Improving Anesthesia and Peri-operative Training (ImPACT) – Africa
Experiences from Kenya

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What is the Situation?

An estimated 830 women die every day - 99% from LMIC's - from preventable causes related to pregnancy and childbirth.

Obstructed labor contributes to 9% of all maternal deaths.

~30 Million people are at risk of developing surgical complications due to unsafe anesthesia.

Kenya C-section rate is 4% (WHO recommends 10–15%)
SIAYA COUNTY vs National Stats

POPULATION 1 million

MMR 691 vs 510 per 100,000

NMR 80 vs 22 per 1,000

U5 MR 159 vs 49 per 1000
Situation Analysis

In an area of Western Kenya, a survey by CPHD, in 2012 showed that there were **36 operating theatres** which had only **12 staff trained to provide anesthesia**; and there were 13 persons capable of doing surgery.

Kenya has about **500** practicing anesthetists for a population of about **45 million**

The anesthetist to population ratio is **1:90,000** in Kenya
What’s Needed

Ensure safe delivery and perioperative care — adequate and skilled anesthetists and simple life-saving interventions for neonates in distress can make a big difference.

- Capacity building of anesthesia training centers
- Larger numbers of admissions into the anesthesia program
- Additional anesthetists drawn from the public healthcare system
- Increased capacity for emergency C-sections & surgeries safely
- Higher C-section rates, better maternal and fetal outcomes, fewer referrals and shorter delays
BONDON DISTRICT HOSPITAL

Bondo: Second poorest district in Kenya (47%) (2007)
Nearest Level 5 hospital Kisumu (75 km)

FIRST PRIMARY POINT OF CARE FOR PREGNANT WOMEN IN RURAL AREAS
It was so frustrating. I used to watch patients requiring C-sections at the mercy of anesthetists, who walked in and walked out of cases whenever they wanted. The moment the baby’s out and the uterus is closed, they walk out without bothering to check the mother's condition. As nurses, we could not stand by and watch the mother suffering. We administered ketamine and diazepam without being ‘trained’ on it.
A few days after we were deployed, I was facing a difficult delivery case. I didn't have the time to put on my scrubs. I saw the patient didn't register any blood pressure, the pulse was faint and she was unresponsive. I realized the patient was going into spinal shock. Adrenaline was the only thing available that could be used to raise the blood pressure and the got mother stabilized.
At Yala, patients came in from rural areas 10-12 km from the hospital. Sometimes the wait for ambulance was too long, and pregnant women in distress were brought in by bodaboda (motorcycle taxi). After 2-3 hours delay we have lost many a woman and baby in fetal distress for lack of time and resources.
Now, we are better prepared for such emergencies. We’ve stopped referring cases of obstructed labor or antepartum hemorrhage of malpresentation or ectopic deliveries to hospitals in Kisumu.
The ImPACT Program Targets

# TRAINING CENTERS
4 (Kisumu, Kijabe, Kisii and Mombasa)

# ANESTHETISTS TRAINED BY END OF PROGRAM
200

# COUNTIES BENEFITTING
16

# HOSPITALS BENEFITTING
16

# PEOPLE COVERED
8 million

# PREGNANT WOMAN & CHILDREN COVERED PER YEAR
106,580
The ImPACT Program Partnerships

2013
GE Foundation

2014
VANDERBILT UNIVERSITY

2015
Harambee

2016
ELMA philanthropies

2017
MEDICAL TRAINING COLLEGE

2018
Assist International

2019
Kijabe Hospital
Program Strategy

Create a cohort of anesthetists who can be mentored into leaders in anesthesia and form a pool from which additional trainers may be drawn.

TRAINING INFRASTRUCTURE

SIMULATION TRAINING

MENTORING

SELF-SUSTAINING TRAINING PROGRAM IN LONG RUN
Achievements: 1 Year Post Deployment

C-SECTION

At county level

19.4%
Achievements: 1 Year Post Deployment

At county level

LIVE BIRTH

6.6%
Achievements: 1 Year Post Deployment

BABIES DISCHARGED LIVE

5.1%
At county level
Achievements: 1 Year Post Deployment

INCOMING MATERNAL REFERRALS

5.1% At county level
A time series analysis of our Kenya data showed a nearly 50% year on year rise in C-sections done within the county of deployment and a rise in C-section rates from 3.2% to 4.9% a shrinking of 25% of unmet need for C-section as per WHO standards.
Thank you

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