Analysis of unbooked emergency admissions into tertiary care and its comparison to booked cases.

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ABSTRACT

Background: To achieve the Sustainable Development Goals with regards to maternal health, there is need for research on the local causes and factors influencing adverse maternal & foetal outcomes in health institutions. Antenatal care throughout the pregnancy can ensure better feto-maternal outcome. It also contributed to reduction of maternal and infant mortality.

Aim: To Study & Analyze various Emergency Admissions in obstetrics which are being referred from other centers, regarding the indication & their management including the maternal & perinatal outcome.

Materials and methods: This was a Prospective Study undertaken at the Emergency Department of Obstetrics & Gynaecology in one of the main referral centre as well as teaching hospital for the Post graduate & Undergraduate students. The study population was categorized into 3 groups Booked referral, Unbooked referral(including self-referral) and Booked cases of Gandhi hospital.

Results: During this 6 months study conducted at the Emergency dept. of OBG, Gandhi hospital, Secunderabad, the total no. of Admissions were 2128, out of which Booked cases were 896(42.1%) & Unbooked cases were 1232. The total incidence of LBW babies is 28.71%. Among them, 62.41% were born to Unbooked mothers. Only 26.03% were booked cases & LBW was the most common cause for early neonatal deaths. Of all the 16 maternal deaths, all were Unbooked cases. The maternal mortality rate is 781.57 per 1,00,000 live births. The most common cause for Maternal mortality was Toxaemia of pregnancy. There were 232 Perinatal deaths with a Perinatal mortality rate of 109.09 per 1000 births. Among these only 13.79% were among the booked cases & the remaining were Unbooked cases.

Conclusions: The incidence of Emergency LSCS, LBW babies and the maternal mortality rate was higher among the Unbooked cases which shows a direct relationship.

Keywords: Booked case, Unbooked case, antenatal care, Fetomaternal out come

INTRODUCTION

The Aim of Obstetrics is to ensure a normal pregnancy with the delivery of a healthy baby from a healthy mother & an uncomplicated puerperium . The primary objective of Preventive

medicine is the prevention of disease & improvement of health. Thus the aim of obstetrics & preventive medicine is the same. Obstetric care includes not only maternal care but also physiological, pathological, psychological & social factors that profoundly influence the future generation of citizens. Thus in a broader sense, it is concerned with the present as well as the future of nation.

Obstetrics is concerned with the reproduction of human. The speciality promotes the health and well-being of the pregnant women and her fetus through the quality of prenatal care. Such care entails the appropriate recognition and treatment of complications, supervision of their labour and delivery, ensuring care of the newborn and management of puerperium to include the follow up care that promotes health and provides family planning options. Childbirth is a regarding event for majority of the couples, yet it may turn into a nightmare by an unforeseen life threatening complication.[1]

In any community , mothers & children constitute a priority group. In sheer numbers, they constitute approximately 71.14% of the population of the developing countries. In India, women of the childbearing age (15-44yrs) constitute 22.2% & children under 15 yrs of age about 35.3% of total population. Together they constitute nearly 57.5% of the total population. By virtue of their numbers, mother & children are the major consumers of health services of all. In many developing countries , complications of pregnancy & child birth are the leading causes of death among the women of reproductive age. Every year more than 150 millions become pregnant in developing countries. More than one women dies every minute from such complications; 5,58,000 women die every year. Less than 1% of such deaths occur in developed countries. Each year, almost 8 million stillbirths & neonatal deaths occur. In addition to maternal death, more than 50 million women experience maternal health problems annually .One quarter of all adult women living in the developing world currently suffer from short or long term illnesses & injuries related to pregnancy & child birth. The disparity in the incidence demonstrates that they could be avoided if resources , services & fairness of its distribution were made available.

