

Utilization of Maternal Health Care Services in an Urban slum of Gujarat, India

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Abstract

Background: Accessibility to maternal health care services for women in marginalized urban slum areas poses a huge public health problem. Many women do not go for institutional deliveries in spite of physical accessibility. Home-based care by Traditional Birth Attendants (TBA) is detrimental. Inappropriate early infant feeding practices are not uncommon. This study aimed to determine the existing maternal health care practices in an urban slum and to identify barriers to utilization of health services by mothers in the year 2010.

Methods: This Cross-Sectional study was conducted in an urban slum area of Salatwada, Vadodara in India. Mothers who had delivered babies in last one year were contacted for the participation in the study. A total of 127 mothers were interviewed at home. Maternal health care practices and reasons for utilizing or not utilizing health services were investigated during the interview. Data were tabulated and analyzed using SPSS version 11.0.

Results: Analyses showed that 74.8% of mothers had received antenatal care. However, this did not translate into safe delivery practices as 57.5% of the women had home deliveries conducted by traditional untrained or trained birth attendants. Reasons for preferring home deliveries were mostly tradition (50.7%) or related to financial problems (24.6%). A total of 76.7% of the deliveries were conducted in the squatting position and in 37% of the cases, the edge of a broken cup was used to cut the umbilical cord. Although breastfeeding was started, inappropriate early infant feeding practices were common. A few mothers had breastfeeding problems.

Conclusion: Inadequate utilization of available services leads to hazardous maternal health care practices in urban slums.

Keywords: Utilization; Maternal Health Services; Urban slum

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1. Introduction

Despite the Registrar General reporting recently that the maternal mortality rate in India declined to 254 per 100,00 live births, India still accounts for the largest contribution to maternal deaths worldwide, related directly to or exacerbated by pregnancy (1-3). Reducing the maternal mortality rate is a key goal of government, and this is enshrined in the National Population Policy, which aims to "provide universal access to, and make available good quality maternal and child health care services" (4). One strategy advocated by the National Population Policy to reduce maternal mortality is to increase access to institutional deliveries in India.

India's Child Survival and Safe Motherhood Program (CSSM), launched in 1992, involved training of physicians and traditional birth attendants (TBAs), provision of aseptic delivery kits and expansion of existing rural health services to include facilities for institutional delivery i.e. supplying essential equipment to district, sub-district and first level referral facilities to deal with high risk obstetric emergencies (MOHFW 1997-8). The initiative aimed to improve the proportion of pregnant women receiving three antenatal visits, and the proportion of deliveries

conducted by trained attendants. The CSSM gave way to the Reproductive and Child Health (RCH) program in 1997, at which point the scope was widened to include other reproductive and child health services (5,6). The second five year phase of the RCH program (RCH II) is currently being initiated and contains a comprehensive newborn health strategy that includes promotion of institutional deliveries, with cash subsidies for poor families and compensation of TBAs facilitating the process (7). In areas remote from facilities, improvement of home-based newborn care via auxiliary nurse-midwives are envisaged (8,9).

Maternal mortality and morbidity continue to be high despite the existence of national programs for improving maternal and child health in India. This could be related to several factors, an important one being non-utilization or under-utilization of maternal health care services, especially amongst the rural poor and urban slum population due to either lack of awareness or access to health care services. Even after reproductive and child health - 2 (RCH-2), it has not been possible to reach a large segment of the marginalized population through the organized health sector (10). Rapid urban development is outstripping the meager resources at the local municipality level. Even where facilities exist, socio-economic and cultural barriers prevent their optimum utilization by the women who need them most, consequently resulting in hazardous health practices (11-14).

Understanding of the knowledge and practices of the community regarding maternity care during pregnancy, delivery and postnatal period is required for program implementation. Therefore, the present study was carried out to determine the existing maternal health care practices and determine the social-demographic correlates and barriers of maternal healthcare utilization amongst women living in a slum in Vadodara District, Gujarat in the year 2010.

