A Randomized Controlled Trial to Assess the Effectiveness of Multimodal Prophylactic Uterotonics in Patients Undergoing Non-Elective Cesarean Sections after a Trial of Labor

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Continuous variables will be analyzed using a fishers exact t-test (i.e. hemoglobin value). Categorical variables will be compared using a chi square analysis (i.e. need for additional uterotonics). Multiple logistic regression will be used to model the relationship between the group assignment (methylergonovine vs placebo) and the need for additional uterotonic agents while controlling for potential confounders. $P < .05$ will be considered statistically significant.

Provide the rationale or power analysis to support the number of subjects proposed to complete this study. Preliminary data demonstrated 42% of laboring patients requiring a cesarean section at the University of Iowa over the past 12 months required additional uterotonics at delivery in addition to the standard oxytocin infusion. To detect a 2-fold decrease in the need for additional uterotonics (42% vs 21%) with a type 1 error of 5% and power of 80%, a sample size of 76 patients per group will be necessary. To account for missing information (i.e. failure to document uterine tone, failure to document in quantitative blood loss in the medical record), we plan to recruit 80patients per group.