

## Capstone for Impact Submission | GY2019

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**Project Title:** Reduction in Septic Abortion Following The Introduction of Misoprostol in Kumasi, Ghana

**Student Name(s):** Ogu, Kiki

**Advisor Names(s):** Dr. Rominski

**Branch:** Procedure Based Care

**Path of Excellence:** Global Health and Disparities

**Handover/Transition:**

If this project can be continued by another UMMS student, you may contact them at the following email address/phone number (N/A if project cannot be handed over): **N/A**

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**Summary:**

In 2008, the world leaders drafted eight Millennium Developmental Goals (MDG) in order to fight poverty on a global scale (1). The fifth MDG sought to enhance maternal health via a 75% reduction in maternal death, defined as the death of a woman while pregnant or less than 42 days following the termination of pregnancy (2, 3). In 2013, global maternal deaths were estimated to be 298,000, marking a 45% decrease from 1990. Developing countries, however, account for 99% of the estimated maternal deaths with 50% occurring in sub-Saharan Africa (3). Ghana's estimated MMR ranged from "214 to 800 per 100

**Methodology:**

000 live births

**Results/Conclusion:**

Significantly higher than the global ratio.

Although antenatal care has been the long focus of maternal mortality, our efforts must expand to target maternal mortality and morbidity related to unsafe abortions. The WHO defines an unsafe abortion as "a procedure for terminating an unintended pregnancy either by individuals without the necessary skills or in an environment that does not conform to minimum medical standards or both" (4). Over 99% of deaths due to abortion occur in developing countries. The risks associated with these deaths are preventable (5). WHO's most recent census of 18.4 million unsafe abortions resulted in 67,500 maternal deaths in developing countries (6). The ratio of maternal mortality is not equal across countries with rates of 709.5/100,000 unsafe abortions in Africa and 100/1000,000 in Latin America.

The WHO added mifepristone and Misoprostol to its Essentials Medicines List for developing countries (7), but only Misoprostol is suitable for the low resource clinical setting. Mifepristone is expensive while

Misoprostol is inexpensive, widely available, and can be stored at room temperature (5). Misoprostol alone is 88-96% effective for first trimester abortion and 85-91% effective in the second trimester (5). Research by Harper et al (5) showed a 15% reduction in mortality when Misoprostol is used in 20% of high mortality rate cases which are typically seen in Africa and Asia. This reduction peaks at 45% reduction if Misoprostol is utilized in 60% of cases, ultimately saving 30,500 lives. With such high risks, greater efforts must be made to improve access to medical abortion and more research efforts dedicated to uncovering the outcomes of Misoprostol use in low resource, high maternal mortality settings in order to mitigate morbidity and mortality associated with unsafe abortions.

### **Reflection/Lessons Learned:**

This was a retrospective analysis conducted at Komfo Anokye Teaching Hospital in Kumasi Ghana from 2013 to 2017. All patients entered into the Emergency Gynecological Ward log book were included in the study, and therefore patients who may have been seen in the clinic but were left out of the logbook were excluded from the study. Information regarding the patient demographics, age, gravida, parity, religion, occupation, admission dates, and diagnosis were collected. The diagnoses were grouped into the categories listed in table \_\_\_ and analyzed using \_\_\_\_. Additional analysis included Whitney U Tests, chi-squared, and Post Hoc ( $p < 0.05$ ).