

Pattern of Antenatal Care Services Utilization in Women Delivered at Tertiary Care Level Hospital In Urban Area, Mumbai



Medical Science

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ABSTRACT

This cross-sectional study was carried out in one of the tertiary hospital of Mumbai having its own teaching institute with 1400 beds. This study was carried out to know exactly the

Pattern of antenatal care services utilization and to find out various components of antenatal care used by women delivered at tertiary hospital. Women in postnatal ward after delivery interviewed with pretested semi-structured Performa. Out of 384 women complete antenatal services were utilized by 255 (66.4%) women & 129 (33.6%) women used them incompletely. 199 (51.8%) women were referred from other government hospital, 8.6% from private facility while 151 (39.3%) were registered to tertiary care hospital on her own. 175 (46.1%) women visited health facility before 16 weeks, while 204 (53.9%) visited after 16 weeks of gestation and it was found to be increased as educational status was increased ($X^2=11.16$ $p<0.05$ highly significant). About 317 (82.6%) women had at least 4 or more antenatal checkups. In 291 (75.8%) of pregnant women were not visited at all even single time by any healthcare worker at their home as per government norms. 255 (66.4%) women used the haematinics as per advised by doctor/health staff. 371 (96.9%), 129 (70.6%) & 306 (80.2%) women had undergone haemoglobin, urine & VDRL estimation respectively. 352 (91.6%) women received two doses of Injection tetanus. Majority women haven't received proper advise on different aspects of ANC. In 74.5% nobody had advised about newborn care, in 80.5% women on breast feeding, in 52% warning signs in pregnancy, in 69% family planning to be followed after delivery. Relatives played key role in 69% women's got advised about ANC care, 63% women about nutrition, 52.6% women about personal hygiene, only 14.6% women got advise from relatives about newborn care.

INTRODUCTION

Pregnancy & delivery are very important events in women's life. Many times it has considered as natural process. As women & children shares nearly 35% of total population.⁴ So illnesses & deaths among this group affects on whole society.¹

Utilization of health services is a complex behavioral phenomenon and affected by accessibility, availability, quality costs and comprehensiveness of services. Nonetheless, there are potential benefits from some of the elements of antenatal care which are significant in reducing morbidity & mortality in developing countries.^{2,3,8,10} Antenatal period clearly presents opportunities for reaching women number of interventions which are beneficial for both women's & infant's health. Hence high risk pregnancy remain unidentified, obstetric history ignored, opportunities for transmitting family planning messages missed.

WHO estimates about 510000 maternal deaths occurred globally during the year 2002. According to estimates developed by WHO, UNFPA and UNICEF on maternal mortality in 1995-world MMR was 400/lac live births South -Asia 430/lac live births, Middle -east & North Africa 360/ lac live births while industrialized countries 12/ lac. Most of the maternal deaths are preventable. A lifetime chance of maternal death in world as a whole is about 1 in 75 varies from region to region. In South Asia it is 1 in 54, in India it is 1 in 55. In developing countries it is 1 in 61 and in industrialized or developed countries it is 1 in 4085. In industrialized countries antenatal care service coverage is extremely high i.e 98% women having at least one antenatal visit. In developing country like India it is around 68%.⁹

Primary means of preventing maternal deaths is to provide access to emergency obstetric care including treatment of hemorrhage, hypertension etc. Four delays are common in this area-

1. Delay in decision to seek care
2. Delay in identifying the problem
3. Delay in reaching the medical facility
4. Delay in receiving adequate treatment.

So our services should direct towards all these delays.¹¹

Content & antenatal care should be as follows as per WHO:

The new model of antenatal care separates pregnant women in two groups: those likely to need only routine antenatal care (75% of total ANC population) & those with the specific health conditions or risk factor (25% of pregnant women) that necessitates special care.

For the first group, a standard programme of four antenatal visits is recommended (with additional visits as required). Also recommends measurement of blood pressure, testing of bacteria & proteinuria and blood tests to detect blood sypyllis, severe anemia, routine weight & height check up at each visit is considered optional. Information regarding danger sign is important. If possible minimum of four visits, one visit in each month of gestation, twice monthly after 7th month till 9th month of gestation and weekly thereafter.

For other group- Number of visits will be more, including all necessary baseline investigation and other investigations depending on risk factor women should be screened.¹²

There are urban-rural differences found in child and maternal health care service utilization in developing countries.⁷ Despite better physical access to health care, higher average cost for accessing health services makes urban poor community as disadvantage as their rural counterparts. There has been found declining trend in out-patient care from 27% to 19% & in-patient care from 60% to 40%.⁶ It was generally observed that, tertiary hospitals with large numbers of obstetric admissions and deliveries report less maternal mortality. Reason could be these tertiary hospitals are used for normal deliveries bringing down mortality ratio. Individual hospital admission practices, as well as trends of utilization of facilities for normal deliveries may be different from trends in utilization of facilities for complicated cases.

