

Utilization of Safe Motherhood Services in a Tertiary Referral Hospital in Western Region of Nepal

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ABSTRACT

Introduction: It has been two decades Nepal has initiated safe motherhood programme in 1998, since then there has been significant reduction in maternal mortality and improvement in newborn care. Western Regional Hospital is the government referral hospital in western Nepal and has large volume of patients utilizing the safe motherhood services. This study is a review of one year of different safe motherhood services provided by this hospital.

Methods: The data from the hospital records section from Asoj 2073 (September - October 2016) to Bhadra 2074 (August - September 2017) has been extracted from the hospital record section and analyzed in terms to different services like antenatal visits, vaginal delivery, caesarean section, incomplete abortion and ectopic pregnancy. The obtained data was entered and analyzed using Microsoft Excel.

Results: Total of 42,798 patients had utilized the safe motherhood services during the study periods, majority of them being antenatal visits followed by vaginal and caesarean delivery. Some of the vaginal deliveries 490 (5.3%) were complicated which included vacuum delivery, intrauterine fetal death, twins and breech delivery. Among the total delivery 2316 (24.8%) were caesarean sections, of which more than halves were due to emergency indications.

Conclusions: The safe motherhood program in Western Regional Hospital has positive impact on the maternal health in this region and further expansion of the services and facilities are recommended in coming days in scenario of increasing number of patients.

Keywords: *safe motherhood; serviceutilization; maternal mortality; infant mortality.*

INTRODUCTION

In 1987, concept of safe motherhood was initiated by different international agencies forming, Safe Motherhood Inter-Agency Group with the aim to decrease maternal and infant mortality rates in developing countries due to pregnancy and childbirth.¹ The review also summarized the considerable statistics regarding the pregnancy related mortality in previous 10 years that around six million women died due to complications of pregnancy and childbirth.²

Nepal being a co signatory of this conference has given priority to reproductive health and integrated it as a core component of Second Long Term Plan by starting Safe Motherhood program in 1998.³ After initiation of safe motherhood program, Nepal has improved significantly in maternal and newborn care, decreasing the maternal mortality ratio by 71% from about 901 deaths per 100000 live births in 1990 to 248 in 2015.⁴ This study is carried out to analyze the services provided by a tertiary referral hospital in western region of Nepal in terms of maternal and newborn health in that region.

METHODS

This is a retrospective descriptive analysis. The study was carried out retrieving data from Asoj 2073 (September - October 2016) to Bhadra 2074 (August - September 2017) available in the record section of Western Regional Hospital, Ramghat, Kaski of women attending the hospital for safe motherhood services. The data was collected from patients' records and maternal mortality statistics.

Data of patients who underwent Ante Natal Care (ANC) visits, post abortion care, vaginal delivery, Caesarean section and laparotomy for ectopic pregnancy were included. Various gynecological and operative procedures and the number of total deliveries during the study period were also used. Due to the limitations of retrospective data collection some other information was not possible to include in our study. The data was entered in Microsoft Excel and analyzed, statistical mean, standard deviation (SD) and proportion were calculated. Patients with Medical and Gynecological causes and those beyond 42 days' post-partum were excluded from study. Ethical approval was taken from Pokhara Academy of Health Sciences.

RESULTS

Total of 42,798 patients utilized the safe motherhood services during the study period. Among them, 33,468 (78.2%) came for regular ANC visits (Figure 1).

