



# REDUCING TIME BETWEEN DECISION AND CAESAREAN SECTION: A QUALITY IMPROVEMENT INITIATIVE AT A RURAL DISTRICT HOSPITAL IN RWANDA

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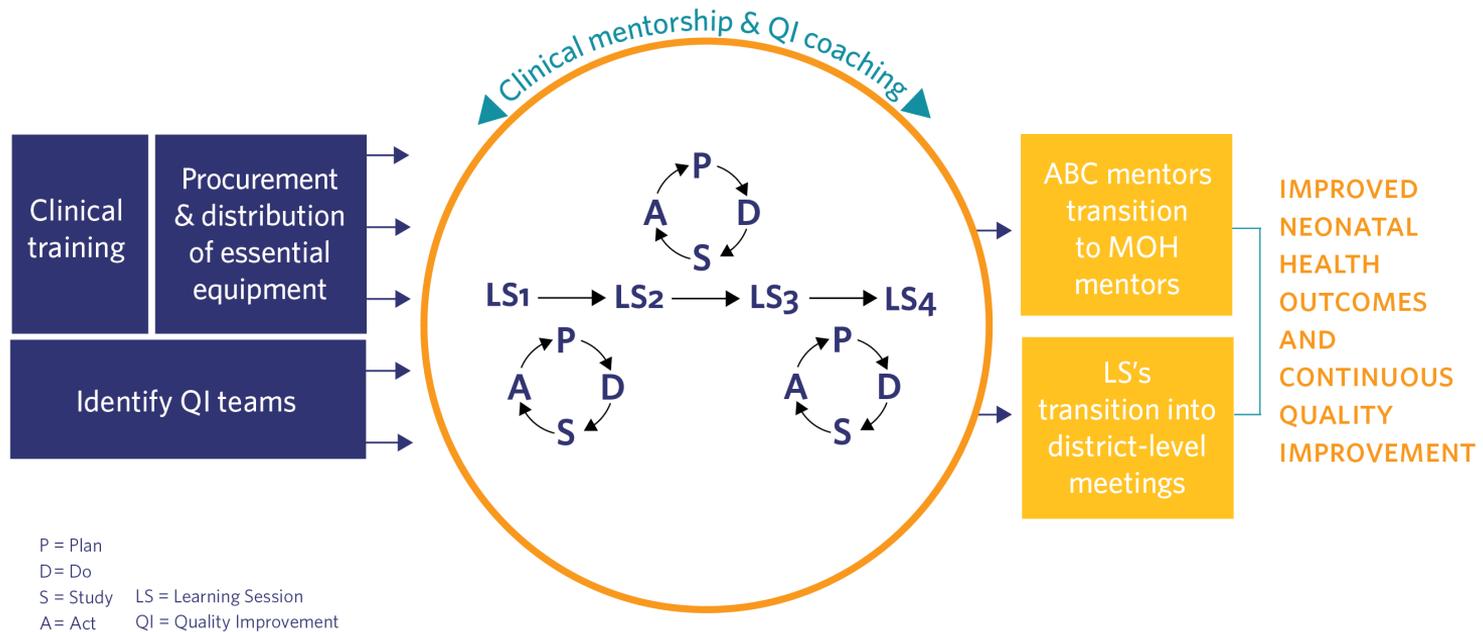
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# Kirehe District, Rwanda

- Catchment area over 350,000
  - On average 200 deliveries per month
  - Cesarean section is 33.3% per month
- In rural Rwanda:
  - 89.4% of women deliver in a health facility
  - 43.9% of women complete 4+ antenatal care visits