In an observational study of home births in rural India (Orissa), 52.6% women developed complications during labour & puerperium . A questionnaire survey was conducted in a rural district in Hyderabad, which reported that 38% women had experienced obstetric complication in their last delivery. Maternal morbidity has been suggested as a marker to measure the standard of obstetric care existing in any society & the incidence varies globally. An Emergency is defined as a situation of serious & often dangerous nature, developing suddenly, unexpectedly & demanding immediate attention in order to save life. Obstetric emergencies have direct relationship with the quality of antenatal care. Obstetric emergencies are the leading causes of maternal morbidity & mortality worldwide, particularly in developing countries. Unregistered women especially in the rural & tribal areas suffer from obstetrical emergencies much more than their urban counterparts where literacy, poverty, lack of antenatal care, poor transport facilities, combined with inadequate equipment / staffing ,meager blood bank facilities magnify the problem. Delay at various levels results in adverse outcomes. [2,3]

Prevention is possible with prompt & effective treatment of obstetric emergencies which will go a long way to reduce the magnitude of ever increasing maternal mortality & morbidity

which appears to have defied all proposed measures set to reduce it by WHO. Though pregnancy and labour are considered a physiological process, the potential for catastrophic complications is constant and may develop in a matter of minutes. There are approximately 118 life threatening events of "near miss mortality" or "severe acute maternal morbidity" (SAMM) for each maternal death. Global prevalence of SAMM (defined as severe life threatening obstetric complication necessitating urgent medical intervention in order to prevent likely death of mother) varies from 0.015 to 8.23%. It is these "near misses" or "SAMM" which require High dependency unit interference. [4,5]

Government of India , through NRHM has launched an "EmOC" (Emergency obstetric care) programme with the aim to train the medical officers & upgrade the infrastructure at PHC's , so that the common emergencies are dealt at peripheral level & emergencies of serious nature get first-aid before shifting to higher centres. In millennium declaration, eight millennium development goals (MDGs) were set out each with its numerical target & indicators for monitoring the progress . In these MDG's , the health & well-being of women, mother & children are given special priority due to unacceptable high mortality & unequal access to health care. [6]

In order to achieve the target of MDG—5 , it is very important to give due attention to the nature & magnitude of obstetrical emergencies, so that corrective measures can be taken to reach the desired goal. The concept of "Near miss maternal mortality" has led to the development of statistical data systems that measure the indicators of severe maternal morbidities. This evolution followed inadequacies in hospitalization coding to reflect the severity of maternal complications. Thus, coding indicators or modifiers are used to allow the analysis of clinical "near misses". [7,8]

With this background, a Prospective study was carried out to understand the incidence of Obstetrical emergencies at Gandhi Hospital, its nature ,their maternal & perinatal outcome & their comparison to the booked cases of Gandhi hospital, a tertiary care teaching hospital.

MATERIAL & METHODOLOGY

This was a Prospective Study undertaken at the Emergency Department of Obstetrics & Gynaecology, Gandhi hospital, Secunderabad, a Tertiary care centre & one of the main referral centre as well as teaching hospital for the Post graduate & Undergraduate students. This hospital is a multispeciality and superspeciality hospital with all the facilities available under a single roof. It has got an attached blood bank facility as well as provided with an Intensive Neonatal care unit with 24 hrs monitoring facility. The study was conducted from January 2021 to June 2021 for a period of 6 months.

Inclusion Criteria: All Emergency unbooked and booked referral cases from - Other Tertiary hospitals, District Hospitals - Area hospitals, PHC's, Private Hospitals and - Self referral cases. Patients delivered elsewhere & referred due to any complication during labour or in puerperium.

The study population was categorized into 3 groups:

1.Booked   referral

2.Unbooked referral(including self-referral)

3.Booked cases of Gandhi hospital.

Booked cases were those who had come to our antenatal clinic. Unbooked cases were those who had never attended the antenatal clinic. A detailed information regarding the age, parity, duration of pregnancy, socioeconomic ,literacy status, antenatal registration, no. of antenatal visits is gathered. The type of institution from which the referral is made, access to health care & its utilization is noted. A detailed general, systemic& obstetrical examination was done. Each case was managed according to the protocol which is provided with that particular Emergency like including the respective Specialities & Superspecialities like Surgical, Medical, Cardiology, Nephrology, Neurology, etc. and watched for its progress, duration & outcome of labour. The outcome of the mother was noted . Both mother & child have been followed up accordingly & discharged as per the patient's condition. Cases were followed up postnatally for any evidence of infection, persistence of hypertension, etc. All newborns were under the supervision of Paediatrician. All spontaneous vaginal delivery cases without any complications were discharged 24 hrs/48 hrs of delivery.