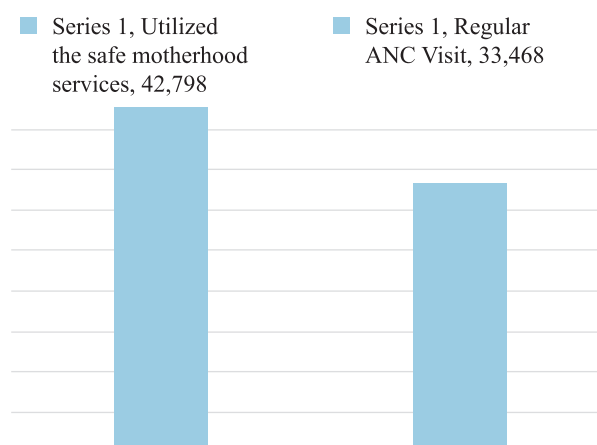


Figure 1: Service utilization by women under safe motherhood program

Table 2: Descriptive Statistics

Components	N	Mean	Std. Deviation	Skewness	Kurtosis
Normal vaginal delivery	6,242	520.16	75.822	.167	-.740
Complicated vaginal delivery	490	40.83	6.873	1.006	.090
Caesarean section	2,316	193.00	24.881	1.092	1.081
Ectopic pregnancy	43	3.58	1.729	-.864	.472
Incomplete abortion	239	19.91	7.513	1.318	.492
Elective Cs	1,299	108.25	18.704	-.172	-.151
Emergency Cs	1,017	84.75	12.856	.805	-.593

Components	N	Mean	Std. Deviation	Skewness	Kurtosis
Vacuum assisted delivery	244	20.33	4.960	.416	-.879
Breech delivery	89	7.41	3.088	.530	.476
Twindelivery	41	3.41	1.781	.164	-1.248
IUFD	116	9.66	1.922	-.259	-.111

Among them, who came for regular ANC visit, outcome of 9,330 (27.9%) pregnancies were recorded at the WRH who returned back to seek services, resulting into 6,242 (66.9%) into normal vaginal delivery, 2,316 (24.8%) Caesarean section, 490 (5.3%) as complicated vaginal delivery, 239 (2.6%) incomplete abortion and 43 (0.46%) ectopic pregnancy (Figure 3).

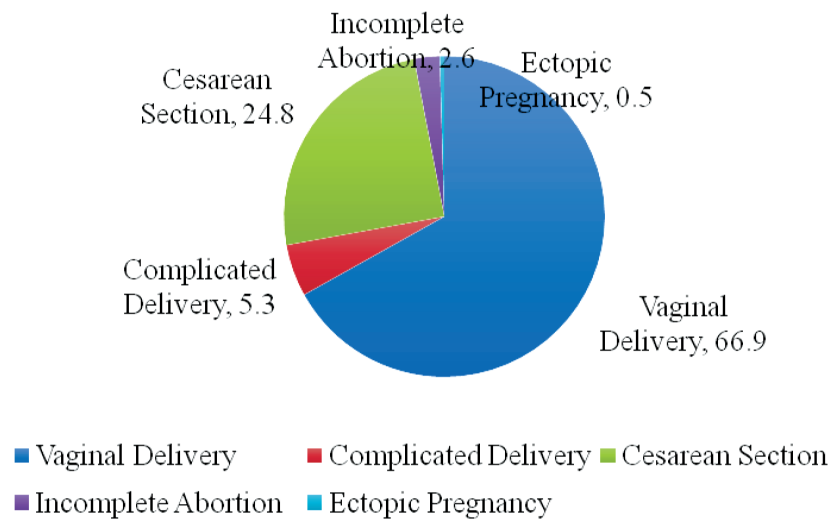


Figure 2: Outcome of pregnancies in percentage presented at WRH

In-spite of the fluctuation in number of total deliveries by month, a very few variations in the complicated delivery was observed (Figure 3).