# All Babies Count



18 MONTH CHANGE ACCELERATION PROCESS

EXIT STRATEGY

OUTCOMES

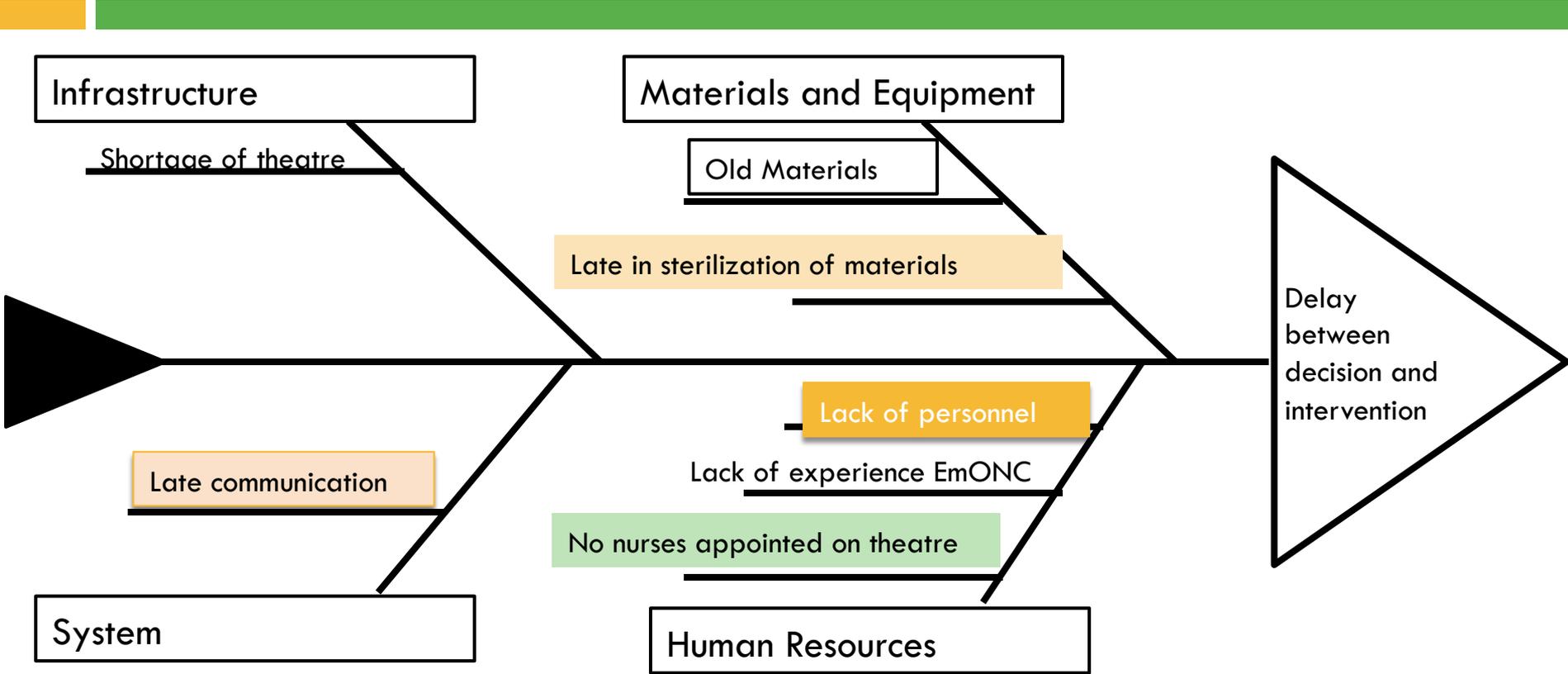
# Background

- In 2012, the Rwandan Ministry of Health in collaboration with Partners In Health implemented “All Babies Count” (ABC) initiative as a strategy to reduce neonatal mortality.
- Delays in decision-making or executing of cesarean sections can lead to maternal and newborn complications and deaths.
- It is recommended 30-50 minutes as the acceptable interval between decision-making and execution of the CS.
- ABC QI Indicator targeted by our team: Time between decision to CS

# QI Implementation in the Maternity Ward

- In Kirehe District Hospital, we implemented a QI project to reduce the delay between decision and intervention
  - ▣ Decision time point: Doctor calls for a c-section
  - ▣ Intervention time point: c-section intervention
  
- Applied QI methods to:
  - ▣ Establish a root cause
  - ▣ Prioritize the focus of the intervention
  - ▣ Initiate PDSA cycle

# Root Cause Analysis



# QI Intervention

Prioritized the following change activities to reduce the delay:

- System Intervention:
  - Routine QI meetings to improve communication between departments
  - Created a communication system for notifying personnel necessary for CS
  
- Human Resources Intervention:
  - Conducted skill-building sessions with maternity staff to address limited EmONC skills
  
- Materials and Equipment Intervention:
  - Added sterilization to QI meeting agenda and involved sterilization team to ensure timely availability of sterile materials

