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Original Article

Situation of antenatal care and delivery practices

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Abstract

Objectives: The study aims to assess the situation of antenatal care usage and delivery practices in the study area. (i) To study the coverage rate for ANC and hospital delivery in different age group, parity, educational status and economic status. (ii)To study the relation of ANC visit and hospital delivery. **Materials and method:** The study design is descriptive cross sectional study. The study was carried out in ward no. 9 of Mahankal VDC, Kathmandu. 50 women of reproductive age group who had delivered live birth five years preceding the survey were selected. A semi-structured questionnaire was administered through informal interview. For the women with more than one child, the information was gathered for the last birth. The data were analyzed through the SPSS software. **Results:** Antenatal visit was a success story. Seventy eight percent of women were using the services. More notable fact was that the 62% of the respondents made antenatal visits for four or more than four times. Seventy two percent of the respondents y received the tetanus toxoid shots. Sixty six percent of the deliveries were hospital deliveries assisted by the doctors. However, 34% of deliveries occurred at home. The difference in ANC visit in different age groups and parity was not much obvious. The educational effect was clear as nearly double women who attained SLC or above, made four or more ANC visit as compared to illiterates. ANC seen as pathway to the institutional deliveries, once again proved its potential. Around 90% of women who made four or more ANC visits delivered in hospital as compared to 18.18% of women who never made any ANC visit. **Conclusion:** The rate of antenatal care use and hospital deliveries in the study area is found good in percentage. The rapid urbanization is taking place in nearby VDCs of Kathmandu. The hospitals in the Kathmandu are accessible to these VDCs. This could be the reason behind increased antenatal care usage and hospital delivery in the study area.

Key words: antenatal care, delivery

Better understanding of foetal growth and development and its relationship to the mother's health has resulted in increased attention to the potential of antenatal care (ANC) as an intervention to improve both maternal and newborn health. Realizing the fact, different international conferences such as World Summit for Children in 1990, International Conference on Population and Development in1994, the Fourth World Conference on Women in 1995, their five-year follow-up evaluations of progress, and the United Nations General Assembly Special Session on Children in 2002 adopted antenatal care as a specific goal[1].

The primary objective of antenatal care is to establish contact with the women, and identify and manage current and potential risks and problems[2]. Few life-threatening complications can be prevented antenatally, most requiring interventions at the time of delivery. There are potential benefits from some of the elements of antenatal care, and these benefits may be most significant in developing countries where morbidity and mortality levels among reproductive-age women are high[3].On one hand, the antenatal interventions may be vital to the health of the pregnant women and well-being of their infants and on the other hand, it may provide the path for skilled assistance during delivery. Women receiving antenatal care come in contact with health-care providers who are likely to encourage them to give birth in a medical facility.

Attendant for the delivery plays important role in the successful outcome of the delivery. However in Nepal, only 9% of the deliveries happen in the health facilities. A child from the urban area is six times more likely to be delivered in health facility than a child from rural area. In our country more than half of the births are assisted by the family members. Urban births are seven times more likely to be delivered by a doctor as compared to the rural births[4]. According to World Demographic and Health Survey 2001, the antenatal coverage rate is a success story in many developing countries[3]. The rate is reported to be more than 50%. However, in Nepal, 49% of Nepalese pregnant women receive antenatal care and only 9% of these women delivered in a health facility [4].

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Nepal through ministry of health has launched national maternity care guidelines to enhance the health situation for women. Guideline emphasize on achieving the enhanced health situation for women during pregnancy and delivery through channelizing the family, the community and health facilities [5].
Second Long Term Health Plan, 1997-2017 aims at achieving following goals[6]:

- To increase the percentage of deliveries attended by trained personnel to 95%
- To increase the percentage of pregnant women attending a minimum of four antenatal visits to 80%;

Objectives
The study aims to assess the situation of antenatal care usage and delivery practices in the study area.

Specific objectives
i) To study the coverage rate for ANC and hospital delivery in different age group, parity, educational status and economic status.
ii) To study the relation of ANC visit and hospital delivery.

Materials and method
The study was carried out in ward no. 9 of Mahankal Village Development Committee (VDC), Kathmandu. 50 women of reproductive age group who had delivered live birth five years preceding the survey were selected. A semi structured questionnaire was administered through informal interview. For the women with more than one child, the information was gathered for the last birth.