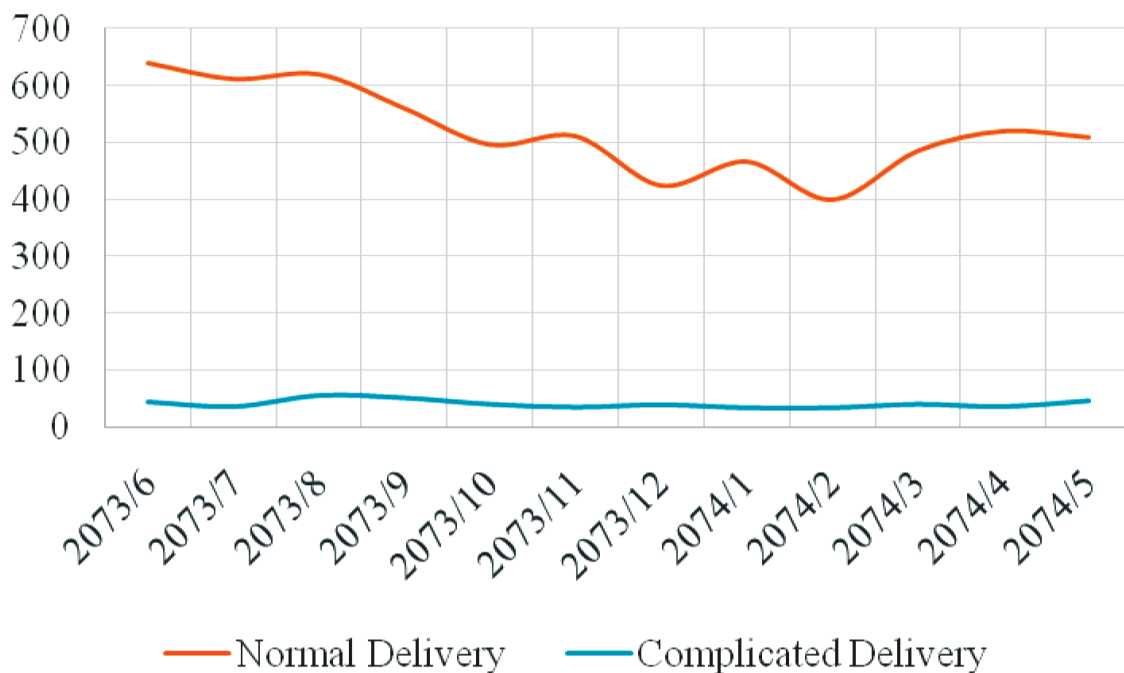


Figure 3: Normal and complicated deliveries by month

Among the total 490 complicated deliveries included vacuum assisted delivery 244 (49.8%), breech delivery 89 (18.2%), delivery of twins 41 (8.4%) was the least common and intrauterine fetal death 116 (23.7%) (Figure 5). However, the frequency of VAD is higher than incidences other type of complicated delivery (Figure 5).

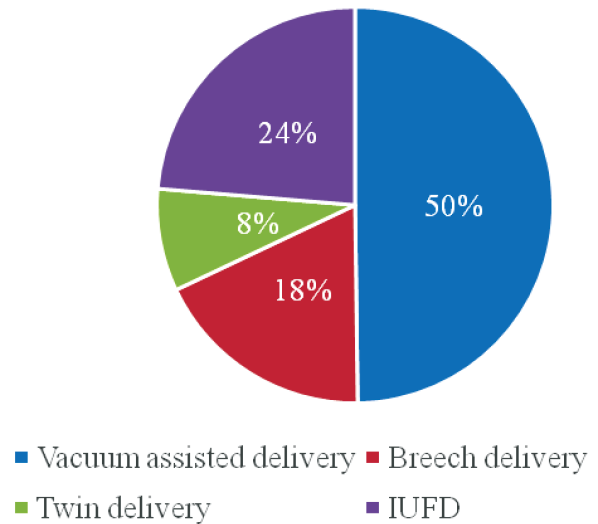


Figure 4: Results of complicated deliveries.

