simkhada B, Teijlingen ER, Porter M, Simkhada P. Factors affecting the utilization of antenatal care in developing countries: systematic review of the literature. J Adv Nurs. 2008; 61:244-60.
11. Chandhiok N, Dhillon SB, Kambo I, Saxena NC. Determinants of antenatal care utilisation in rural areas of India: A cross-section study from 28 districts (An ICMR task force study). J Obstet Gynaecol India. 2006; 56:47-52.

12. Devasenapathy, Niveditha et al. "Association of antenatal care and place of delivery with newborn care practices: evidence from a cross-sectional survey in rural Uttar Pradesh, India." Journal of health, population, and nutrition vol. 36,1 30. 21 Jun. 2017, doi:10.1186/s41043-017-0107-z
13. Roy, Manas P et al. "Determinants of utilization of antenatal care services in rural lucknow, India." Journal of family medicine and primary care vol. 2,1 (2013): 55-9. doi:10.4103/2249-4863.109946
14. Saseendran Pallikadavath, Mary FossR, William Stones. Antenatal care: provision and inequality in rural north India. Data Social science & medicine (1982), ISSN: 0277-9536, Vol: 59, Issue: 6, Page: 1147-58