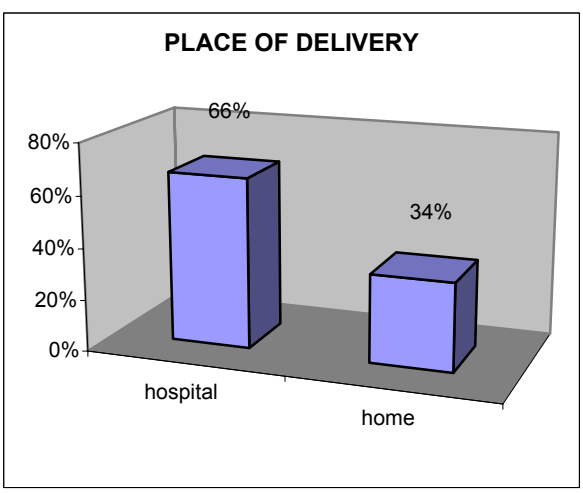
Results
Table 1: Percent distribution of antenatal visits, tt shots received and delivery attendant for women who had live birth in the five years preceding the study by age, parity, educational status and monthly income.

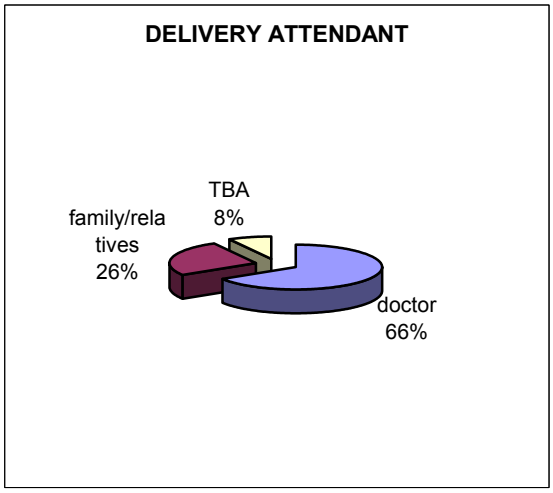
Background characteristics of respondents	Antenatal visits				Delivery attendant			No. of women
Age	**Four or more**	**Less than four**	**Non**	**tt shots received**	**Doctor**	**Traditional birth attendant**	**Family /relatives**	
15-19	100	-	-	100	100	-	-	1
20-34	66.7	20.0	13.3	83.3	70.0	6.7	23.3	30
35 and above	52.6	10.5	36.8	52.6	57.9	10.5	31.6	19
Parity								
1	78.6	21.4	-	92.9	78.6	7.1	14.3	14
2	69.6	8.7	21.7	73.9	69.6	4.3	26.1	23
3	28.6	14.3	57.1	28.6	42.9	14.2	42.9	7
4 and more	33.3	33.3	33.3	66.7	50.0	16.7	33.3	6
Educational status								
Illiterate	20.0	20.0	60.0	40.0	40.0	-	60.0	5
Literate	47.4	26.3	26.3	63.2	57.9	15.8	26.3	19
S. L. C. and above	80.8	7.7	11.5	84.6	76.9	3.8	19.2	26
Monthly income								
< 4000	14.2	42.9	42.9	71.4	42.9	-	57.1	7
> 4000	69.8	11.6	18.6	72.1	69.8	9.3	20.9	43
Percent out of total respondents	62.0	16.0	22.0	72.0	66.0	8.0	26	N = 50

Source: Field survey, 2005

In this study the results showed that 78% of the respondents were benefited by antenatal care services. Sixty two percent of them made the visits four or more times, 16% of them made it less than four times during the pregnancy. Seventy two percent of respondents got tetanus toxoid shots.

Fig 1: Figures representing place of delivery and delivery attendant





The results showed that 66% of the deliveries happened in hospital and assisted by the doctors. And 34% were the home deliveries, among which 26% were assisted by the family or relatives and 8% by the traditional birth attendants (TBA). Significant percentage of the respondents delivered at the hospital. Proportion test for hospital deliveries against the ANC visits categorized as more than four visits and no visit was applied. The difference is statistically significant.

