

A STUDY OF UTILIZATION OF MATERNAL HEALTH CARE SERVICES IN URBAN SLUMS OF AURANGABAD CITY, MAHARASHTRA

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ABSTRACT: INTRODUCTION: Pregnancy is one of the most important event in the life of Indian women. Despite considerable improvements in health service delivery for pregnant women in India, maternal mortality rate is still high. Poor access and utilization of antenatal and other health services continue to contribute to high maternal mortality rate along with other socioeconomic factors. Improving utilization of maternal health care services is a global challenge for the health system in low and middle income countries. So the present study was carried out to study utilization of maternal health care services in urban slums of a Aurangabad city, Maharashtra. **MATERIAL AND METHODS:** It was a community based descriptive cross-sectional study, which was undertaken from August 2010 to July 2011 in 5 urban slums of Aurangabad city. Respondent women who had less than 1 year child and should be resident of particular area for previous 2 years or more at the time of interview were included in the study. Simple random sampling was used for selection of slums. Maternal health care services which were received was recorded and analyzed. **RESULTS:** In present study 67.6% respondent women had their first antenatal visit in 1st trimester. Most of the respondent women 88.9% had received two doses of TT. Only 41.7% respondent women had consumed equal to or more than 100 IFA tablets. Majority of the women 93.9% had institutional delivery. Out of 4(1.9%) deliveries assisted by untrained person in 2(0.9%) deliveries umbilical cord cut with unsterile instrument and of these 2(0.9%) deliveries in 1(0.5%) untrained person applied cow dung to umbilical stump. Most of the women 83.3% did not pay any post natal visits to health facility respectively. **CONCLUSIONS:** Awareness regarding three or more antenatal visits and registration of pregnancy in first trimester should be emphasized through health education campaign. In present study though negligible percentage of hazardous practice of application cow dung to the umbilical stump was observed. It should be averted through health education and promotion of institutional deliveries.

KEY WORDS: Respondent women, TT, IFA tablets, untrained person

INTRODUCTION: In the Indian epic Mahabharata, a women was always blessed as "sau putravati bhavh" (be mother of hundred sons), because in those days, the prime role of women was childbearing. The situation has not changed much since then as till date in many parts of India, mainly rural areas, the main role assigned to her is that of child bearer. Thus pregnancy is one of the most important events in the life of Indian women.¹ Routine antenatal visits may raise the awareness about the need for care at delivery or give women and their families, familiarity with health facilities that enable them to seek help more efficiently during crisis.

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Since an estimated 90% of maternal deaths can be prevented with timely medical intervention, ensuring quick access to appropriate services when obstetric emergencies arise is one of the most important aspects of safe motherhood in developing countries.²

Maternal and child healthcare is one of the eight basic components of primary healthcare (PHC) in the Declaration of Alma-Ata.

The Child Survival and Safe Motherhood, now a component of Reproductive and Child Health Programme, is initiated to achieve a substantial improvement in the health status of women and children in India. It includes early registration of pregnancy, at least three antenatal check-ups, universal coverage with tetanus toxoid and iron and folic acid tablets, early detection and referral of at risk mothers, deliveries by trained health personnel, facilities to manage obstetrical medical emergencies and birth spacing.³ Understanding of the knowledge and practices of the community regarding maternity care during pregnancy, delivery and postnatal period is required for program implementation.⁴

Despite considerable improvements in health service delivery for pregnant women in India, maternal mortality rate is still high. The tragedy is that these deaths are largely preventable. For every woman who dies, approximately 30 or more incur injuries, infection, and disabilities which are debilitating, humiliating, and usually remain untreated and unspoken of. Poor access and utilization of antenatal and other health services continue to contribute to high maternal mortality rate along with other socioeconomic factors.⁵

Improving utilization of maternal health care services is a global challenge for the health system in low and middle income countries. The goal set by United Nations, Millennium Developmental goals to reduce the maternal mortality ratio by three quarters during the period 1990-2015.⁶ So the present study was carried out to study utilization of maternal health care services in a urban slums of a Aurangabad city.

MATERIAL AND METHODS: The present study was planned to carry out in urban slums of Aurangabad city to study utilization of various maternal health care services.

Study period: From August 2010 to July 2011.