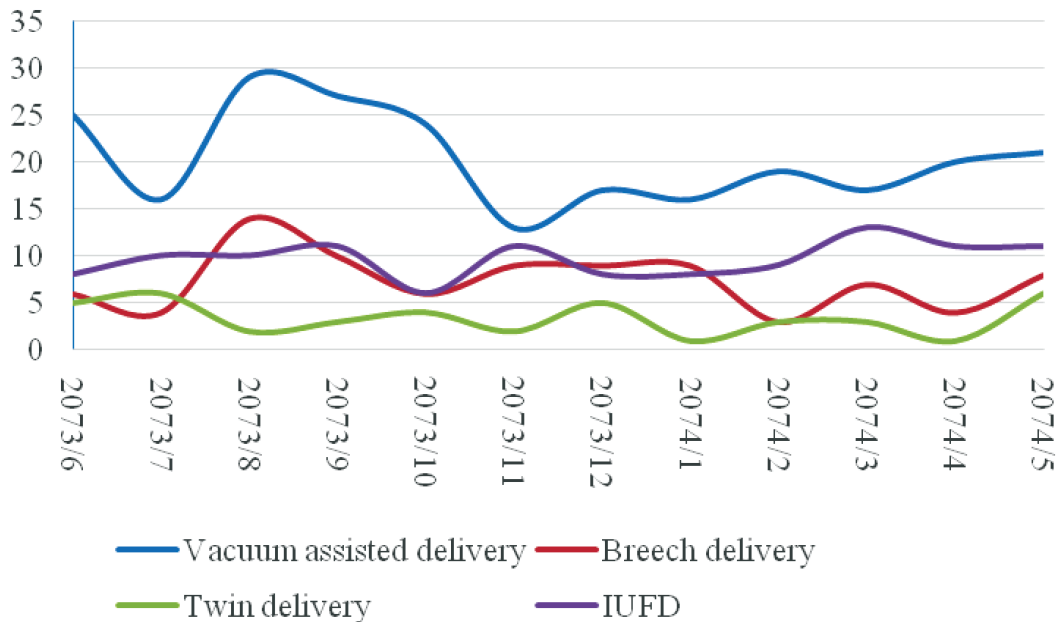


Figure 5: Complicated deliveries by month

A total of 2,316 (24.8%) of all cases underwent caesarean section out of which 1,299 (56.1%) choose to go for it while 1,017 (43.9%) caesarean sections were conducted due to various indications in emergency. The monthly caesarean section data shows that the elective Cs were conducted more than the caesarean section were required to be done due to emergency indications (Figure 6).

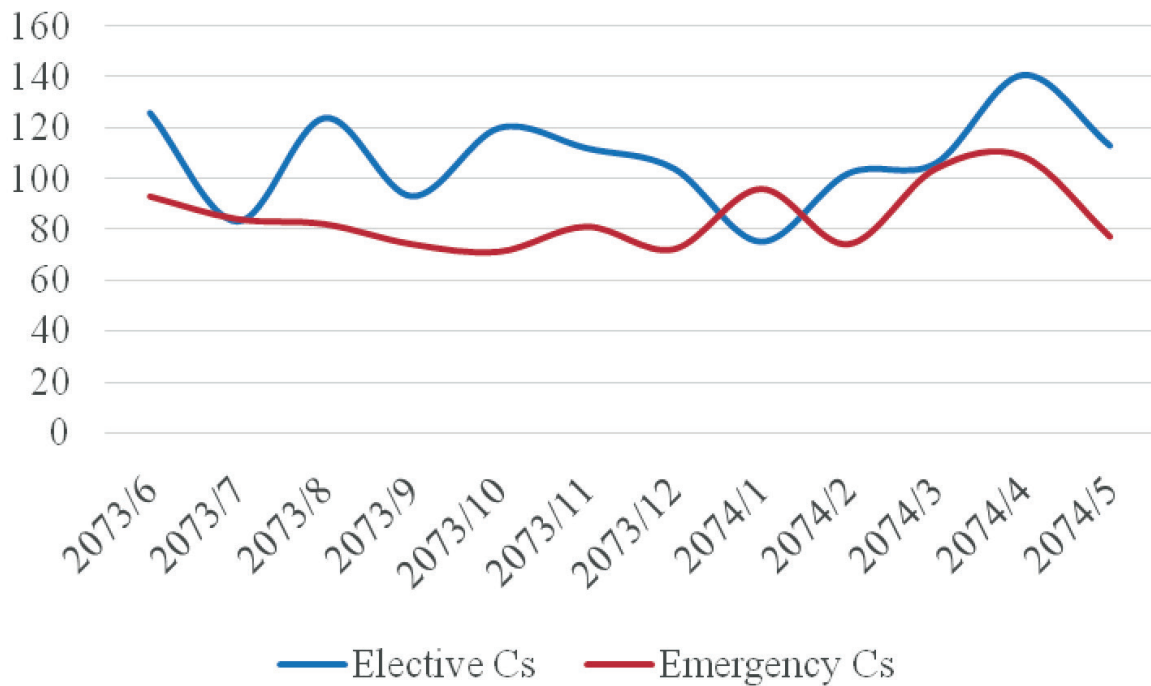


Figure 6: Elective and emergency caesarean sections conducted by month

At the same time, 239 (2.6%) underwent Manual Vacuum Aspiration for incomplete abortion and 43 (0.46%) were ectopic pregnancy that underwent laparotomy. The significant point to note is there was no maternal mortality during the study of period of one year.

