

Original Article

UTILIZATION OF ANTENATAL CARE SERVICES IN THE GANDHINAGAR (RURAL) DISTRICT, GUJARAT

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ABSTRACT

Back ground : Maternal and child health care is one of the eight essential components of primary health care as per Alma-Ata Declaration.

Materials & Methods: A Multi-Indicator Cluster Survey (MICS) was conducted in April 2008 using 30 cluster technique.

Results: 118 (7.82 %) women who were pregnant at the time of MICS survey were included in this article. More than half of the women were in 20 to 24 years age group with mean age 23.75 years. At the time survey 83% of the antenatal women had registered for Antenatal care and about two third of antenatal women had received IFA tablets, a single dose of TT injection and undergone BP measurement. About two third of the Antenatal women had registered for ANC at government health facilities and about one third at private hospital. Knowledge about the Chiranjeevi Yojana and JSY was very poor. 61% antenatal women had registered at Mamta session (VHND). The significant association was found between availing the ANC services and planning the institutional delivery. (p=0.009)

Conclusions: Awareness about the government scheme for delivery was very low. ANC visits are opportunity for counseling the women for institutional delivery.

Key-words: MICS, ANC, Mamta session (VHND)

INTRODUCTION

Antenatal care (ANC) refers to pregnancy-related health care. ¹ Women rarely perceive childbearing as problematic and therefore do not seek care. This affects the utilization of ANC services in regions of the country where poverty and illiteracy are wide spread. ² To increase the number of women for early registration,

consuming IFA tablets, two TT injections and counseling, and thereby to increase the antenatal coverage up to 90% is one of the objectives of the Reproductive and Child Health (RCH) II. Also under RCH II there is increased emphasis on mobilization of community for weekly ANC clinics at health facilities named as Mamta Day or Village health and Nutrition Day (VHND). ³ Antenatal visits raise awareness and make

pregnant women and their families familiar with health facilities, which enable them to seek help more efficiently during a crisis. Utilization of antenatal care services promotes the preference for institutional deliveries.² National Family Health Survey-3 (NFHS-3) reveals just over half of mothers (52%) had three or more antenatal care visits. Urban women were much more likely to have three or more antenatal visits than rural women.¹ The present study assessed the utilization of antenatal services in Gandhinagar (Rural) district.

METHODOLOGY

Gandhinagar is an administrative district in the central part of Gujarat with its headquarters in Gandhinagar city, the state capital. It covers an area of 2163 square kilometers with a total population of 13,34,731 according to 2001 census. The district has a population density of 617 persons per sq.km. and sex ratio of 911 females per 1000 males. The district includes four talukas with about 35% population living in urban area.⁴ Department of Health & Family Welfare, Government of Gujarat planned to carry out Multi-Indicator Cluster Survey (MICS) in various districts. Preventive & Social Medicine (P&SM) departments of various medical colleges who already had good liaison with the health department were given the responsibility for conducting the MICS in one district each. As per the allocation of district, MICS was planned & carried out in rural component of Gandhinagar district from 1st April to 17th April 2008 by P&SM department of this institute. A total of five teams, each comprising of four members (1 faculty member, 1 resident from P&SM department and 2 interns) carried out the survey. All the 5 teams surveyed 6 clusters each, completing the survey of 30 clusters. A structured, pre-tested questionnaire designed by UNICEF was used after necessary modifications and approval by the health officials of government of Gujarat. To minimize errors and uniform reporting, the survey team members received training and extensively discussed the likely problems in filling the format. To reduce data-entry errors, programming was done using EPI-Info software and survey team members were assigned the duties to enter their own collected data.