Uncomplicated Abdominal delivery patients were discharged on 6th/ 7th POD. Complicated cases depending on the nature of disease have been treated accordingly in conjunction with other Specialities like GE, Endocrinology, Cardiology, Psychiatry, Neurology and then discharged. Any maternal mortality that has occurred and its underlying cause was noted.
RESULTS

Figure-1: Incidence of cases in present study
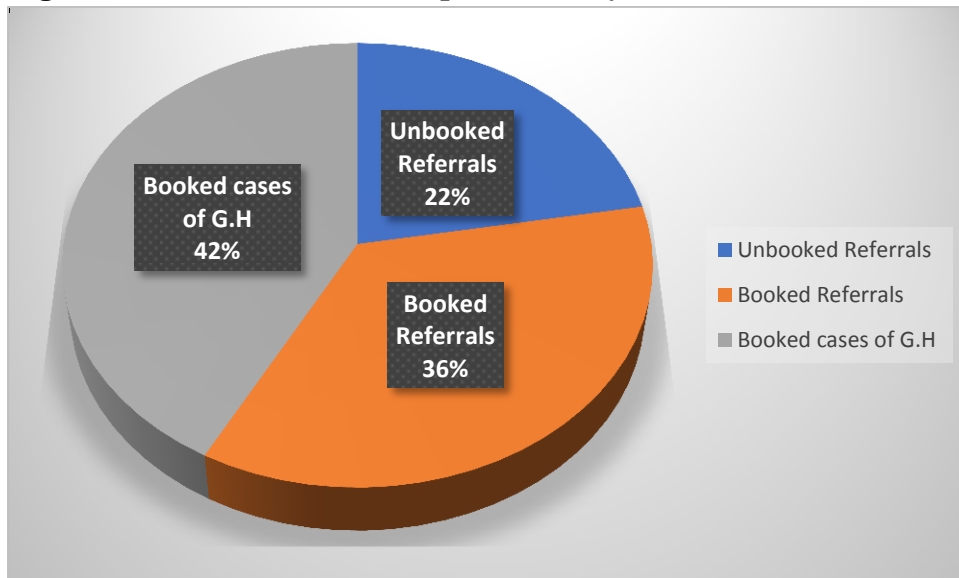
Out of total 2128 admissions done for a period of 6 months, 57.88% were unbooked cases, whereas 42.1% were booked cases. Out of total unbooked cases(1232), booked referrals from other institution were 759 accounting for 35.66%, while unbooked referrals including self-referrals were 473 accounting for 22.22%.

Table-1: Rural/Urban and literature Distribution

	Unbooked Referrals	**Booked Referrals**	**Booked cases of G.H**	**Total**
Rural Area	289(61.09%)	370(48.74%)	298(33.25%)	957(44.76%)

Urban Area	185(38.9%)	390(51.25%)	596(66.51%)	1171(54.77%)
Chi square = 84.38 P < 0.001 (Highly significant)				
Literate	152(32.13%)	331(43.6%)	358(39.95%)	841(39.5%)
Illiterate	321(67.86%)	428(56.38%)	538(60.04%)	1287(60.5%)
Chi square = 0.12 P > 0.05 (not significant)				

Most of the Unbooked Referrals (289) were from rural area accounting for 61.09%, while majority of the Booked cases (596) were from urban area- 66.51%. Booked referrals had a slightly higher incidence from urban area (390) accounting for 51.25.

Of the total Unbooked referrals, majority of them (67.86%) were illiterate. Among the Booked cases were, 60.04% were illiterate & 56.38% of booked referrals were illiterate.

