

# Study to assess the extent of maternal health care utilization by women residing in urban slum area in Ahmedabad

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## Abstract

**Background:** Maternal mortality is on an average 18 times higher in developing countries as compared to developed countries. Despite the existence of many national programs for improving maternal and child health, maternal mortality and morbidity continue to be at higher side, at an unacceptable level.

**Objective:** (1) To know the extent of maternal health care utilization; (2) To study the factors affecting utilization of maternal care services.

**Materials and Methods:** The cross-sectional study was conducted in an urban slum during September and October 2014. A pretested questionnaire was used to collect data. All married women in the age group of 15–45 years who were either pregnant at time of interview or had delivered within last 1 year were included. A total of 100 such women identified by door-to-door survey participated in the study after getting informed oral consent. Data were entered in Microsoft Excel and was analyzed in Epi Info 7. “*P*” < 0.05 was considered statistically significant.

**Result:** Around 80% respondents received antenatal care (ANC) and 20% did not seek ANC. Overall, ANC registration was quite good (92%) but within first trimester it was only 58%. Immunization for tetanus was 79% but consumption of iron and folic acid tablets was 76%. Reason for inadequate utilization was mainly due to either unawareness or financial constraints.

**Conclusion:** The utilization of ANC services and deliveries at health centers were significantly associated with education of the women, education of their spouses, and socioeconomic status of the family.

**KEY WORDS:** Maternal care, barrier, urban slum, utilization

## Introduction

The fifth Millennium Development Goal (MDG 5: Improve Maternal Health)<sup>[1]</sup> has helped to galvanize attention to and action for improving maternal care and survival for all women

especially during childbirth. Maternal morbidity and mortality in childbirth is a matter of utmost importance in public health. Every woman has the right to the highest attainable standard of health.

Maternal mortality is on an average 18 times higher in developing countries as compared to developed countries.<sup>[2]</sup> Despite the existence of many national programs for improving maternal and child health, maternal mortality and morbidity continue to be at higher side, at an unacceptable level.<sup>[3]</sup>

Effective antenatal care (ANC) can improve the health of the mother and give her chance to deliver a healthy baby. Regular monitoring during pregnancy can help detect the complications at early stage before they become life-threatening emergencies.

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Utilization of health services is a complex behavioral phenomenon.<sup>[4]</sup> The behavioral model of utilization of maternal health services proposed that the use of health-care services is a function of three sets of individual factors:

1. predisposing factors, for example, age, household size, education, number of previous pregnancies, and health-related attitude;
2. enabling factors, such as income, characteristics of health-care system and accesses, and availability of health facilities; and
3. Need factors, such as characteristics of illness, perceived health status, and expected benefit from treatments.

This study was aimed to find out the ANC services utilization in urban slum area, the factors affecting ANC services utilization, the percentage of home deliveries, and the factors responsible for the same.

## Materials and Methods

The present community-based cross-sectional study was conducted in slum area of Ahmedabad city during September and October 2014. All married women in the age group of 15–45 years who were either pregnant at the time of interview or had delivered within the last 1 year were included. A total of 100 such women identified by door-to-door survey participated in the study after getting informed written consent. Predesigned questionnaire, based on relevant information about the ANC services utilization and place of the delivery, was recorded along with the sociodemographic data.

Adequate utilization of services was considered, if the pregnant women had fulfilled the following criteria:

1. ANC registration, at any time.
2. Received required TT injections.
3. Consumption of minimum 100 iron and folic acid tablets.
4. Minimum three ANC visits.

Data were entered and analyzed using EPI Info. Data were expressed in percentage.  $\chi^2$ -test was used for evaluating association between ANC and categorical variables. *P*-value less than 0.05 was considered statistically significant.

## Result

Table 1 shows that overall ANC registration was quite good (92%) but within first trimester it was only 58%. Immunization for tetanus was 79% but consumption of iron and folic acid tablets was 76%. Table 2 states that education of the mother, education of the father, and socioeconomic status of the family strongly influence the ANC utilization and this is statistically proven significant. Table 3 shows that reason for inadequate utilization was mainly due to either unawareness or financial constraints. Table 4 states that main reason for having home delivery is tradition followed by easy availability of trained person.

## Discussion

Most maternal deaths can be prevented if women have access to basic medical care during pregnancy, childbirth, and postpartum period. In India, these services are provided through a network of health centers in outpatient clinics, as well as through home visits by health workers. However, utilization of these services by the target population continues to be poor.<sup>[5]</sup> This could be due to lack of awareness, availability, or accessibility to these services.<sup>[6]</sup>

This study was carried out in urban slum area of Ahmedabad city. A total of 100 women, who had delivered within last 1 year, were interviewed and analyzed for the ANC services utilization, delivery practices, and factors affecting them.

Utilization of ANC services for the most recent birth among never married women increased substantially over time, from 66% in National Family Health Survey 2 (NFHS-2) to 77% in NFHS-3, whereas in this study it was 70%. This means that there is need of more efforts by the health functionaries to strengthen the ANC services and to improve the utilization of them.