Study design: Descriptive cross sectional

Sample size determination: One of the important indicator for determination of maternal health care delivery utilization is, minimum three antenatal care visits to health care facility. According to NFHS-3 survey 86.3 % women in urban area had at least three antenatal care visits for their last birth, in Maharashtra.⁷

Sample size was determined by referring the book of WHO publication of 1991 titled Sample size determination in health studies written by Lwanga S. K. and Lemeshow S.⁸

Anticipated Population proportion (P) - 86.3

Confidence level [100(1- α) %] - 95%

Precision (ϵ) - 5%

$n = (z)^2 p (1-p) / \epsilon^2$

(z is (confidence coefficient) = 1.96

Thus the sample size derived was 182 for P= 0.86 and $\epsilon = 0.1$

So it was decided to take sample size of more than 182 from urban slum area.

Respondent women: Women who had less than 1 year child at the time of interview.

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Inclusion criteria:

1. Mother who had less than 1 year child at the time of interview.
2. Respondent woman should be resident of particular area for previous 2 years or more.
3. Mothers willing to participate in this study

Exclusion criteria:

1. Those mothers who had more than 1 year child
2. Mothers not willing to participate in this study.

Health education received: if respondent women told that she received advice regarding rest, nutrition, exercises, counseling, breast feeding, immunization during pregnancy from health worker then it was considered as a health education received.

JSY eligible woman: Respondent woman who fulfilled the criteria of beneficiary under JSY scheme was considered JSY eligible women.⁹

JSY benefit: Respondent woman who received monetary benefit of JSY scheme considered as JSY benefited women.⁹

Post natal visit: Respondent women who had paid at least one visit to health facility within seven days of delivery considered as post natal visit paid.

For data collection first list of slums was obtained from Aurangabad Municipal Corporation. There were total 53 slums in Aurangabad Municipal Corporation area. List of 53 slums was arranged alphabetically. Sample size of 182 required from urban slums. So initially one slum was selected randomly from the list of slums naming Jaybhim Nagar. Investigator visited first slum Jaybhim Nagar collected information from respondent women by visiting household. Efforts were made to cover whole slum by investigator. Household which were found locked or where respondent women was not available for interview was excluded from the study. Investigator could collect information from 52 respondent women of slum Jaybhim Nagar. Once first slum was covered investigator randomly selected next slum naming Indira Nagar (Baijipura) here he could find 40 respondent women. Same procedure was repeated and investigator could collect information from 24 respondent women of slum naming Fulenagar (Usmanpura), from 64 respondent women of slum Sanjaynagar and from 36 respondent women of slum Nagnesen Nagar.

So total 216 respondent women interviewed from 5 slums. Before the actual commencement of the study in any slum, a preparatory visit was made by the investigator to that slum. A meeting with the Anganwadi Worker (AWW) was made after taking permission from the Child Development Project Officer. The purpose of study was explained to the AWW. She accompanied with the investigator during study in slum. On seeing the familiar personnel, the respondent women were cooperative.

A house to house survey was carried out in all the selected slums to identify the women who had less than one year child. For the data collection in particular slum firstly investigator searched for important land mark like temple, school, masjid, rikshow stand etc, then he searched for number of paths (lanes) leading to slum from that important landmark. Investigator started data collection from one of the path, visited households one by one. After visiting the first household, next household, which has front door nearest to the front door of the first household (previous household), was visited. Then he went to the next houses in that direction till that particular path ends, after that investigator went on surveying other paths till whole slum got covered.

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At the household investigator first introduced himself and told purpose of his visit and explained about the study to the family head or adult present in the house. Enquiry was made about women who had less than one year child, if answer was yes then consent of the respondent women was taken. The utilization of maternal health care services was assessed with the help of predesigned pretested questionnaire. Questions were asked regarding her age, literacy status, occupation and income, religion, registration of pregnancy, number of ANC visits paid, time of first ANC visit, administration of TT injection, consumption of iron and folic acid tablets, place of delivery, assistance during delivery, postnatal visits paid etc.

The data was compiled, analyzed and tabulated with the help of Percentages

RESULTS: Table 1 shows majority 72(33.3%) were in the age group of 25 to 28 years. 36(16.7%) were equal to and below 20 years. The average age of the respondent women was 24.8 years. The youngest and oldest respondent women were 18 and 40 years old respectively. Most of the respondent women 86(39.8%) were educated up to middle school while 42(19.4%) were illiterate. 24(11.1%) women were involved in some kind of work while 192(88.9%) were Housewives. Majority 88(40.7%) belonged to socioeconomic class III while 76(35.2%) belonged to upper socioeconomic strata.

