

# Prevalence of Women Meeting WHO Criteria of Antenatal Care Presenting in a Tertiary Care Hospital of Lahore

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## ABSTRACT

**Objectives:** To determine the frequency of women meeting WHO criteria of antenatal care presenting in a tertiary care hospital of Lahore

**Study design and settings:** This was a cross-sectional study conducted in the Deptt. of Obs & Gynae Fatima Memorial Hospital, Lahore for a period of six months from March 2012 to August 2012.

**Results:** Age range was between 15-40 years, majority of them were 42%(n=126) between 26-30 years, common age was 27.73±4.46 years, 34.67%(n=104) were primigravida, 26%(n=78) were gravida 2, 19%(n=57) were gravida 3, 9%(n=27) were gravida 4, 4.33%(n=13) gravida 5, 3.67%(n=11) were gravida 6 and 3.33%(n=10) were recorded with >gravida 6, frequency of women meeting WHO criteria of antenatal care presenting in our hospital was recorded in 32.33%(n=97) while 67.67%(n=203) did not meet the criteria. Stratification for socioeconomic status reveals 29.90 % (n=29) out of 97 patients with salary <7000 Rupees while 70.10 & (n=68) had salary ≥7000 rupees; 75.26% (n=73) were graduate and 24.74% (n=24) were undergraduate.

**Conclusion:** The frequency of women meeting WHO criteria of antenatal care presenting in a tertiary care hospital of Lahore is only 32.33% which is a dilemma for maternal and child health

**Keywords:** Antenatal care, WHO criteria, frequency, tertiary care hospital

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## INTRODUCTION

Antenatal care means "Care before birth" and includes education, counseling, screening and treatment to monitor and to promote the well being of the mother and fetus<sup>1</sup>. High quality antenatal care provide important opportunities for reaching pregnant ladies with the number of intervention that may be vitals to their infants like, treatment of hypertension to prevent pre-eclampsia, tetanus immunization, micronutrients, supplementation, birth preparedness including danger signs during pregnancy and childbirth<sup>1</sup>. The aim of antenatal care is to assist women to remain healthy. Finding and correcting adverse condition when present, thus aid the health of unborn<sup>1</sup> and to reduce the maternal and perinatal mortality. Perinatal mortality is a significant health problem in our region as compared to the rest of the world<sup>4</sup>.

According to demographic survey, in Karachi perinatal mortality is 54.1 per 1000 birth and in Lahore perinatal mortality is 53 per 1000 birhts.<sup>4</sup> According to White ribbon alliance Pakistan 2006, maternal mortality ratio is 350-500 per 100,000 live births and infant mortality rate is 78 per 1000 live births. According to UNICEF, maternal mortality is 340 per 100,000 live births, and globally 536,000 women die each year during child birth<sup>5</sup>.

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Most of causes of maternal and perinatal mortality are treatable and outcome can be improved by providing good health care facilities during antenatal and intrapartm period<sup>4</sup>.

Now a days WHO recommends only four antenatal visits and in each visit proteinuria, bacteria and syphilitic screening should be done. Early entry to the antenatal care is important for early detection and treatment of adverse pregnancy<sup>6,7</sup>. WHO recommends that a pregnant woman should seek antenatal care in first four months of pregnancy but late booking is still a big problem<sup>8</sup>.

The outcome of pregnancy in booked patients is better than unbooked patients, like in triplet gestation and placental abruption, mortality rate is higher for unbooked patients than in booked patients<sup>9,10</sup>. Despite of these facts, utilization rates of health services is poor in developing countries than in developed countries. In Tanzania 47% give births with skilled attendants.<sup>11</sup> In Pakistan 70% of pregnant women did not receive antenatal care 23% receive antenatal care by doctors. 3% by nurse, lady health visitors and 4% by trained or untrained birth attendant<sup>2</sup>. One study that was conducted in Nepal gives us the statistics that 62% women receive four antenatal visits as recommended by WHO<sup>12</sup>.

This study was planned with the view to assess the %age of women meeting WHO criteria of antenatal care in Pakistan for improvement of maternal and perinatal mortality rate. We will get an

idea regarding magnitude in our population which may be helpful for policy makers while they plan programs for the betterment of maternal & child health.

**MATERIAL AND METHODS**

This was a cross sectional study conducted in the Department of Obstetric & Gynaecology Fatima Memorial Hospital Lahore for a period of six months from March 2012 to August 2012 and 300 patients taken by non-probability consecutive sampling were included in the study. All pregnant ladies of any parity admitted in labour room beyond 36 weeks of gestation by ultrasonography were included in the study. The aim was to determine the frequency of women meeting WHO criteria of antenatal care presenting in a tertiary care hospital of Lahore. The WHO criteria for antenatal care included minimum 4 antenatal visits, first antenatal with in the first four months of pregnancy, height & weight monitoring and B.P monitoring in each visit, screening for proteinuria, screening for bacteraemia, screening for anemia and screening for syphilis (it was not included in our study as it is not routinely done in out setup). A patient was considered to meet WHO criteria of antenatal care if all above conditions were fulfilled.