Utilization of individual ANC services such as ANC registration in first trimester (58%), TT injections (79%), and three ANC checkups (70%) was more than national coverage survey.<sup>[7]</sup> In this study, various sociodemographic factors (such as education of mother and father and socioeconomic status of the family) showed a significant association with the utilization of ANC services.

A study by Ray *et al.*<sup>[8]</sup> showed that practices of delivery at home in slums were found to be 34.7%, whereas in this study it was just 8%, which is almost near to state health statistics data (2009–2010) in which home delivery proportion in urban areas is around 10%.

Traditional practice was the main reason for conducting the deliveries at home, followed by unsatisfactory or unacceptable hospital services and lack of transport facilities.

Though the study results are convincing, they could not be generalized as the sample size was too small and taken from only one small urban area that was near to civil hospital. Hence utilization of services more likely to high in proportion as compared to other area. So to deal with this limitation, large scale study is advocated including representative mothers from all urban slum area.

## Conclusion

In this study we examined a number of predisposing and enabling factors that influence the use of maternal health care services. The results show a high level of association between certain predisposing and enabling factors and use of maternal health services. The strong influence of mother's education on the use of health care services is consistent with the findings from other studies.<sup>[9]</sup>

**Table 1:** ANC service utilization ( $n = 100$ )

ANC services	Yes	No
ANC registration	92	8
ANC registration in first trimester	58	42
Received required TT injections	79	21
Received iron and folic acid tablets	88	12
Consumed all received tablets	76	24

**Table 2:** Sociodemographic factors affecting adequate ANC services utilization

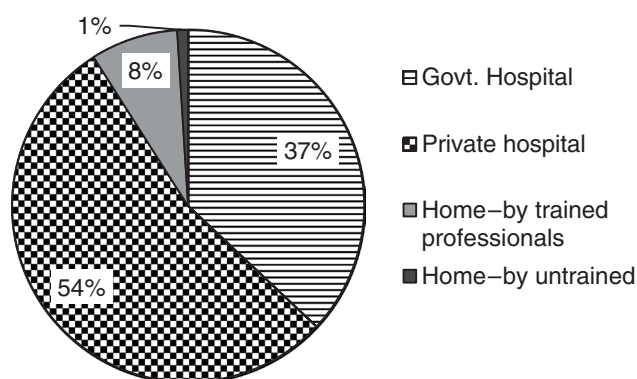
Sociodemographic variable	Utilization	Inadequate utilization	Total ( $n = 100$ )	<i>P</i> -value
Age of the mother (years)				
<20	30 (75%)	10 (25%)	40	<i>P</i> > 0.05
20–25	20 (62.5%)	12 (37.5%)	32	
25–30	10 (62.5%)	6 (37.5%)	16	
>30	10 (83.3%)	2 (16.7%)	12	
Education of the mother				
Illiterate	14 (46.6%)	16 (53.4%)	30	<i>P</i> < 0.05
Primary/secondary	42 (79.2%)	11 (20.8%)	53	
Graduate/PG	14 (82.3%)	03 (17.7%)	17	
Education of the father				
Illiterate	08 (57.14%)	6 (42.8%)	14	<i>P</i> < 0.05
Primary/secondary	34 (60.7%)	22 (39.2%)	56	
Graduate/PG	28 (93.3%)	02 (06.6%)	30	
Socioeconomic status of family				
Class 1 and 2	15 (93.75%)	1 (06.2%)	16	<i>P</i> < 0.05
Class 3	23 (82.14%)	5 (17.8%)	28	
Class 4	22 (56.4%)	17 (43.5%)	39	
Class 5	10 (58.8%)	07 (41.1%)	17	
Type of family				
Nuclear	28 (75.6%)	9 (24.3%)	37	<i>P</i> > 0.05
Joint	15 (71.4%)	6 (28.5%)	21	
Three generation	27 (64.2%)	15 (35.7%)	42	

**Table 3:** Main reason for inadequate utilization of ANC services ( $n = 30$ )

Reason	Frequency (%)
Financial	7 (23.33)
Unaware about the ANC services	7 (23.33)
Accompanying person not available	5 (16.66)
No transport facility	4 (13.33)
Hospital services not acceptable	3 (10.00)
Tradition	2 (6.66)

**Table 4:** Main reason for conducting delivery at home ( $n = 9$ )

Reason	Frequency (%)
Tradition	4 (44.4)
Trained person available	2 (22.2)
Hospital services not acceptable	1 (11.11)
Financial	1 (11.11)
No transport facility	1 (11.11)
Total	9 (100)



**Figure 1:** Distributions of deliveries according to the place of delivery.

The utilization of ANC services and deliveries at health centers were significantly associated with education of the women, their spouses, and socioeconomic status of family. Counselling and social mobilization can remove the traditional barriers to a large extent in health seeking behavior.<sup>[10]</sup>

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