# Evaluation of Progress

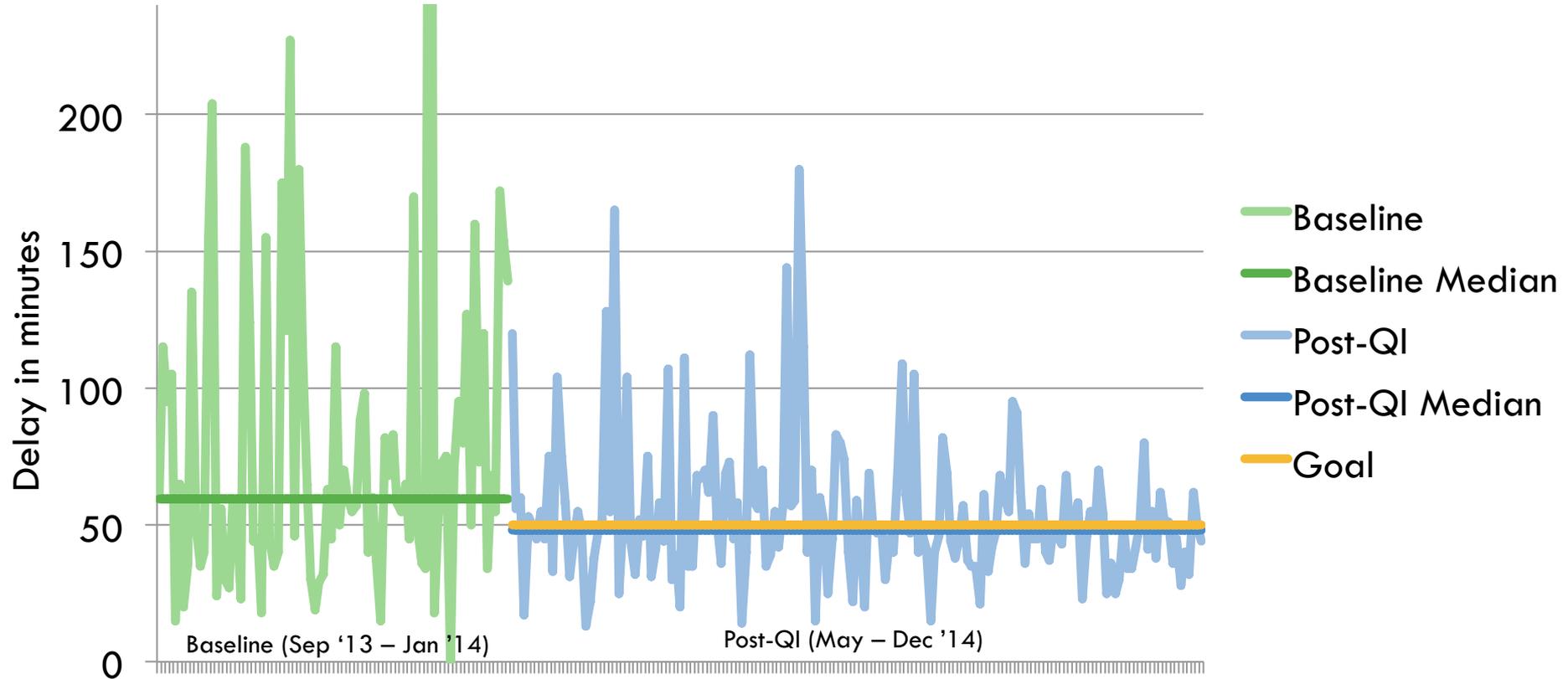
- Tracked data for process and outcome indicators
  - Process: Number of QI meetings held, number of teaching sessions
  - Outcome: Delay between decision and intervention
- A random sample of approximately 20 files per month were taken to track the outcome indicator
- Data were analyzed using descriptive statistics and the Mann-Whitney test was used to assess differences in the median delay at baseline and post-intervention.

# Results

Time Point	Number of Deliveries	DDI Median [IQR]	P-Value
Baseline (Sept '13-Jan '14)	86	59.5 [40-105]	<b>0.004</b>
Post-QI (Aug-Dec '14)	169	48 [39-61]	

Time of Decision	Number of Deliveries	DDI Median [IQR]	P-Value
Day (Baseline)	45	60 [45-95]	0.762
Night (Baseline)	41	55 [35-115]	
Day (Post-QI)	89	45 [36-61]	<b>0.046</b>
Night (Post-QI)	80	50 [43.5-62]	

# Decision Delivery Interval Run Chart



# Conclusions

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- The results show success in reducing the delay from decision-making to performing a c-section.
- In the future, plan to track the additional delay from when the nurse notifies the doctor of a concern, to the time the doctor makes a decision
- Positive experience in QI implementation, reinforced by peer-to-peer learning sessions, has led to addition of new QI projects in maternity ward



***THANK YOU***

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