

## ABSTRACT

Neonatal mortality accounts for 41% of all global deaths among children below five years and it is estimated that approximately 15% of expected births worldwide result in life-threatening complications during pregnancy, delivery, or the postpartum period. Obstetrics care remains a challenge in developing countries. Siaya County intervened by conducting training to providers with the aim of improving outcomes. This intervention had not been evaluated in terms of both neonatal and maternal outcomes. A retrospective cross sectional study design was used to evaluate the emergency obstetric and neonatal care services five sub-county hospitals in Siaya County and Siaya county referral hospital. The aims were to determine both the prevalence of maternal and neonatal outcomes over a period of 4 years, compare the maternal and neonatal outcomes across sub-county hospitals, assess the effect of EmONC training on the maternal and neonatal outcomes and identify challenges to the effective delivery of EmONC services. The data on maternal and neonatal outcomes were collected by extraction from DHIS (District Health Information System) between July 2012 and June 2016. The data were managed and analyzed using SPSS IBM Version 20. Univariate analysis was used to describe socio demographic, neonatal and maternal outcomes. Continuous variables and effect factors were presented as means and standard deviation while categorical and ordinal data were presented as percentages, or frequency distributions. 95% confidence intervals were used as a measure of precision on these means and percentages. The study showed that the leading maternal outcomes over the 4 years are CS (48%), PPH (13%), Breech of delivery 12%, obstructed labor 11% and others were below 10%. However, neonatal outcomes were below 5% for all the outcomes. Across the sub-counties, Alego Usonga had higher maternal: outcomes maternal deaths, 43.2%, PPH 37.2%, eclampsia 38% save for Uterine rupture where Bondo had 61%. And neonatal outcomes: Neonatal deaths (57.1%), FSBs (36.31%) and MSBs (36.1%). Also, there was no statistically significant positive difference in the prevalence of maternal and neonatal outcomes before and after EmONC training ( $P > 0.05$ ). However, the negative difference was observed on post-partum hemorrhage and caesarian section. ( $P= 0.0003, 0.029$ ). The leading maternal outcomes are CS, PPH, breech delivery and obstructed labor. However, the neonatal outcomes remain very low for fresh still birth, macerated still birth an Across the sub-counties Alego Usonga had a higher prevalence of maternal deaths, PPH, Caesarian sections, referrals and eclampsia with similar trends of higher neonatal outcomes in Alego Usonga: live births, FSBs, MSBs and Neonatal deaths. EmONC has no effect on maternal and neonatal outcomes. The study provides evidence that PPH and CS increased after undertaking EmONC training. I therefore recommend that the ministry of health (national and county) needs to establish mechanisms of reinforcing the guidelines for EmONC in Siaya County with specific targets on management of post-partum hemorrhage and compliance with use of partograph to avert many cases of obstructed labor and also develop a monitoring and evaluation tool, to identify the predominant outcomes with specific consideration of Alego Usonga sub-county. Further studies to evaluate the independent variables are also recommended.