Table-2: Distribution of Occupation

	Agriculture	Labourer	Skilled Worker	Employee	Un-Employee	Business
Unbooked Referrals	113 (25.85%)	188 (43.02%)	66 (15.1%)	47 (10.75%)	0	23 (5.2%)
Booked Referrals	134 (17.6%)	288 (37.94%)	119 (15.67%)	146 (19.23%)	0	72 (9.48%)
Booked cases of G.H	118 (13.16%)	216 (24.1%)	199 (22.2%)	287 (32.03%)	0	76 (8.48%)
Chi square = 94.48 P < 0.001 (Highly significant)						

Among the Unbooked referral cases,25.85% were agricultural workers.43.02% were labourers, 15.1% were skilled workers, 10.75% were employees, 5.2% were business people.

Among the Booked referrals, 17.6% were agricultures, 37.94% were labourers,15.67% were skilled workers, 19.23% were employees & 9.48% were business men.

Among the Booked cases of Gandhi hospital, 13.16% were agricultures, 24.1% were labourers, 22.2% were skilled workers, 32.03% were employees, & 8.48% were business people.

Table-4: Distance travelled and Causes for not having antenatal check-ups and delayed referral

Distance (Kms)	Number	Percentage
Upto 25	587	47.64%
26 – 50	253	20.53%
51 – 100	158	12.82%

101 – 150	139	11.28%
151 and above	95	7.71%
Total	1232	100
Causes for not having antenatal checkups and delayed referral		
Lack of Money	213	45.03%
Ignorance	187	39.53%
Transport problems	30	6.34%
Remains Undiagnosed	43	9.09%

Among all the referrals(both Booked & Unbooked Referrals), majority of them(47.64%) travelled a distance of upto 25kms,11.28%& 7.71% travelled a distance of 101-150 kms & above 151 kms respectively.

While considering the reasons among the referrals for not having antenatal checkups or delayed referrals, majority of them were due to lack of money accounting for 45.03%, 39.53% due to ignorance, and 6.34% had transport problems, remaining 9.09% had their

Table-5: Mode of Delivery

Type of Delivery	SPVD	LSCS	Forceps	Vacuum	Abortion
Unbooked Referrals	218(46.08%)	144(30.4%)	78(16.4%)	6(1.2%)	27(5.7%)
Booked Referrals	322(68.07%)	253(53.4%)	138(29.17%)	3(0.63%)	43(9.09%)
Booked cases of G.H	493(55.02%)	275(30.69%)	127(14.17%)	1(0.11%)	0
Total cases	1033(48.54%)	672(31.57%)	343(16.11%)	10(0.46%)	70(3.28%)
Chi square = 7.61 P < 0.05 (significant)					

48.54% of the total cases were vaginal deliveries. Out of these, 46.08% were unbooked referrals, 68.07% were booked referrals & 55.02% were booked cases of Gandhi hospital.

Of the total 31.57% of LSCS's, 30.4% were Unbooked referrals, 53.4% were booked referrals & 30.69% cases belonged to Gandhi hospital Booked cases.

Totally,16.11% underwent delivery by forceps, 0.46% by vacuum& 3.28% had abortions among which most of them were booked referrals & Unbooked cases.

Table-6: Birth weight of the Babies

Birth Weight (Kgs)	1 to <1.5	1.5 to <2	<2 to 2.5	2.5 to <3	3 to <3.5	>3.5
Unbooked Referrals	24 (5.07%)	38 (8.03%)	113 (23.89%)	207 (43.76%)	58 (12.26%)	33 (6.9%)
Booked Referrals	34 (4.47%)	52 (6.85%)	107 (14.09%)	207 (27.27%)	305 (4.18%)	54 (7.11%)
Booked cases of G.H	19 (2.1%)	63 (7.03%)	161 (17.9%)	284 (31.69%)	301 (33.6%)	68 (7.58%)
Total cases	77 (3.61%)	153 (7.18%)	381 (17.9%)	698 (32.8%)	664 (31.2%)	155 (7.28%)
Chi square = 1.92						

P > 0.05 (not significant)					

Total Low birth weight babies(wt. of less than 2.5kgs) were 611 accounting for 28.71%.Among them, 37% of cases were Unbooked referrals, 25.41% were Booked referrals & 26.03% were Booked cases of Gandhi hospital. 64% of the babies weighed between 2.5-3.5 kgs. Only 7.28% of the babies were weighing greater than 3.5kgs.