Selection of study clusters: Urban areas were excluded from the list of district population of 2007 and a total of 292 villages/towns with

10,34,032 total population were selected. Cluster interval was 34,468. The first cluster was selected using the random number which was 00092. Subsequent clusters were selected using the sampling interval. Thus, 30 clusters were selected on the basis of systematic random sampling from the probability of the cluster selection based on the population size of the cluster. Details of sampling within a cluster: The 30 cluster technique was used in MICS. The cluster survey methodology has been criticized by survey statisticians due to the manner in which the households are selected within a cluster.⁵

Documented techniques to improve the accuracy of cluster survey method including, segmenting sample clusters (selecting subsamples of equal probability from within a cluster) was also considered.⁶ To satisfy the objective of studying multiple indicators, various criteria were considered for the completion of study in one cluster. Among these, study of households in four different quadrants of the village with at least two children aged 12-23 months in each quadrant

making a total of minimum 8 children was also considered. The present article is the part of MICS survey undertaken during April 2008 and information about the women who were antenatal at the time of survey was included in this article. Those antenatal women who were not registered at the time of survey were counseled for ANC services so that women who were not registered at the time of survey might get registered later on but as this was the cross sectional survey follow up was not done. Data thus gathered was entered and analyzed using the EPI-INFO software package. Simple proportions were calculated and appropriate statistical tests were applied wherever found necessary.

RESULTS

A total of 1,218 families with 6,366 subjects with an average family size of 5.22 were studied from 30 clusters. Sex ratio was 964. Out of a total 1508(48.25%) women of reproductive age group, majority (87%) were married and 118 (7.82 %) were pregnant at the time of survey.

Mean age of antenatal women was 23.75 years and median age was 23 years. Age ranged from 18 to 43 years. More than half of the women (55.1%) were in 20 to 24 years age group while

2.5% of antenatal women were > 35 years of age and can be considered for high risk pregnancy. Five percent of antenatal women were of 18 to 19 years age group. (Table-1)

Table 1: Age wise distribution of Antenatal women

Age group	Frequency (n=118)	Percent
15 to 19	6	5.1
20 to 24	65	55.1
25 to 29	38	32.2
30 to 34	6	5.1
35 to 39	2	1.7
40 to 44	1	0.8

At the time of survey, 83% of the antenatal women had registered for Antenatal care and had done at least one ANC visit and about two third of antenatal women had received Iron and Folic Acid (IFA) tablets, Tetanus Toxoid (TT) injection and undergone BP measurement. Out of 81 women who had taken IFA tablets 71(87.65%) were consuming it regularly while 10(12.35%) were consuming the tablets irregularly because of side effects. Out of those antenatal women who had registered for ANC about two third (68.37%) of Antenatal women had registered at government health facilities and about one third (31.63%) had registered at private hospital (Table 2).

Table-2: Antenatal services received by pregnant women at the time of survey

Services (n=118)	Total(%)	Public(%)	Private(%)
Registered for ANC	98 (83.1)	67 (68.4)	31 (31.6)
IFA received	81 (68.6)	47 (58.0)	34 (41.9)
TT received	78 (66.1)	42 (53.8)	36 (46.2)
BP measured	78 (66.1)	46 (58.9)	32 (41.0)

Table 3: Distribution of pregnant women according to planned place for delivery

Place of delivery	Subjects (n=118) (%)
Home	7 (5.93)
Govt. Hospital	32 (27.12)
Private Hospital	40 (33.90)
Not yet decided	39 (33.05)

When asked about the choice of place for delivery, only about one fourth (27.12%) of the women had selected the government hospital for delivery and one third (33.90%) had private hospital. Six percent of women had preferred

home delivery and 33 % of the women had not yet decided the place of delivery.(Table 3)

The antenatal women were asked about the JSY and Chiranjeevi Yojana and their benefits. Janani Suraksha Yojana (JSY) is a safe motherhood intervention under the National Rural Health Mission (NRHM) being implemented with the objective of reducing maternal and neo-natal mortality by promoting institutional delivery and it integrates cash assistance with delivery and post-delivery care among the poor pregnant women. The Chiranjeevi Yojana implemented by the Government of Gujarat aims at encouraging the BPL families to improve access to institutional delivery by providing financial protection to these families. Knowledge about the benefits under Chiranjeevi Yojana and JSY was very poor, only seven antenatal women had correct information.