**Data collection procedure:** All patients in labour ward, fulfilling inclusion criteria were included in this study. An informed consent for using their data in research was obtained. Demographic information's like age, gravidity, education and socioeconomic status was evaluated. The number of antenatal visits, gestational age at first antenatal visit and to whom antenatal checkup done was evaluated with the help of patient's record it was evaluated that whether height, weight, BP monitoring had been checked in each antenatal visit or not. The patients investigations were analyzed that whether screening for proteinuria, anemia and bacteraemia done in each antenatal visit or not. Data was collected with the help of Performa attached. Data was calculated by researcher herself. Other variable as antenatal done by DAI, LHV, MBBS Doctor or consultant Gynaecologist were be noted.

**Data analysis procedure:** The collected data was entered in SPSS version 10 for analysis. Qualitative variables like female fulfilling WHO criteria for antenatal care were presented by calculating frequency of percentages. Quantitative variables like age, age of gestation at was calculated as Mean±S.D. Ddata was stratified for socioeconomic status (according to Pakistan Government minimum salary is 7000, so we considered poor socioeconomic status if salary was < 7000), education (if one of the partners was graduate we considered educated

family, as Pakistan Government declare person educated if he/she was graduate)

**RESULTS**

In this study, a total of 300 patients were recruited after fulfilling the inclusion/exclusion criteria to determine the frequency of women meeting WHO criteria of antenatal care presenting in a tertiary care hospital of Lahore. Age range of the patients was between 15-40 years, majority of the were 42%(n=126) between 26-30 years, 34.33%(n=103) were between 21-25 years, 15.33%(n=46) were between 31=35 years, 4.34%(n=13) were between 36-40 years and only 4%(n=12) were between 15-20 years of age, mean and sd was calculated as 27.73±4.46 years of age. (Table 1).

Gestational age of the patients was recorded in Table No. 2, where 53% (n=159) were between 39-40 weeks, 25.67%(n=77) were between 36-38 weeks and only 21.33%(n=64) were between 41-42 weeks of gestation.

Parity of the subjects was recorded, 34.67%(n=104) were primigravida, 26%(n=78) were gravida 2, 19%(n=57) were gravida 3, 9%(n=27) were gravida 4, 4.33%(n=13) gravida 5, 3.67%(n=11) were gravida 6 and 3.33%(n=10) were recorded with >gravida 6.(Table 3).

Frequency of women meeting WHO criteria of antenatal care presenting in a tertiary care hospital of Lahore were recorded in 32.33%(n=97) while 67.67%(n=203) did not meet the criteria (Table 4).

Stratification of patients meeting WHO criteria of antenatal care presenting in a tertiary care hospital of Lahore for socioeconomic status was done where we recorded 29.90%.

Stratification of patients meeting WHO criteria of antenatal care presenting in a tertiary care hospital of Lahore for educational status was done where we recorded 75.26%(n=73) out of 97 patients were graduate and 24.74%(n=24) were undergraduate. (Table 6)

Table 1: Age distribution of the subjects (n=300)

Age in years	=n	%age
15-20	12	4
21-25	103	34.33
26-30	126	42
31-35	46	15.33
36-40	13	4.34

Mean and S.D. =27.73±4.46

Table 2: Gestational age of the subjects (n=300)

Gestational Age (in weeks)	=n	%age
36-38	77	25.67
39-40	159	53
41-42	64	21.33

Table 3: Parity of the subjects (n=300)

Pare	=n	%age
Primigravida	104	34.67
Gravida 2	78	26
Gravida 3	57	19
Gravida 4	27	9
Gravida 5	13	4.33
Gravida 6	11	3.67
>Gravida 6	10	3.33

Table 4: Frequency of women meeting who criteria of antenatal care presenting in a tertiary care hospital of Lahore (n=300)

Antenatal care	=n	%age
Yes	97	32.33
No	203	67.67

Table 5: Stratification of patients meeting who criteria of antenatal care presenting in a tertiary care hospital of Lahore for socioeconomic status

Antenatal care	=n	%age
Salary <7000	29	29.90
Salary ≥ 7000	68	70.10

Table 6: Stratification of patients meeting who criteria of antenatal care presenting in a tertiary care hospital of Lahore for education status (n=97)

