Adherence level of Health care Providers to first visit antenatal care guideline and its effect on perinatal outcome in Tigray public Health institutions, 2017/18: Cohort study

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Abstract

Background: Antenatal care is one of the medical services delivered to pregnant women for the safety of the mother and the neonate. Guidelines are developed to ensure quality, uniformity and consistency of care for clients. One of the guidelines is focused antenatal care. Despite this fact, there is a paucity of information regarding the adherence of health professionals in the implementation of the guidelines and its effect on the perinatal outcomes.

Objective: To assess adherence level of health care providers to first visit antenatal care guidelines and its effect on perinatal outcomes among mothers in Tigray Public health institutions in 2017/18.

Methods: Cohort study design was employed with sample size of 1545. Among the participants 501(496 with complete follow up) were recruited to exposed groups and 1044 for non-exposed groups. The ratio of exposed to non-exposed group was 1:2. In the selection of study sites simple random sampling method was used but to select study participants consecutive sampling technique was employed. Women with full adherence to the first antenatal guideline were considered as exposed group, whereas those with incomplete adherence were considered as non- exposed group. It was assumed that the risk of complication among the non-exposed group was twice as that of the exposed group. Data was entered to Epi data version 3.51 and exported to SPSS version 20 for further analysis. Binary logistic regression was employed to determine the associated factors and multivariable analysis was done to control the confounding factors and significance was declared at CI of 95% and p-value of <0.05. Relative risk was used to express the association and effect of adherence on the perinatal outcome.

Result: Overall, the level of complete adherence to antenatal care guideline was 32.2% .The risks of antenatal, intranatal and neonatal complication was 21%, 41.3% and 26.8% respectively. The risk of maternal and neonatal complication is higher in non-exposed groups, pregnancy induced hypertension and postpartum hemorrhage risks were 1.6%:6.2% and 2.6%:4.3% among exposed and non-exposed groups and a neonatal complication of low birth weight and preterm labor was 5.8%:8.2% and 6.7%:8% among exposed and non-exposed groups respectively. Effect of complete adherence was found to be significant in reducing maternal and neonatal complications. Neonatal

complications, anemia, postpartum hemorrhage and early neonatal death was reduced by 40% among the women with complete adherence, maternal sepsis and neonatal sepsis were reduced by 60% among the exposed groups and pregnancy induced hypertension was reduced by about 70% in women with complete adherence.

Conclusion and recommendations: Overall providers' complete adherence to antenatal care guideline at first visit influences both maternal and neonatal outcomes. On average the risks of developing antenatal, intranatal and post natal complications were reduced by almost 50% among the exposed groups. The Federal Ministry of Health and teaching institutions should capacitate their staff to strictly adhere to the implementation of the guidelines

Full Text

Due to technical limitations, full-text HTML conversion of this manuscript could not be completed.

However, the manuscript can be downloaded and accessed as a PDF.

Figures

Figure 1

Postnatal follow up women's who gave birth in Tigray public health institutions

Figure 2

Type of health facility where women's gave birth in Tigray public health institutions