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**Comparison between vaginal misoprostol and intravenous oxytocin in induction of labor at
Muhimbili national hospital, Dar es Salaam, Tanzania
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Objective: To compare the safety, efficacy and cost effectiveness of vaginal misoprostol and intravenous oxytocin in induction of labor.

Design: Randomized trial.

Setting: Labor ward at Muhimbili National Hospital (MNH), Dar es Salaam Tanzania.

Methods: One hundred and forty two non-grandmultiparous (< gravida 4) women with indication for labor induction were randomly selected for vaginal misoprostol and intravenous oxytocin methods of induction of labor. Misoprostol was administered to 71 women at a dose of 25µg four hourly, not exceeding 4 doses, whereas oxytocin infusion was titrated based on patient response.

Main outcome measures: The main parameters measured were: induction -to- delivery interval, time from induction to onset of contraction, maternal and fetal outcomes, safety and the cost of induction between the two drugs.

Results: The median induction -delivery interval was significantly shorter in the misoprostol group as compared to the oxytocin group (10.86 versus 15.45 hours, $p < 0.001$). The time from induction to beginning of contraction was also significantly shorter in the misoprostol group than in the oxytocin group (2.59 versus 3.57 hours $p < 0.0015$). There was no difference in fetal and maternal morbidity between the groups. There was no single case of uterine rupture. Majority of women in the misoprostol group (70%), required less than 0.2 USD for successful induction, whereas in the oxytocin group 77% spent >2.10 USD for induction. Misoprostol was significantly cheaper ($p < 0.05$).

Conclusion: Misoprostol at a dose of 25 µg is safe, effective and cheaper than oxytocin for induction of labor.