So this study was carried out to know exactly the recent situation of antenatal care services utilized by women living in urban area in India. As there are few studies done to find out percent utilization of ANC services utilization at tertiary care level by pregnant women.⁵

Materials and methodology:

Mumbai is the most populous city of country having population

of 11.9million.It is a high density area with 21190 persons living / Sq.km.According to planning commission of India (1983) it is estimated about 20-26% total urban population lived in slums. Slum population concentrated in 12 metropolitan cities accounts 40% of Indian population.3/4th concentrated in 4 metropolitan city including Mumbai.

Bhrihan-Mumbai Municipal Corporation is the largest corporation in India & major public health provider. City has 3 teaching hospitals, 14 Municipal General Hospitals, 26 Maternity Homes apart from 185 Municipal health dispensaries and 176 health posts.State Government has 1 Medical College, 3General Hospitals & two health units. All have capacity of 2871beds (Govt. of Maharashtra 2001) Statistics shows that the bed-population ratio is higher in urban settings & regional inequalities are seen.

In urban set up antenatal women connected to health posts, anganwadis and dispensaries for routine ANC check up as well for basic investigation and iron & folic acid supplementation. There is proper referral system established through network of ANM, male worker if required, where they refer to urban health centre or First referral Units or to Maternity homes. If any complication at this level women is referred to Tertiary care level for more specialized care. But many times patients may get directly come on her own to such facility as unknown of hierarchy. Also due to less health consciousness about facilities available around for antenatal care.

A Cross-sectional study was conducted in a 1400 bedded tertiary care hospital of Mumbai during period from April 2010-February 2011.On an average 8000 deliveries per year took place at this tertiary care hospital. So every 20th postnatal women after delivery was interviewed with a pretested semi-structured proforma after verbal consent. Sample size of 384 was estimated through systematic random sampling with the precision of 50% utilization of antenatal services. Postnatal women were inquired about socio-demographic factors, obstetric history, antenatal history of this pregnancy, places of service utilization, kind of antenatal services provided, advices given during antenatal period. Also their records at the same time were utilized to register about investigations done, medicines received by women, complications occurred during or after delivery till the time of interview & outcome of pregnancy, causes of referral if any were also noted. Complete antenatal services was considered when women visited health facility for minimum 3 antenatal checkups, registered before 16 weeks of gestation, have received 2 doses of Inj.T.T And ate minimal 90 iron tablets. Statistical analysis was done by using SPSS 10thversion & chi-square test.

Results :

Table 1 shows pattern of antenatal care services utilized by study women.

Total 384 post-natal women were interviewed, of which 255 (66.4%)used complete antenatal services while 129 (33.6%) were not used them completely. Majority of women, 264 (69%) were used public health facility, while 70 (18%) used both public as well as private health facility and 45 (11%) used only private facility for antenatal care.

Most of the women, 175 (46%) visited health facility for antenatal check up before 16 week while 204 (54%) visited after 16 weeks of gestation. Among 175 women, 25(61%) visited health facility before 16 weeks were educated above secondary class and this was found to be statistically significant.(X²= 11.16 p< 0.05 highly significant). About 317(82.6%) women had at least 4 or more antenatal checkups.199 (51.8%) women were referred from other government hospital, while 151(39.3%) were registered to tertiary care hospital on her own.

Components of ANC care are shown in table 2-Of 384 women 255(66.4%) used the haematinics as per advised by doctor/ health staff.371 (96.9%), 129 (70.6%) & 306 (80.2%) women had undergone haemoglobin, urine & VDRL estimation respectively. 352(91.6%) women received two doses of Injection tetanus.In 291(75.8%) women no one visited at home of antenatal

women. Only 93(24.2%) women visited by public health worker.