Antenatal care	=n	%age
Graduate	73	75.26
Under graduate	24	24.74

## DISCUSSION

High quality antenatal care is a fundamental right for women to safeguard their health. The state of women health in Pakistan is not satisfactory, majority of them suffering from preventable and treatable risks and diseases associated with child bearing. The maternal mortality ratio officially quoted by UNICEF is 340 per 100,000 live births. There are many reasons identified for poor maternal health; which includes low socioeconomic status, poor nutrition, high-risk pregnancies and poor access to health care provision. According to Pakistan demographic health survey 70% of pregnant women did not receive antenatal care, 23% receive antenatal care by doctor, 3% by nurse, lady health visitor or family welfare worker, and four percent by trained or untrained traditional births attendant<sup>13</sup>. This shows that small number of women seeks antenatal care and those who seek care during pregnancy and delivery have poor outcome due to the uneven quality of services. The National Health Survey of Pakistan (1990–1994) estimated that only 52% of postpartum women had serological evidence of adequate immunization against tetanus<sup>14</sup>. The prevalence of contraceptive is 24%, which is quite low<sup>15</sup>.

We planned this study with the view to assess the %age of women meeting WHO criteria of

antenatal care in Pakistan for improvement of maternal and prenatal mortality rate so that an idea regarding magnitude in our population which may be helpful for policy makers while they plan programs for the betterment of maternal & child health.

In our study age range was between 15-40 years, majority of the were 42%(n=126) between 26-30 years, common age was 27.73±4.46 years, 34.67%(n=104) were primigravida, 26%(n=78) were gravida 2, 19%(n=57) were gravida 3, 9%(n=27) were gravida 4, 4.33%(n=13) gravida 5, 3.67%(n=11) were gravida 6 and 3.33%(n=10) were recorded with >gravida 6, frequency of women meeting WHO criteria of antenatal care presenting in our hospital was recorded in 32.33%(n=97) while 67.67%(n=203) did not meet the criteria.

Stratification for socioeconomic status reveals 29.90% (n=29) out of 97 patients with salary <7000 Rupees while 70.10 & (n=68) had salary ≥7000 rupees; 75.26% (n=73) were graduate and 24.74% (n=24) were undergraduate.

The results of the study are in agreement with the study conducted by Nisar N and colleagues, who assessed the pattern of antenatal care provided to the pregnant women and to determine their level of satisfaction for provision of services and recorded mean age of women was 29.08±3.95 years, about 71% were multi gravida.

While the frequency of WHO criteria met in our study was in agreement with 'Pakistan Demographic and Household Survey 1990–91', where only 30% of women were recorded utilizing antenatal care services, while 70% do not<sup>13</sup>. This is very misfortunate that even after passing 23 years the frequency of antenatal care was not improved.

The limitation of the study was that we did not recorded factors affecting the utilization of antenatal care, while the literature reveals that antenatal care is often delayed even in developed countries due to multiple factors<sup>16,17</sup>. Nettleman et al<sup>17</sup> indicated that even in commercially insured population antenatal care is delayed for about 25% of pregnant women for more than four (04) weeks. One of the major reasons was found to be not getting a timely appointment at an antenatal clinic. Cohen,<sup>18</sup> citing the work of Nettleman et al,<sup>17</sup> criticized the existing system of prenatal care and emphasized to make the first visit of pregnant women to antenatal clinics as the most educating and triaging opportunity.

Oladekun et al<sup>19</sup> showed that in Nigeria, first trimester booking was significantly with more educated, professional women of low parity and those who have had previous still birth. Nisar N and White E<sup>20</sup> conducted a study to determine the factors affecting utilization of Antenatal Care among reproductive age group women and recorded 77.62%

women, 60.84% husbands were illiterate and 73.43% had monthly income <4500 while another study by Sadiq N and co-workers<sup>21</sup> recorded 59.3% women who were illiterate and 66.1% husbands were illiterate and did not use the antenatal care, while another study by Tewodros B shows 42.4% illiterate women and 94.4% were housewives.

The aim of antenatal care is to assist women to remain healthy. Finding and correcting adverse condition when present, thus aid the health of unborn<sup>1</sup> and to reduce the maternal and perinatal mortality. Perinatal mortality is a significant health problem in our region as compared to the rest of the world<sup>4</sup>.

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Most of causes of maternal and perinatal mortality are treatable and outcome can be improved by providing good health care facilities during antenatal and intrapartum period<sup>4</sup>.

Now a days WHO recommends only four antenatal visits and in each visit proteinuria, bacteraemia and syphilitic screening should be done. Early entry to the antenatal care is important for early detection and treatment of adverse pregnancy<sup>6,7</sup>. WHO recommends that a pregnant women should seek antenatal care in first four months of pregnancy but late booking is still a big problem<sup>8</sup>.

According to the results of our study, the frequency of antenatal care in women coming to our hospital is very low which may be considered by the policy makers while they plan programmes for the betterment of maternal & child health must consider moreover the factors affecting antenatal care may also be controlled.

## CONCLUSION

The frequency of women meeting WHO criteria of antenatal care presenting in a tertiary care hospital of Lahore is only 32.33% which is a dilemma for maternal and child health.

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