Table 2 shows out of 216 urban respondent women majority 150(69.5%) had paid three or more than three antenatal visits and only 2(0.9%) did not pay any antenatal visit. At least 3 antenatal visits should be paid by pregnant women; it is vital to start it in 1st trimester. In present study 146(67.6%) had their first antenatal visit in 1st trimester. Most of the respondent women 192(88.9%) had received two doses of TT while 6(2.8%) did not receive TT dose. 90(41.7%) respondent women consumed equal to or more than 100 IFA tablets and 16(7.4%) women did not consume single IFA tablet.

Table 3 states that of 216 urban respondent women 94(43.5%) had government hospital delivery, of which 14(16.5%) women had their delivery assisted by Medical officer while 80(37.0%) women had their delivery assisted by Obstetrician. 109(50.5%) women had delivered in private hospital of which only 12(5.6%) women had their delivery assisted by General Practitioner while 97(44.9%) women had their delivery assisted by Obstetrician. 13(6.1%) women had their delivery occurred in home of which 4 (1.9%) women had their delivery assisted by untrained person. While 5(2.3%) and 4(1.9%) women had their delivery assisted by General Practitioner and ANM respectively. Out of 4(1.9%) deliveries assisted by untrained person in 2(0.9%) deliveries umbilical cord cut with unsterile instrument and of these 2(0.9%) deliveries in 1(0.5%) untrained person applied cow dung to umbilical stump.

Table 4 shows that out of 216 urban respondent women maximum 176(81.2%) had received health education. Out of 136 (63.0%) eligible JSY women 46 (21.3%) received financial benefit. Most of 180(83.3%) did not pay any post natal visits to health facility respectively.

DISCUSSION: In present study 8(3.7%) respondent women paid one antenatal visit, 56(25.9%) paid two, 122(56.5%) paid three and 28 (13.0%) paid equal to and above four antenatal visits and only 2(0.9%) did not pay any antenatal visit. Study carried out by Siddharth Agarwal¹⁰ showed 40(12.8%) mothers had 1 antenatal visit. 74(23.7%), 77(24.7%) and 48(15.4%) mothers had 2, 3 and more than 3 antenatal visits respectively. While 73(23.4%) did not pay any antenatal visit.

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Percentage of women who did not pay any antenatal visit was more than our study. According to NFHS-3 survey (2005-06)⁷ 86.3% of urban women paid at least three antenatal care visits in Maharashtra. In present study percentage of women who paid at least three antenatal care visits 150 (69.5%) was less compare to NFHS-3 survey. In present study 146(67.6%) had their first antenatal visit in 1st trimester, 66(30.6%) in 2nd trimester and 2(0.9%) in 3rd trimester. While 2(0.9%) women never paid antenatal visit. Ali Yawar Alam¹¹ in his study showed 71(35.5%) women paid their first antenatal visit in first trimester, 68(34 %) and 12(6%) women paid their first antenatal visit in second and third trimester respectively. While 49(24.5%) women did not pay antenatal visit. Percentage of women who paid their first antenatal visit in first trimester was more in our study compared to study done by Ali Yawar Alam¹¹. Study carried out by Siddharth Agarwal¹⁰ found that 220(70.5 %) women had their first antenatal visit in first trimester. his finding was similar with present study. Majority 192(88.9%) had received two doses of TT while only 6(2.8%) did not receive TT dose in our study. Zufia Khan¹² in his study showed, 72 (78.2%) women received two doses dose of TT whereas only 2 (2.2%) received one doses dose of TT and 18 (19.6%) women did not receive TT dose. Percentage of women who did not receive TT dose was more comparing to our study. In present study 90(41.7%) consumed equal to or more than 100 IFA tablets and 16(7.4%) women did not consume single IFA tablet and majority 110(50.9%) had consumed less than 100 IFA tablets. Study carried out by Siddharth Agarwal¹⁰ found that 238(76.3%) mothers consumed less than 100 IFA tablets while 36(11.5%) mothers consumed more than 100 IFA tablets and rest 38(12.2%) did not consume IFA tablets. Findings of Siddharth Agarwal¹⁰ were not similar with present study. According to NFHS-3 survey (2005-06)⁷ 30.5% urban mothers consumed IFA tablets for duration of 90 days or more in Maharashtra. Percentage of women who consumed IFA tablets for more than stipulated time was more in our study compare to NFHS-3 survey (2005-06)⁷ Out of 216 urban respondent women 203(94.0%) had hospital delivery and 13(6.1%) women had their delivery occurred in home 4 (1.9%) women had their delivery assisted by untrained person. While 5(2.3%) and 4(1.9%) women had their delivery assisted by General Practitioner and ANM respectively. Out of 4(1.9%) deliveries assisted by untrained person in 2(0.9%) deliveries umbilical cord cut with unsterile instrument and of these 2(0.9%) deliveries in 1(0.5%) untrained person applied cow dung to umbilical stump. Study carried out by M. K. Sharma¹³ showed that of 354 deliveries majority 202(57%) deliveries conducted by untrained persons. Use of unsterilized instruments (i.e scissors / knife) for cutting umbilicus was found in 36(10.8%) deliveries. Application of cow dung to umbilical stump in 9(2.5%) deliveries and no application were used in 85(24%) newborns. Percentage of deliveries conducted by untrained persons were more compare to present study. Paras Agarwal⁴ showed 56(68.3%) delivery conducted by doctor or nurse and 26(31.7%) delivery conducted by dai. Findings were not similar compare to present study.

