Pilot of Single Use Obstetrical Emergency Medical Kits to Reduce Maternal Mortality

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BACKGROUND: Maternal mortality is the leading cause of death among women of childbearing age in Kenya. Examining the delays that contribute to preventable deaths, we developed an intervention to reduce the delay in receiving appropriate emergency obstetrical care at Moi Teaching and Referral Hospital. We describe the experience at a single facility regarding single-use emergency medication kits to treat obstetric emergencies in a resource-poor setting.

METHODS: A retrospective study was conducted between October 2009 and October 2010 using data from the medical records of all patients treated with a single-use obstetric emergency medical kit (E-kit) during admission at the Riley Mother and Baby Hospital Wing, Eldoret, Kenya. Descriptive analyses were performed to quantify proportions of emergencies treated using E-kits in the first year of implementation. Summary statistics regarding maternal mortality from October 2008 to October 2010 were also retrieved to evaluate differences in the maternal mortality rates in the year of E-kit implementation and the year preceding implementation in order to estimate maternal mortalities averted with E-kit implementation.

RESULTS: In the first year of implementation, 192 patients were treated using E-kits. Overall, 144 kits were used for treating postpartum hemorrhage, 52 for treating severe pre-eclampsia/eclampsia, and 1 for treating cardiopulmonary shock. When we reviewed the causes of death before and after E-kit implementation, we found substantial differences in the distribution of causes of death. In the year preceding E-kit implementation, hemorrhage accounted for 51% (N=14/27) of maternal deaths. In the year after E-kit implementation, deaths from hemorrhage decreased to 31% (N= 6/19). There was a 30% reduction in maternal mortality ratio with E-kit implementation; however, results did not reach statistical significance.

CONCLUSION: The results indicate that single-use E-kits may help to achieve a significant reduction in hospital rates of maternal mortality.