Table 2: Percentage delivered at hospital against ANC visits

ANC visits	Hospital Delivery	N	P value
More than 4 visits	90.32%	31	< 0.01
Non	18.18%	11	

Discussion

Antenatal care

Age is one of the most important factors for pregnancy complications. Younger age group of 15-19 and over 35 age group are considered risky. Studies showed that women older than 35 are less likely to make antenatal visits[3]. This study showed that the percentage of women of more than 35 years of age, who did not attend the antenatal visits, is 36.8%. A good percentage of these women made the antenatal visits. Statistics suggests that antenatal coverage rate is increasing in these years. The similar findings can be seen in this study.

World Demographic and Health Survey (DHS) on 45 developing countries showed that higher parity women less encounters antenatal care components[3]. Similar results were found in NMIS study[7]. Our study results showed that 100% women with first pregnancy made antenatal visits. Seventy eight percent of the women made it four or more times. For women with second pregnancy, the coverage is 78.3%. However, the coverage is high in higher parity group too. Around 66% of women with fourth or more pregnancies made the ANC visits. The results were collected for last pregnancy, which could be the reason for higher coverage rate in high parity group too, since the overall national ANC coverage is also increasing as seen in 2001 as compared to Nepal Family Health Survey 1996 results[4].

Educational status plays vital role in availing health services. World DHS suggests that women with secondary education are twice more likely to have antenatal care than women with no education. But in some countries the disparity is much larger, particularly in Asia. In Nepal, women with secondary education are 8 times more likely to report at least four antenatal visits than women with no education[3].

This study result showed that percentage of women with educational attainment of School Leaving Certificate (SLC) and above who attended the ANC visits was double as compared to the illiterate women.

Similarly, data on economic status against ANC use shows that 81.4% of women with more than four thousand per monthly income avail the ANC services. The coverage is nearly 5 times higher for four or more ANC visits made by these women as compared to the women with lesser income.

Delivery characteristics

Even with the best possible antenatal screening, any delivery can become a complicated one requiring emergency intervention. Therefore, skilled assistance is essential to delivery care.

ANC being a pathway to institutional delivery as seen in many studies, this study tried to look upon the relation between these variables in the study area. The results showed that the difference in the percentage of hospital delivery among women who made four or more visits as compared to women who never visited ANC clinics was obvious. Around 90% women following four or more ANC visits were hospital delivered as compared to 18.18% of women not making any ANC visits. The difference was found to be statistically significant ($p<0.01$).

According to the study based on world DHS, the relationship between four or more antenatal care visits and delivering in a medical facility – hospital, health centre or clinic – is even more pronounced. Women reporting at least four antenatal care visits were on average 3.3 times more likely to deliver in a medical facility than other women. The difference between the two groups of women is especially large in Bangladesh and Ethiopia, both countries with low overall levels of antenatal care use[3]. Another study showed that mothers who received antenatal check-ups are two to five times more likely to give birth in a medical institution than mothers who did not receive any antenatal check-up. Mother's age and education and child's birth order also have strong effects on the likelihood of institutional delivery. Household standard of living also has a substantial effect in most cases[8].

The results showed that 66% of the deliveries happened in hospital and assisted by the doctors. And 34% were the home deliveries, among which 26% were assisted by the family or relatives and 8% by the traditional birth attendants (TBA).

Seventy percent of women in 20-34 years of age whereas 57.9% of women of more than 35 years of age delivered in assistance of a doctor. Nearly seventy nine percent of women with first pregnancy and 69.6% of women with second pregnancy, delivered in health facility as compared to 50% of women with fourth or more pregnancies. Like ANC service use the place and attendance during delivery was found to be associated with education and economic status. The percentage of delivery assisted by doctors was nearly double in women with SLC and above education as compared to illiterates. Sixty percent of illiterate women delivered in assistance of family or relatives. Similarly, 69.8% of women with higher income level delivered at hospital in assistance of doctor as compared to 42.9% of women with lesser income.

Conclusion

Antenatal visit was a success story in the study population. Seventy eight percent of women were using the services. More notable fact was that the 62% of the respondents were visiting antenatal services four or more times as recommended by World Health Organization[1]. Significant percentage of the respondents delivered at the hospital. The differences in coverage rate in various age groups and parity is not much pronounced. However, the effect of the education is clear. ANC seen as pathway to the institutional deliveries, once again proved its potential. Around 90% of women who made four or more ANC visits delivered in hospital as compared to 18.18% of women who never made ANC visit.

The rapid urbanization is taking place in the VDCs near to the Kathmandu. The hospital services are easy to avail. People are well informed about the health services. All these factors could be responsible for higher ANC visits and hospital deliveries in study area.

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