Table-7: Maternal Morbidity

Morbidity	Number	Percentage
Rupture Uterus	12	0.97%
Manual Removal of placenta	6	0.48%
Caesarean Hysterectomy	3	0.24%
Ectopic	22	1.78%
P.P.H	58	4.7%
Puerperal Sepsis	33	2.6%

During the 6 months study, we had 12 cases of Ruptured uterus all of which were Unbooked. Among them 5 were Booked from outside. Of the 6 cases of Retained Placenta,4 were referred from outside remaining 2 cases were delivered in our hospital. All 3 cases of Caesarean Hysterectomy& 22 cases of Ectopic were referred cases. Among the 58 cases of PPH, 49 cases were Unbooked & referred from outside. Remaining 9 cases were booked cases of Gandhi Hospital.

Table-8: Maternal Mortality

Causes	Number of Deaths	Percentage
A. Direct causes	13	81.25%
1. Toxaemia 2. Haemorrhage 3. Sepsis 4. Rupture Uterus	4 6 2 1	25% 37.6% 12.5% 6.25%
B. Indirect causes	3	18.75%
1. Heart Disease 2. Severe Anaemia 3. Lung Disease 4. Anaesthetic complications	12	6.25% 12.25%
Total Deaths	16	100%
Time Interval		
< 24hrs	7	43.75%
24hrs to 7 days	8	50
>7 days	1	6.25%

Total No. of maternal deaths during my study was 16.

Total No. of female deaths due to complications of pregnancy, childbirth or within 42 days of delivery from Puerperal causes/Total no. of Live births x 1,00.000.

MMR= 751.87 per 100,000 live births

Table-9: Perinatal Mortality

	Still Births	Early Neonatal Deaths
Unbooked Referrals(127)	52(40.94%)	75(59.05%)
Booked Referrals (73)	42(57.53%)	31(42.46%)
Booked cases of G.H(32)	11(34.37%)	21(65.6%)
Total cases (232)	105(45.25%)	127(54.74%)
Chi square value = 85.62 P < 0.001 which is highly significant		

Perinatal mortality rate(PMR):

Late Fetal deaths & early neonatal deaths weighing over 1 kg at birth/ Total no. of births weighing over 1kg at birth x 1000.

P.M.R = 232/2128 x 1000 = 109.09 per 1000 births.

P.M.R in unbooked referrals = 127/473 x 1000 = 268.49 per 1000 births.

P.M.R in booked referrals = 73/759 x 1000 = 96.17 per 1000 births.

P.M.R in booked cases of GH = 32/896 X 1000 = 35.71 per 1000 births.

Among 232 perinatal deaths,54.74% were unbooked referrals, 31.46% were booked referrals. Only 13.79% were booked cases of Gandhi hospital.

Table-9:Cause of early neonatal deaths(total-127)

Causes of Death	L.B.W	Asphyxia	R.D.S	Septicaemia	Congenital Malformation	Others
Unbooked Referrals(75)	35 (46.66%)	11 (14.66%)	6 (8%)	7 (9.33%)	4 (5.33%)	12 (16%)
Booked Referrals (31)	8 25.8%)	4 (12.9%)	3 (9.67%)	2 (6.45%)	3 (9.67%)	11 (35.48%)
Booked cases of G.H (21)	4 (19.04)	6 (28.57%)	3 (14.28%)	2 (0.95%)	2 (0.95%)	4 (19.04%)
Total cases (127)	47 (37%)	21 ((16.5%)	12 (9.4%)	11 (8.66%)	9 (7.08%)	27 (21.25%)

Total Early Neonatal Deaths i.e. within 7 days = 127

Out of 127 deaths, 75 were unbooked referrals, 31 were booked referrals & remaining 21 were booked cases of Gandhi hospital.

Early neonatal death rate = 127/2128 x 1000 = 59.68 per 1000 births. ENDR in unbooked referrals = 75/2128 x 1000 = 35.24 per 1000 births. ENDR in booked referrals = 31/2128 x 1000 = 14.56 per 1000 births. ENDR in booked cases of GH = 21/2128 x 1000 = 9.86 per 1000 births.

