

Evaluating the Management of Ectopic Pregnancies at a Tertiary Teaching Hospital in Western Kenya to Build Minimally Invasive Gynecologic Surgery

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Background/Objectives:

Minimally invasive surgery (MIS) offers clinical and economic benefits over laparotomy which are critical in low- and middle-income countries (LMICs) like Kenya. Most efforts to expand MIS in LMICs have focused on surgical training, while systems-level barriers remain under-addressed. As part of a larger quality improvement (QI) initiative to expand minimally invasive gynecologic surgery (MIGS) at Moi Teaching and Referral Hospital (MTRH), this subproject of preliminary data focused on evaluating MIGS implementation for ectopic pregnancy using time-based analysis and outcome comparison.

Methods:

To assess change over time, we used a run-sequence plot to track rates of laparoscopic management of ectopic pregnancy, overlaying Plan, Do, Study, Act (PDSA) cycles to identify interventions and setbacks. We also compared clinical outcomes between laparotomy and laparoscopy groups, focusing on estimated blood loss (EBL), and length of hospital stay. Insights from a MIS Leaders Committee (LCom) interpreted these findings.

Results:

Laparoscopic management of ectopic pregnancies increased from an average of 2.8% to 6% after targeted interventions. The run chart revealed both progress and barriers to MIGS adoption. Preliminary data showed reduced EBL in laparoscopic cases but no difference in hospital stay. LCom feedback suggested selection bias in patient acuity and norms around post-op discharge practices as possible explanations. Additional challenges include case identification by OBGYN registrars and equipment, space, and staff availability.

Conclusion:

While some progress has been made, systems-level challenges continue to limit MIGS uptake. The ongoing QI project will focus on improvements needed to meet the target of 20% laparoscopic management of ectopic pregnancies and expand MIGS capacity at MTRH.

Potential Impact:

This work supports development of a context-specific MIS implementation toolkit for use across similarly resourced Kenyan hospitals. Improving MIS access advances surgical equity, strengthens health systems, and aligns with global health priorities shared by U.S. and Kenyan partners.