CONCLUSIONS: Present study was conducted in urban slums and in this area awareness regarding three or more antenatal visits and registration of pregnancy in first trimester should be emphasized through health education campaign. Importance of consumption of more than 100 IFA tablets during pregnancy period should be stressed in urban slum residing women by increasing their educational status and through strengthening public health activities and health education. Percentage of Institutional deliveries which were found in present study is encouraging and it should be promoted through IEC activities. Importance of post natal visit to health facility after delivery should be

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advocated in these population as these visits gives opportunity to the health care providers to examine the mother and newborn. Immunization can be given to the newborn during this visit. Monetary benefit of JSY scheme to the eligible women should be disbursed within a stipulated time. Policy of compulsory and free education to girls should be adopted to increase utilization of maternal health care services. More efforts to uplift socioeconomic condition of urban slum poor should be made by government. In present study though negligible percentage of hazardous practice of application cow dung to the umbilical stump was observed. It should be averted through health education and promotion of institutional deliveries.

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Table 1:- Distribution of urban respondent women according to sociodemographic variables		
Variable	Frequency	Percentage
Age group (in Years) n=216		
≤ 20	36	16.7
21-24	68	31.5
25-28	72	33.3
≥ 29	40	18.5
Educational status n=216		
Illiterate	42	19.4
Primary School	16	7.4
Middle School	86	39.8
High School	48	22.2
Intermediate	18	8.3
Graduate	6	1.9
Occupational status n=216		
Housewives	192	88.9
Non agricultural worker	14	6.5
Agricultural worker	8	3.7
Owner & Cultivator	2	0.9
Socio-economic class* n=216		
Class I	10	4.6
Class II	66	30.6
Class III	88	40.7
Class IV	42	19.4
Class V	10	4.6

*Socioeconomic classification as suggested by B. G. Prasad was adopted and modified as per the All India Consumer Price Index (AICPI) of May 2011

Table 2: Distribution of urban respondent women according to antenatal care utilization		
Variable	Frequency	Percentage
Number of Antenatal visits paid n=216		
None	2	0.9
1	8	3.7
2	56	25.9
3	122	56.5
≥4	28	13
Time of first antenatal visit n=216		
1 st trimester	146	67.6
2 nd trimester	66	30.6
3 rd trimester	2	0.9

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No	2	0.9
TT dose taken n=216		
Single dose	8	3.7
Two doses	192	88.9
Booster dose	10	4.6
None	6	2.8
IFA tablet consumed n=216		
≥100	90	41.7
< 100	110	50.9
Not taken	16	7.4

Table 3: Distribution of urban respondent women according to assistance during delivery

Place and Assistance	Frequency	Percentage
Government		
Medical officer	14	6.5
Obstetrician	80	37.0
Private		
General Practitioner	12	5.6
Obstetrician	97	44.9
Home		
Untrained person	4	1.9
General Practitioner	5	2.3
ANM	4	1.9
Total	216	100

Table 4: Distribution of urban respondent women according to health education received, JSY benefit and postnatal visits paid.

	Frequency	Percentage
Health education n=216		
Received	176	81.5
Not received	40	18.5
JSY eligibility n=216		
Eligible	136	63.0
Not eligible	80	37.0
JSY benefit n=136		
Received	46	21.3
Not received	90	41.7
Post Natal visit n=216		
Yes	36	16.7
No	180	83.3

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