DISCUSSION

In this Prospective Study conducted at the Emergency Department of Obstetrics at Gandhi hospital, various Emergency Unbooked admissions that were admitted have been analysed &

their maternal and perinatal outcome was compared to the booked cases of Gandhi hospital. The present study was conducted to analyze the various emergency admissions referred to Gandhi hospital & to identify the various factors responsible for not seeking health care/ delay in seeking help as well as to compare the outcome with booked cases. Also to implement any intervention that improves the antenatal care, thereby reducing the Perinatal & Maternal morbidity & mortality.

Most of the Admissions into Gandhi Hospital showed increased incidence among the Unbooked cases(referred & self-referral). Because Gandhi Hospital being a tertiary care centre with all the specialties and super specialties being under a single roof, most of the cases with medical & obstetrical emergencies are referred to here from PHC's, CHC's, District hospitals & other tertiary centers. We have demonstrated that the outcome of Emergency Unbooked cases in labour room is not as well as booked cases & it appears that various socio-economic factors have got an indirect influence on pregnancy outcome by modifying the quantum of antenatal care which is similar to a study conducted at the Dept. of OBG, Lagos state university teaching hospital, Ikeja, South Nigeria .[9]

The **incidence** of booked cases at GH was 42.1%& that of the Unbooked cases was 57.88% accounting for total of 2128 admissions at GH over a period of 6 months while study done by Riffat Jaleel, et al showed almost a similar incidence of 47.2% of Unbooked cases, but a total of only 735 women for a period of 12 months. Booked & Unbooked differed by distance travelled to hospital. In my study at GH, where most of the Booked & Unbooked cases travelled from a near distance except for the referrals which travelled a far off distance. This is in contrast to the study done by Pokharel HP et al which showed that booked cases travelled from near distance while more than half of Unbooked cases came from far off place.[10]

Majority of Booked cases were from urban area & only 36.7% of rural population had prior antenatal visits in a study conducted by Dr.Ruchi Karla at Bhopal India.[11] Considering the Literacy status, both Booked & Unbooked cases had lower literacy rates but the percentage was more higher in Unbooked cases compared to booked cases. This shows that Education is a crucial element in economic & socio-development by increasing the awareness that there will be better utilization of health care facilities .

The study at GH showed most of the booked cases of GH were employees, while among the Booked referrals & Unbooked cases, most of them were labourers .This shows as explained earlier that lack of awareness, transport problems, lack of money, loss of daily wages were the major causes among the low socioeconomic people for not seeking proper antenatal care. In a study done at Lagos, South Nigeria, 22.3% were unskilled workers among Unbooked cases while majority of the booked cases were semi-professional & skilled workers. [12]

Most of the cases referred to GH/ Unbooked self-referral cases had certain reasons for not seeking antenatal care & also for delayed referral. Majority of them had transport problems & lack of money as the main reasons. In Mitra's et al study, the most common cause for delayed referral was proper intervention was not available at their centre which is also similar to a study done by Dr.Ruchikarla .[11]

Regarding the mode of delivery, majority of the Booked & Unbooked cases delivered by SPVD, but the incidence is more in booked cases (55.02%).Majority of the Unbooked cases

underwent Emergency LSCS compared to booked cases. In a study at Lagos, South Nigeria, 27.7% of unbooked cases delivered by Emergency LSCS compared to 12.4% of booked cases .

Likewise, 52.6% of unbooked cases had vaginal delivery while 67.6% of booked cases underwent vaginal delivery .[12] This high rate of Emergency LSCS among unbooked cases was due to delayed referrals from various hospitals in the late stage of labour with some complications.

In this study, 28.71% were LBW babies. In India, the prevalence is 33%.Among the LBW babies, 62.41% were unbooked. This was similar to a study done at Bhopal, M.P. by Dr. Ruchikarla[11,13] which showed the incidence of LBW in booked cases was 26.3% & 36.75% in unbooked cases. This high rate was due to malnutrition, unregulated fertility, infections, hard work during the pregnancy among the low socioeconomic people. LBW is the single most important factor determining the survival chances of child. With proper antenatal care, most of the factors responsible for LBW could be avoided.