Table 1. Pattern of antenatal care services utilization

Time of first visit	No.	%
Before 16 weeks	175	46
Between 16-28 weeks	139	36
After 28 weeks	70	18
Number of visits		
0	5	1.3
1	9	2.3
2-3	53	13.8
4-8	228	59.4
>8	89	23.2
Reasons for visiting tertiary care hospital		
Referred from Government hospital	199	51.8
Referred from private hospital	33	8.6
Registered on their own	151	39.3
Complications at home	01	0.3

Table 2.Components of ANC utilization

Haematinic used	No.	%	Investigation not done	
Used	255	66.4		
Not used	129	33.6		
Minimum investigation done				
Hb	371	96.9	13	3.4
Urine	129	70.6	113	29.4
VDRL	306	80.2	76	19.8
Immunization against Tetanus				
Single dose	17	4.4		
Two dose	352	91.6		
none	15	4		
Home visit by health worker				
None	291	75.8		
other	52	13.5		
ANM	40	10.4		
Doctor	01	0.3		

Source of advice regarding antenatal care given during ANC period-

There were multiple responses given by study participants when question was asked about source of advice for different aspects of ANC care. Relatives acted as important source of advice in 69% women for ANC services availability, 63% women about nutrition, 52.6% women about personal hygiene, only 14.6% women got advise from relatives about newborn care .In 286(74.5%) women nobody had advised about newborn care,69% women didn't got advise on family planning,309(80.5%) women nobody advised on breast feeding 200(52%) women were unaware of warning signs occurring in pregnancy, also 237(61.7%) women were unaware of immunization against tetanus.

Doctors / health worker wasn't acted as important source for the advises given during pregnancy. They advised mainly on medicines /supplements to be taken in pregnancy in 246(64%) women, on personal hygiene 126(32.8%) women, on warning signs 142(37%) women, on nutrition 106(27.6%) women got advice from them.

Discussions-

In this study 199(51.8%) women were referred from other government hospital,33(8.6%) from private facility while 151(39.3%) were registered to tertiary care hospital on her own.In RCH-RHS survey II, 53% women utilized services from private health facility while 45 % approached Government health facility.In similar study by Nandraj in Mumbai, 30% of women delivered at public health facility & 31.7% in private set up.

In this study, 175(46%) women visited health facility for antenatal check up before 16 weeks, while 204 (54%) visited after 16 weeks of gestation. Among 175 women, 25(61%) visited health facility before 16 weeks were educated above secondary class and this was found to be statistically significant. ($X^2=11.16$ $p<0.05$ highly significant).According to RCH-RHS survey II carried in Maharashtra, nearly 57% of women availed services in first trimester.

About 317(82.6%) women had at least 4 or more antenatal checkups. As per WHO recommendations minimal four antenatal checkups are required. In this study ANC coverage was found to be adequate. In DHS 2002, 56% women received four or more antenatal checkups. While NFHS II 65.4% women received three or more ANC checkups. In study conducted in Maharashtra by CORT (Centre for research & Training) a multidisciplinary social organization, Vadodara 92.7% women were received three or more antenatal check-ups 78% women received all two doses of Injection TT.Of 384 women 255(66.4%) used the haematinics as per advised by doctor/health staff.371 (96.9%), 129 (70.6%) & 306 (80.2%) women had undergone haemoglobin, urine & VDRL estimation respectively. 352(91.6%) women received two doses of Injection tetanus.This was similar to NFHS survey II- 75.7% women received iron and folic acid tablets,78.1% women got their blood checked, in 76.2% urine was tested.81.9% women received two or more doses of injection TT.

In 291(75.8%) women no one visited at home of antenatal women. Only 93(24.2%) women visited by public health worker. This was only 3.1 % found with CORT study conducted in Maharashtra.

Important finding was found when postnatal women was inquired about advises given by different persons. Relatives played key role in giving advice regarding ANC services in 69%, about nutrition in 63%,52.6% in personal hygiene. Doctors/paramedical staff wasn't advised carefully on each aspect except medicines, to be taken in pregnancy in 246(64%) women, on personal hygiene 126(32.8%) women, on warning signs 142(37%) women, on nutrition 106(27.6%) women got advice from them.

To surprise, in 286(74.5%) women nobody had advised about newborn care,69% women didn't got advise on family planning,309(80.5%) women nobody advised on breast feeding 200(52%) women were unaware of warning signs occurring in pregnancy, also 237(61.7%) women were unaware of immunization against tetanus.

Antenatal period thought to be a very nice opportunity for advising on different aspects which was again missed in majority cases. As by above findings, antenatal services are not seems to be a domain of doctors/paramedical staff and it is still responsibility of family or relatives.

Conclusions-

Antenatal coverage in this study was found to be adequate, satisfactory. Complete awareness regarding antenatal care services among study population was still not fully percolated as almost half of them registered themselves after 16 weeks. Although education played important role but all ANC not shown compliance of medicines, tests advised to them. Doctors /paramedical staff seems to important link towards good health and giving extra precaution to the antenatal women which was found to be missed opportunity in this study, may be because doctors are too busy in managing these cases. Public health personnel were not able to maintain the routine home visit to the antenatal women which is thought to be weak area of the antenatal service.

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