2. Material and Methods

2.1. Study setting

This Cross-Sectional study was conducted in a slum - Salatwada, a field practice area of the Department of Community Medicine, Medical College, Vadodara - during June-December 2010. The slum has been in existence for the past two decades, with an approximate population of 10,000. This area is located within the city and has unplanned houses. This area accommodates mix groups of population ranging from laborers, small vendors, shopkeepers to government employees. One Urban Health Centre is within 1 km and the Medical College Hospital is within 2 km of the area. There is one Private Maternity Home and 2 Private Clinics in the area.

2.2. Sampling

The sample size for this study was 127. No specific formula was used for calculating the sample size. All mothers who had delivered within the last 1 year in that particular area were included. A total of 127 such women identified by door-to-door survey participated in the study after obtaining informed consent.

2.3. Data collection

These women were interviewed using a pre-structured and pre-tested interview schedule including identification data, socio-demographic profile, details of antenatal care, delivery, postnatal care and perceived barriers for non-utilization of maternal healthcare services. At least three visits were made to include all the women who could not be contacted in the first visit. Appropriate counseling, treatment, and referral were given wherever needed

2.4. Ethical consideration

This study was carried out after obtaining the approval of the Institutional Ethical Committee of Govt. Medical College, Vadodara, Gujarat. The ethical consideration which was taken into account was obtaining informed consent from the participant.

2.5. Statistical analysis

Data were entered and analyzed using SPSS version 11. Data were expressed in percentage. Z test was used to test the difference between home and institutional deliveries. 'P' value less than 0.05 was considered statistically significant

3. Results

3.1. Socio-cultural profile of the study population

All mothers had poor socioeconomic status and lived in a congested, unsanitary environment in the slum. As can be seen, from table 1, more than half of women (57.5%) preferred to have the delivery at home. A majority were young mothers (81% being 30 years or younger), illiterate (50.5%) or just literate (28.3%), and a quarter of them were

living in nuclear families (27.6%). The decision about the place of delivery was taken by the husband (48%), mother in law (23.6%) or jointly by the family (7.9%).

Table 1. Socioeconomic variables of the study population

	Home delivery		Institutional delivery		Total		
	No.	%	No.	%	No.	%	
Type of Family							
Nuclear	22	30.1	13	24.1	35	27.6	
Joint	51	69.9	41	75.9	92	72.4	
Total	73	57.5	54	42.5	127	100	
Age of Mother							
20-30	58	79.5	45	83.3	103	81.1	
31-40	15	20.6	9	16.7	24	18.9	
Total	73	57.5	54	42.5	127	100	
Education of Mother							
Illiterate& just literate	61	83.6	39	72.2	100	78.8	
Literate	12	16.4	15	27.8	27	21.2	
Total	73	57.5	54	42.5	127	100	
Decision for place of delivery							
Husband	38	52.1	23	42.6	61	48.0	
Mother-in-law	19	26.0	11	20.4	30	23.6	
Self	9	12.3	17	31.5	26	20.5	
More than one person	7	9.6	3	5.6	10	7.9	
Total	73	57.5	54	42.5	127	100	

Table 2. Antenatal practices in the study population

	Home delivery		Institutional delivery		Total		Z test
	No.	%	No.	%	No.	%	
Any Antenatal care received							
No	25	34.2	7	13.0	32	25.2	
Yes	48	65.8	47	87.0	95	74.8	P<0.5
Total	73	57.5	54	42.5	127	100	
No. of Tetanus Toxoid. Received							
Zero	27	37.0	5	9.3	32	25.2	P<0.5
One	9	12.3	0	0	9	7.1	*
Two	37	50.7	49	90.7	86	67.7	P<0.5
Total	73	57.5	54	42.5	127	100	

*No Comparison

3.2. Existing Perinatal Practices

3.2.1. Antenatal care

A total of 25.2% of the mothers did not receive any antenatal care (Table 2). Of these, a large majority were those who preferred to deliver at home. Only two women who did not receive any antenatal care delivered in the hospital due to some unforeseen complication of the delivery. There was a significant difference in the rate of antenatal care received (at least one visit and one tetanus toxoid) among women who delivered at home and those who delivered in an institution. While overall, a majority of women (74.8%) did have at least one antenatal check-up either in a government hospital or a private clinic or nursing home, the number was significantly higher in those women who had institutional deliveries. A quarter of the mothers did not receive a dose of Inj. TT. These were the same mothers who did not receive an antenatal check-up. The majority of women received two doses of Inj. TT (68%). However, the rate was significantly higher in women who chose to have an institutional delivery.