Most of the cases referred from outside/ unbooked cases were PPH followed by sepsis & hypertension leading to increased maternal morbidity, thus the need for blood transfusions & higher antibiotics was relatively high among the unbooked cases. Other causes included ectopic gestation, thus the need for Laparotomy, Rupture Uterus, Manual removal of Placenta, etc. This was consistent with other studies conducted by Riffat Jaleel et al, at Karachi, Chaitalli Dattaray et al at Kolkata, West Bengal & Vidyadhar B Bangal et al[15,16,17] at Maharashtra which also showed PPH & Sepsis were the major causes for maternal morbidity followed by hypertension.

The total No. of deaths were 16 among 2,128 admissions & none of them were unbooked, the most common cause being PPH. This was consistent with a study done at Nepal which had 16 maternal deaths of 2128 admissions(none of them being booked). Another study done at Karachi showed only 2 maternal deaths among 735 women which is inconsistent. Other studies done at Lagos, Karachi[18,19] (also showed similar results which were consistent with that done at GH, PPH being the commonest cause in them. Most of the deaths in my study had the admission- death interval of <24 hrs which shows that delayed referral had an adverse effect on the outcome of both mother & the baby.

The Perinatal mortality in my study was 109.09 per 1000 live births. Among them booked cases accounted for only 13.79% of all deaths & majority of them were booked cases. Five major causes of early neonatal deaths in the order of frequency were LBW, Asphyxia, R.D.S, Septicaemia & Congenital malformations. Most of the LBW babies were unbooked which clearly shows that most of the Perinatal deaths are preventable by improving the antenatal care. Similar results have been observed at studies done at Nepal, Karachi & Lagos which also revealed that Perinatal mortality is 3 times higher in Unbooked cases compared to Booked cases, the most common cause being LBW. The leading causes of Maternal and Perinatal deaths in this study is similar to that conducted by Vidhyadhar B Bangal and most of them are preventable.[12,15,16,17,18]

A problem with the use of Unbooked cases who it is assumed had no antenatal care, is the epidemiologic fallacy stemming from the fact that their denominator is unknown. Those with

complications are more likely to appear as booked cases, while normal deliveries occur at home. Through all these studies runs a pattern in common with this research namely inadequacy of antenatal care. It seems that if this care is provided even to a so called "not so satisfactory" socio-demographic group of women, their Perinatal & Neonatal outcome will improve.

CONCLUSION

Obstetric Emergencies have a direct relationship with the quality of antenatal checkups& are the leading causes of maternal morbidity & mortality particularly in developing countries. The Major indications for Admission/ Referral cases into Gandhi hospital in my study were Hypertensive disorders of pregnancy, Anaemia, CRHD, APH, PPH etc. The Mean duration of hospital stay for most of them were 8-9 days, while a $1/3^{rd}$ of the patients had a longer duration of stay of 15-20 days. In our study, most of the unbooked cases referred from other centers were from the rural areas, illiterate people and most of them were labourers & agricultures which indicates that higher socioeconomic people have higher antenatal booking status which further improves the outcome of the mother & baby due to better supervision. Among all the cases of referrals, some of them travelled a distance of >25kms which showed increased incidence of complications due to time delay in transportation which clearly demonstrates that quick transfer of patients to higher centres reduces the Maternal & Perinatal morbidity and mortality. The incidence of Emergency LSCS, LBW babies and the maternal mortality rate was higher among the Unbooked cases which shows a direct relationship with all the above factors. Finally, to Conclude, Poor utilization of prenatal care is associated with increased maternal & perinatal morbidity & mortality which is also because of the lack of experienced personnel in the peripheries like Obstetrician, Anaesthetist and other Speciality doctors with a lack of blood bank facility.

 Further, services utilization can be improved by fairly equipping peripheral health utilization and strengthening of health services, reduction in poverty, female literacy, establishing early referrals and transport facility for Obstetric Emergencies to higher health care centres and improving health awareness will help in making pregnancy safe.

