**Factors associated with inappropriate blood transfusion among obstetric patients at Moi Teaching and Referral Hospital, Eldoret Kenya**

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Abstract

**Objectives**: To determine the blood transfusion rate, identify the indications for blood transfusion and assess the appropriateness of  blood transfusion among obstetric patients at Moi Teaching and Referral Hospital, (MTRH) Eldoret.

**Methods**: This was a hospital based cross-sectional study. Pregnant women from 28 weeks of gestation to 6 weeks postpartum, who  received transfusion of blood and blood products, were included in the study. A total of 228 participants were enrolled in the study.

**Results**: The blood transfusion rate among obstetric patients at Moi Teaching and Referral Hospital was 3.82%. Obstetric hemorrhage  accounted for 72% of all indications for transfusion of blood and blood products, while anemia in pregnancy explained 28% of indications.  The commonest indication for transfusion of blood and blood products was uterine atony at 34.2%, followed by genital tract  trauma at 14.5% and anemia in pregnancy at 14.0%. *Postpartum anemia* and retained placenta accounted for 13.2% and 11.4%  respectively. HELLP syndrome (6.1%), placental abruption (4.8%), secondary post-partum haemorrhage (3.1%), placenta Previa (2.2%) and  uterine rupture (1.8%) accounted for the remainder of the cases. Overall, 37.3% of blood transfusions were inappropriate, with pre- transfusion hemoglobin level and referral status being significantly associated.

**Conclusions**: The blood transfusion rate among obstetric  patients at Moi Teaching and Referral Hospital was 3.82%. Uterine atony was the most common obstetric indication for blood transfusion  at 34.2%. Only 37.3% of blood transfusions were inappropriate as per the Kenya National Blood Transfusion Services (KNBTS) blood  transfusion guidelines. Patients who had been referred from other facilities and those with a pretransfusion hemoglobin level above 7g/ dL were more likely to receive an inappropriate blood transfusion.