3.2.2. Hazardous practices in home delivery:

Natal care was found to be poor in the case of deliveries at home (Table 3). Fifty percent of the home deliveries were attended by Trained Birth Attendants and 34% were attended by Untrained Birth Attendants. A private nurse

attended 15% of the home deliveries. A majority of women delivered their babies in the squatting position (76.7%). The umbilical cord was cut by a new blade in 63% of the cases but by traditional objects such as the edge of a broken cup in 37% of the cases. While a majority of the women had normal deliveries, 6.8% said they had some complication during delivery such as prolonged labor.

Table 3. Hazardous practices in home delivery

	No.	%
Delivery conducted by		
Trained Dai	37	50.7
Untrained Dai	25	34.2
Nurse	11	15.1
Total	73	100
Position of conducting delivery		
Squatting	56	76.7
Lying down	17	23.3
Total	73	100
Umbilical cord cut by		
New razor blade	46	63.0
Edge of broken cup	27	37.0
Total	73	100
Complications from delivery		
No	68	93.2
Yes	5	6.8
Total	73	100

Table 4. Reasons for choosing the place of delivery

	No.	%
Home delivery (n=73)		
Tradition	37	50.7
Economic reason	18	24.6
Rude behavior of personnel in hospital	6	8.2
Nobody to take care of home	4	5.5
Fear of hospital	7	9.6
Other	1	1.4
Govt. Hospital (n=44)		
Close to home	19	43.2
Complication in earlier pregnancy	12	27.2
Proper attention given	8	18.2
Sympathetic attitude of health personnel	3	6.8
Other	2	4.6
Private Nursing Home(n=10)		
Close to home	4	40.0
Complication in earlier pregnancy	2	20.0
Proper attention given	3	30.0
Sympathetic attitude of health personnel	1	10.0
Other	0	0.0

3.2.3. Feeding Practices

All newborns were breast-fed. Colostrum was given to 73.9% of the babies and discarded in the rest. The first feed was given within 6 hours of birth in 66.7% of the newborns in institutional deliveries compared with 46.8% in home delivery. Prolactal feed was given to almost half of the babies. A total of 11.9% of the mothers were having some breast-feeding problems at the time of survey.

3.3. Barriers to Utilization of Health Services

Table 4 shows the main reasons stated by the mothers for choosing home delivery (n=73) or institutional delivery (n=54).

3.3.1. Home delivery

Most mothers said that giving birth at home with assistance from a traditional attendant was a norm followed in their family and society. Childbirth being a natural process, there was no need to change the norm. Thus, the most common reason for home delivery was stated as being a family tradition (50.7%). Economic constraint was also a common reason for avoiding the institutional delivery, as even in the government hospitals medicines and investigations were not free (24.6%). Other reasons for preferring home delivery included rude behavior of hospital personnel (8.2%), nobody to take care of the home during their absence (5.5%), fear of hospitals (9.6%), and other reasons (1.4%).

3.3.2. Institutional delivery

A total of 42.5% of the women delivered in an institution, either a government hospital (n=44) or a private nursing home (n=10). The main reasons stated for choosing a government hospital were its proximity to home, and a history of complications in earlier pregnancies. The main reasons for choosing a private nursing home were proximity to home and the perception that proper attention will be given to the patient. Thus, the important barriers to utilization that have been identified include a strong tradition of home delivery and economic constraints of the family.