REFERENCES

1. introduction in: Jafarey S, Ahsan A, Kamal I,eds. Manual for emergency Obstetric care.1st edition. NCMNH/UNICEF; 2003 III-IV.
2. Ndiweni Q, Buchmann EJ: Unbooked Mothers and their babies- What causes the poor outcomes? SAfr Med J.1998 Feb;88:192'195-6'199.
3. Bang R A, Bang A T, Reddy M H, Deshmukh M D, Baitule S B, Fillipe V. Maternal morbidity during labour and the puerperium in rural homes and the need for medical attention: A prospective observational study in Gadchiroli, India. Br J Obstet Gynaecol 2004; 111: 231-238.
4. Brace V, Penney G, HallM. Quantifying severe maternal morbidity: a Scottish study.Br J Obstet Gynaecol May 2004; 111:481-484.
5. Drife J. Maternal mortality. In:Leuslay DM, Baker PN, editors. Obstetrics & Gynaecology and Evidence –Based Text for MRCOG. 1st edition. Arnold Publishers; 2004.pp. 196—204.

6. Haines A, Cassels A. Can the Millenium development goals be attained? British Medical Journal. 2004; 329(7462): 394—397.

7. Callaghan WM, MacKay AP, and Berg CJ: Identification of severe maternal morbidity during delivery Hospitalizations, United States 1991-2003.AmJ Obstet Gynaecol: 2008: 199:133.e l, 2008.

8. Zwart JJ Richters JM, Ory F, et al: Severe maternal morbidity during pregnancy, delivery & puerperium in the Netherlands: A nationwide population based study of 371,000 pregnancies. BJOG :2008: 115(7):842.

9. Lulu A, Babatunde A. The unbooked mother at a University Teaching Hospital. Ann Saudi Med 1998; 18(3): 269.

10. Pokharel HP, Lama GJ, Banerjee B, Paudel LS, Pokharel PK. Maternal and perinatal outcome among the booked and unbooked pregnancies from catchment area of BP Koirala Institute of health sciences, Nepal. Kathmandu Univ Med J (KUMJ) 2007 Apr-Jun; 5(2):173-6.

11. Bansal A, Kalra R. Feto maternal outcome in obstructed labor: a tertiary centre study. International Journal of Reproduction, Contraception, Obstetrics and Gynecology.2019; 8(6):2500.

12. Agboghoroma OC, Emuveyan EE. Maternal Mortality in Lagos, Nigeria: aten – year review (1986—1995) Nigerian Quarterly Journal of Hospital Medicine.1997; 10:230—232.

13. Ziyo FY, Matly FA, Mehemd GM, Dofany EM. Relation between prenatal outcome and pregnancy at Benghazi. Sudanesejournal of public health 2009; 4(4):403-10.

14. Fikree F F, Ali T, Durocher J M, Rahbar M H. Health service utilization for perceived postpartum morbidity among poor women living in Karachi. Social Science and Medicine 2004; 59(4): 681-694.

15. R.N.Qureshi , S.Jaleel, R. Hamid, S.F. Lakha :Maternal Deaths in a Developing Country: a Study from the Aga Khan University Hospital, Karachi, Pakistan 1988-1999: Journal Of Pakistan Medical Association: March 2001, Volume 51, Issue 3

16. Dattaray C, Mandal D, Shankar U, Bhattacharya P, Mandal S. Obstetric patients requiring high-dependency unit admission in a tertiary referral centre. Int J Crit Illn Inj Sci. 2013 Jan;3(1):31-5.

17. Bangal, Vidyadhar & Giri, Purushottam & Garg, Ruchika. Maternal Mortality at a Tertiary Care Teaching Hospital of Rural India: A Retrospective Study. Int J Biol Med Res. :2011: 2.

18. Oladapo O T,Sule-Odu A O,Olatunji A O, Daniel O J.”Near Miss” obstetric events and maternal deaths in Sagamu, Nigeria: a retrospective study. Repod health 2005; 2: 9.

19. Anderson J M. Etches D. Prevention and management of postpartum haemorrhage. AmFam Physicians 2007; 75(6): 875-882.