Table 4 Services availed by antenatal women during Mamta session

Services availed during Mamta session	Respondent (n=72)
Visit Mamta day regularly	52 (72.22)
Having Mamta card	59 (81.94)
BP measured at Mamta session	46 (63.88)
Weight done at Mamta session	61 (84.72)
Counseled at the session	40 (55.55)
True understanding about weight	24 (33.33)

On the Mamta day (VHND session) preventive, promotive health care service are offered to pregnant/lactating mothers and under 5 children every week on a fix day and at the fix site. Mamta Day provide an opportunity for integrated Management of Antenatal, Postnatal, Neonatal Child Health and nutrition Services and is a day of counseling for institutional delivery; diet, IFA and Calcium supplement compliance, child feeding and care, vaccination, FP and early detection and timely treatment. Out of the total antenatal women 61% had registered at Mamta session and out of them 72.22% had regularly visited Mamta day, 61 (85%) had undergone weight measurement and 40(55.55%) women were counseled about the same. Only one third of the women visiting Mamta session had true understanding about weight. The services availed from the Mamta session are lesser than beneficiaries registered at Mamta session. (Table-4)

As per palmer examination 20 (16.95%) antenatal women were having pallor, and 5(4.24%) women

had pedal oedema. When asked about current health status 106(89.83%) of antenatal women responded that they were healthy and only 10(8.47%) had complained about weakness. Minor health complains during the pregnancy were rarely perceived as problematic by antenatal women and therefore did not seek care.

Table 5: Association of variable of ANC services with age of antenatal women

Variable	Age in years		P value
	≤25(n=73)	>25(n=25)	
Govt. sector	46(63.01)	21(84.00)	0.051
Private hospital	27(36.99)	4(16.00)	

Table 6: Association of variable of ANC services with planned place of delivery

Place of delivery decided	Registration for ANC		P value
	Yes (n=98)	No (n=20)	
Institutional	65(66.33)	7(35)	0.009
Not decided/ home delivery	33(33.67)	13(65)	

Among those Antenatal women who had registered their ANC, place of registration was associated with age. Among both the groups (above and below 25 years of age) registration was higher in government sector. Registration at government place was slightly higher among antenatal women above 25 years (84%) then the antenatal women < 25 years age group (63%), however the difference was not significant. Out of 98 women who had registered for ANC, 65(66%) had planned for institutional delivery, while out of 20 antenatal women who had not done a single ANC visit, only 7(35%) had planned their delivery at the institution and this difference was statistically significant. (p=0.009) (Table 5 and Table 6).

DISCUSSION

This study was carried out among 1,218 families with 6,366 subjects. Out of a total 1508(48.25%) women of reproductive age group, 118 (7.82 %) women who were pregnant at the time of survey were included in this article. More than half of the antenatal women were in 20 to 24 years age group similar to a study in Karnataka.⁷ Out of total antenatal women 2.5% were ≥ 35 years of age and 5% were at age of 18 to 19 years can be considered for high risk as they may develop serious consequences for the health of themselves and their infant. Higher percentage

of women taking ANC from government sector than private hospital while when planning the place of delivery, higher percentage of women had planned it in private hospital compared to government facilities. Six percent of women had planned home delivery. In general, women prefer to deliver at home for reasons such as support, familiarity, tradition, and belief that birth is considered a natural phenomenon for which an institutional delivery is not required.² . Sixty one percent of antenatal women found to be registered at Mamta session while a study in 7 states found 45% of antenatal women used VHND services.⁸ The percentage of antenatal women availing various services from Mamta session was slightly less than percentage of women registered at Mamta session indicating that all the women who had registered at Mamta day were not given all the services available for them on the Mamta day. This study did not observe the significant association of place of registration and age antenatal women. Majority of women (66%) with antenatal care observed to plan an institutional delivery. Similar to a study by Nomita Chandhiok et al this study also found significant association of availing the ANC services and planning the institutional delivery.² It may therefore, be possible to promote institutional delivery by promoting antenatal check-ups and associated counseling.

CONCLUSION

Though the ANC registration among the antenatal women of rural area in Gandhinagar was high, the awareness about the benefits under the government scheme for delivery was very low so there is a need for enhancing awareness about the same. Those antenatal women who had done at least an ANC visit plan institutional delivery, so ANC visits are opportunity for counseling the women for institutional delivery.

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