4. Discussion

This study shows that the good quality Maternal and Child Health (MCH) services are not reaching those who need them most. There is evidence to show that the demand side barriers to access of services, such as tradition, lack of knowledge, and financial constraints may be as important as supply factors in deterring patients from utilizing services (12-14). Thus, although at least one antenatal visit was availed by almost 75% of the mothers, this did not translate into good delivery practices for most, as 57.5% mothers preferred to deliver at home. An earlier study by Aggarwal et al (15,16) has also reported an ANC utilization rate of 74.3%. However, this is more than the overall ANC coverage rate of 25% as reported by Singh JV (17).

The rate of delivery at home is 57.5% in the present study, which is less than 73% reported by Singh JV (17). A study from urban slums and periurban areas by Aggarwal et al (15,16) has reported 70% home deliveries of which 81.9% were attended by untrained dais. A community-based case control study in slums by Aggarwal A et al (18) has also reported that most deliveries were conducted at home by untrained dais. The rate of births attended by untrained birth attendants is comparatively lower in the present study (34.2%). Delivering a baby in the squatting position is beneficial in that it shortens the duration of the 1st and 2nd stages of labor. However, without proper perineal support provided by birthing chairs or cushions, the incidence of maternal injury such as perineal tear is very high. Given the current delivery practices at home, it is thus considered to be hazardous for the mother (18).

Although breast feeding is the norm, giving prelacteal feeds is a deep-rooted custom in India and many studies have reported up to 100% of mothers giving prelacteal feeds (19,20). However, in this study, 45.7% of the mothers gave prelacteal feeds and the rate was not significantly different in home deliveries compared with institutional deliveries. Delaying of the first feed (22.6%) and discarding of colostrums (26.1%) were other customs that have been reported in similar earlier studies (19-22).

Socioeconomic barriers to utilization of services are important. For many of these urban families, pregnancy and childbirth is not a priority. The tradition of home delivery with help from untrained birth attendants is the societal norm. However, antenatal care and Inj. TT is well accepted by the majority. An important barrier to acceptance of services is economic constrain. A total of 24.6% of the families from the urban slum in this study said they were unable to afford services even in government hospitals because of the cost of medicines and investigations, even though consultation was free. They visited hospitals because of complications during delivery in the current or an earlier pregnancy. Evidence suggests that demand side barriers such as cost of services are important barriers to obtaining services, especially in poor and vulnerable groups (13). In a study on barriers to access of health services in Bangladesh, 45% of the women stated financial reasons for not accessing health services (23). However, a study in Maharashtra, India points out that women were able to overcome the economic constrains if they felt that services outweighed the cost (14).

It may be possible to overcome the economic constraints by ensuring availability of trained birth attendants for home delivery in urban settings as in rural setting. There is an ongoing debate about reinforcing home-based birthing strategies with skilled birth attendants in developing countries (12). Trained birth attendants are more likely to use clean delivery practices compared with untrained birth attendants. However, a study from rural Bangladesh has shown no significant difference in the level of post-partum infection rate in deliveries conducted by trained birth attendants compared with untrained birth attendants (23,24). Thus, it is logical that because institutional facilities are available in urban areas, under the RCH 2 program, women, especially in urban areas, are encouraged to have their deliveries in an institution.

In this study, 42.5% of the women who delivered in institutions, either government or private, had significantly better indicators of maternal health care, such as utilization of antenatal care and appropriate infant feeding practices, compared with those mothers who delivered at home. Thus, it is justifiable to prioritize the promotion of institutional deliveries for the mothers in urban slum dwellings. Social mobilization, using a participatory approach can be effective in improving perinatal health indicators (25).

5. Conclusion

In summary, our findings showed that in spite of health services being within reach, a majority of women chose to deliver at home, often by untrained birth attendants. Hazardous delivery practices and undesirable feeding practices were common. Important barriers for institutional delivery were family tradition and economic constraints. The practical implication of our findings indicate that physical accessibility to services does not necessarily lead to service utilization. We suggest that social and cultural accessibility is as important as physical accessibility. Performing a comparative study on two different slum population (one where social mobilization and counselling using a participatory approach is effectively used) can be considered a recommended future study.

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Conflict of Interest:

There is no conflict of interest to be declared.

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