DISCUSSION

Maternal mortality, newborn deaths and pregnancy related complications are one of the preventable causes of deaths with some interventions in minimal or little cost even in poor resource settings.⁶ The three delays: delay in seeking care, delay in reaching care and delay in receiving care are the major hurdles in achieving the standard care by pregnant women in most of the developing and least developing countries.⁷ After the safe motherhood initiatives began globally on 1987 and reduction in maternal mortality became one of the priority points for millennium development goals, there has been significant workup in terms of policy and action to overcome it, and there has been substantial decline in maternal mortality rate.⁸

Nepal has formulated national reproductive health strategy along with safe motherhood program on 1998 to improve the maternal and newborn care in our

settings. Since then various other policies and scheme like: National safe abortion policy 2003, Maternal incentive scheme 2005, National policy on skill birth attendants 2006, and National free delivery policy 2009 has been implemented to aid this programme.⁵

A woman can undergo normal delivery as well as caesarean section if indicated free of cost in the healthcare institution accredited by government of Nepal along with cash incentives for Antenatal Care visits and institutional delivery.⁹ For significant accomplishment towards achieving the millennium development goals, Nepal was selected out of 49 least developed least developed nations by United Nations to receive an award in 2010.⁴

Western Regional Hospital, now called as Pokhara Academy of Health Sciences is the referral government hospital of western hilly region of Nepal. It has wide catchment area of more than ten districts and most of the complicated obstetric case are referred to this hospital from the nearby peripheral health institution.

Our study showed the large volume of patients took the safe motherhood service from the Western Regional Hospital. Most of them have taken antenatal care services. It has been found that more number of

antenatal visits is found to have decreased perinatal mortality and preterm deliveries in developing countries.¹⁰ The number of women using antenatal care services is increasing in Nepal, but still only half of the women completes the recommended four antenatal visits.¹¹

Out of total pregnant women, 74.40% underwent normal vaginal delivery during the study period. Few of them 7.30% are complicated vaginal deliveries like 18.10% breech delivery, 47.8% vacuum delivery, 10.40% twin delivery and 23.70% Intrauterine Fetal Demise (IUFD). Vacuum delivery is the major one among them. A study conducted by Lamichhane et.al. in Patan Hospital has concluded that there has been significant decrease in instrumental vaginal delivery and increasing trends of caesarean section in recent years.¹²

The percentage of Caesarean section in Western Regional Hospital during the study period is 25.60% which is quite lower than other healthcare institutions of Nepal where the rates of Caesarean delivery is as high as 81%.¹⁴ Similarly in our study the elective Caesarean section is slightly higher than emergency Caesarean section in contrast to other study conducted in similar settings in Nepal, where the rates of emergency Caesarean were significantly higher.^{14,15} Since this study was conducted in one hospital, so these results cannot be used for generalization of results in the whole country. As this study uses convenience sampling, there could have been selection bias in selection of participants. The main source of data in the study is from the hospitals records so there can be reporting bias in this study. To minimize such bias in the study, we have reviewed the results with peers and large sample size has also been taken.

Western Regional Hospital being the government referral hospital in Western Region of Nepal has high volume of patients including those taking services under the safe motherhood program. The authors would like to recommend for the increase in infrastructure and manpower so that more number of patients would be benefited from the service in future. Also if such safe motherhood programs could be

extended to the private health institutions, maternal and newborn care would much improve and it helps the government to achieve sustainable development goals of reducing maternal mortality rate significantly by 2030.

CONCLUSION

Safe motherhood program is one of the noteworthy initiations of government of Nepal that is helping to reduce the maternal mortality and improve the quality of newborn care considerably in last two decades. Western Regional Hospital has provided the quality services to the women of this region with zero maternal mortality during the study period. Further expansion of services would help for better care and more number of patients would be benefitted in coming days.

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