



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

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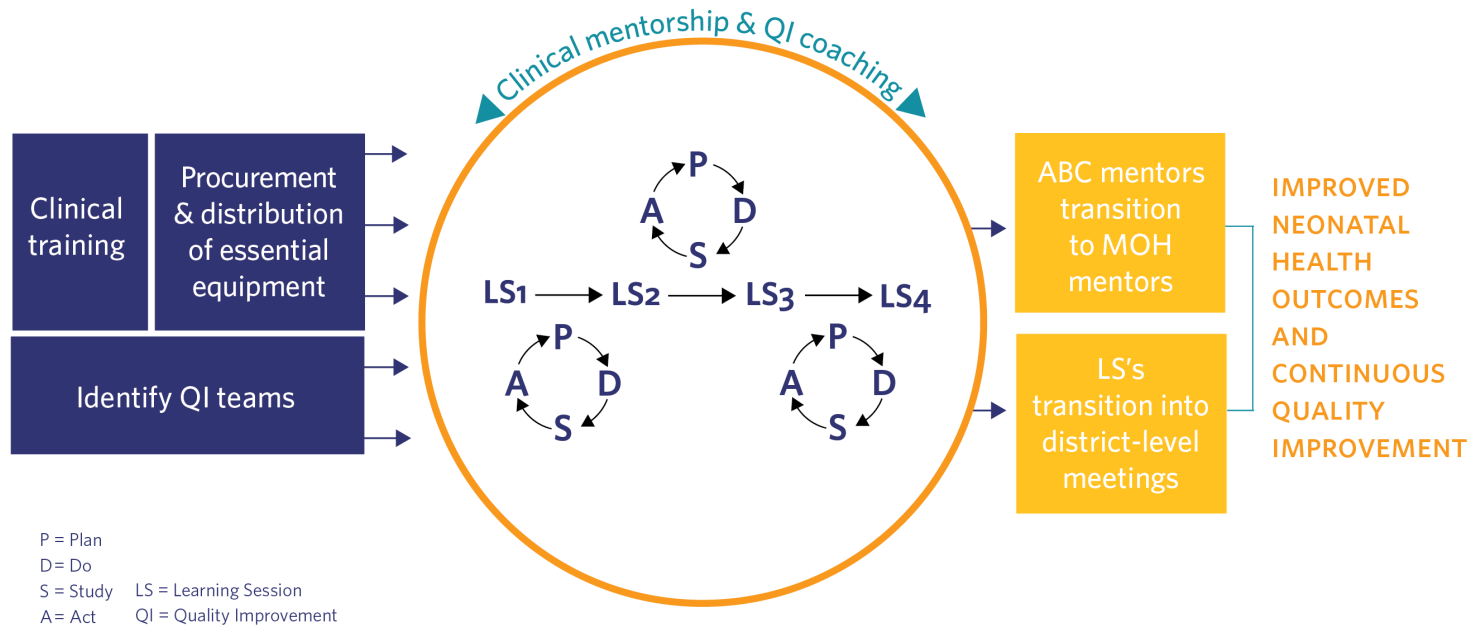
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Kirehe District, Rwanda

- 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

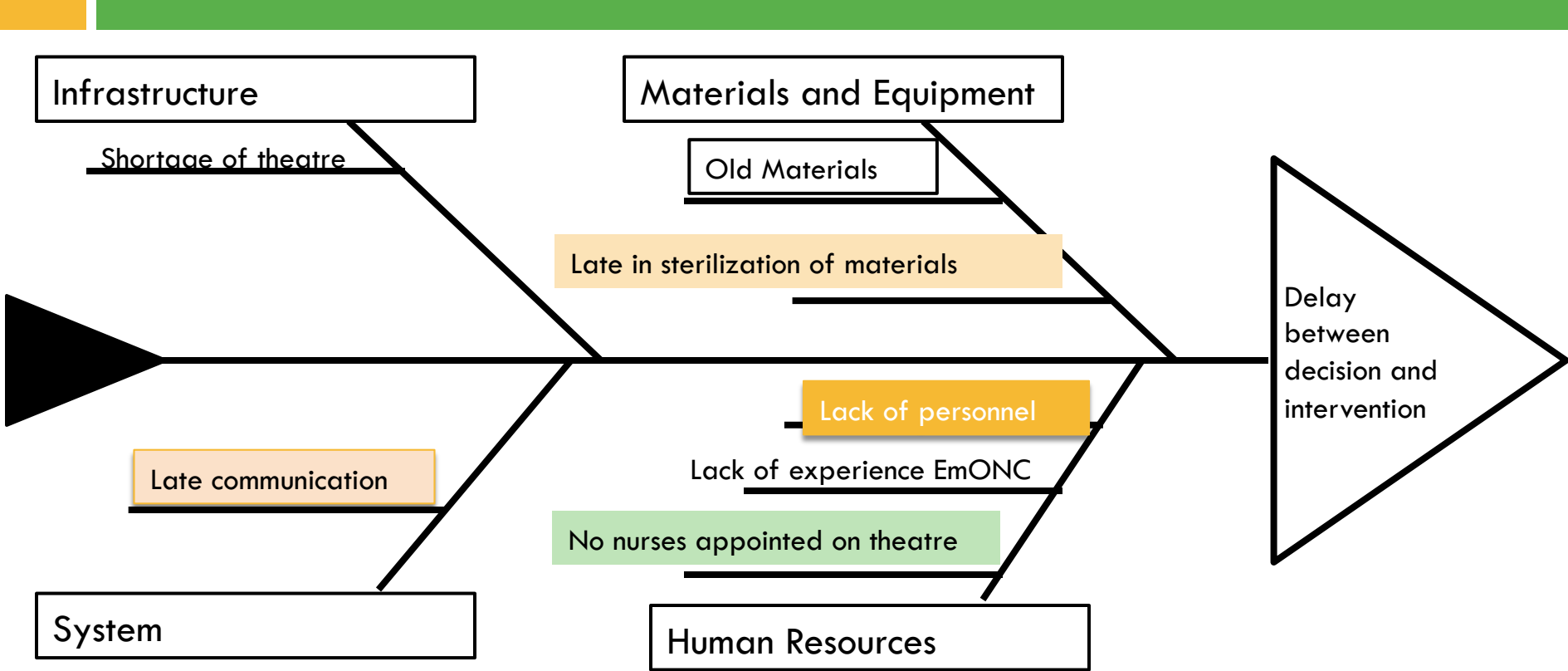
- In 2012, the Rwandan Ministry of Health in collaboration with Partners In Health implemented “All Babies Count” (ABC) initiative as a strategy to reduce neonatal mortality.
- Delays in decision-making or executing of cesarean sections can lead to maternal and newborn complications and deaths.
- It 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

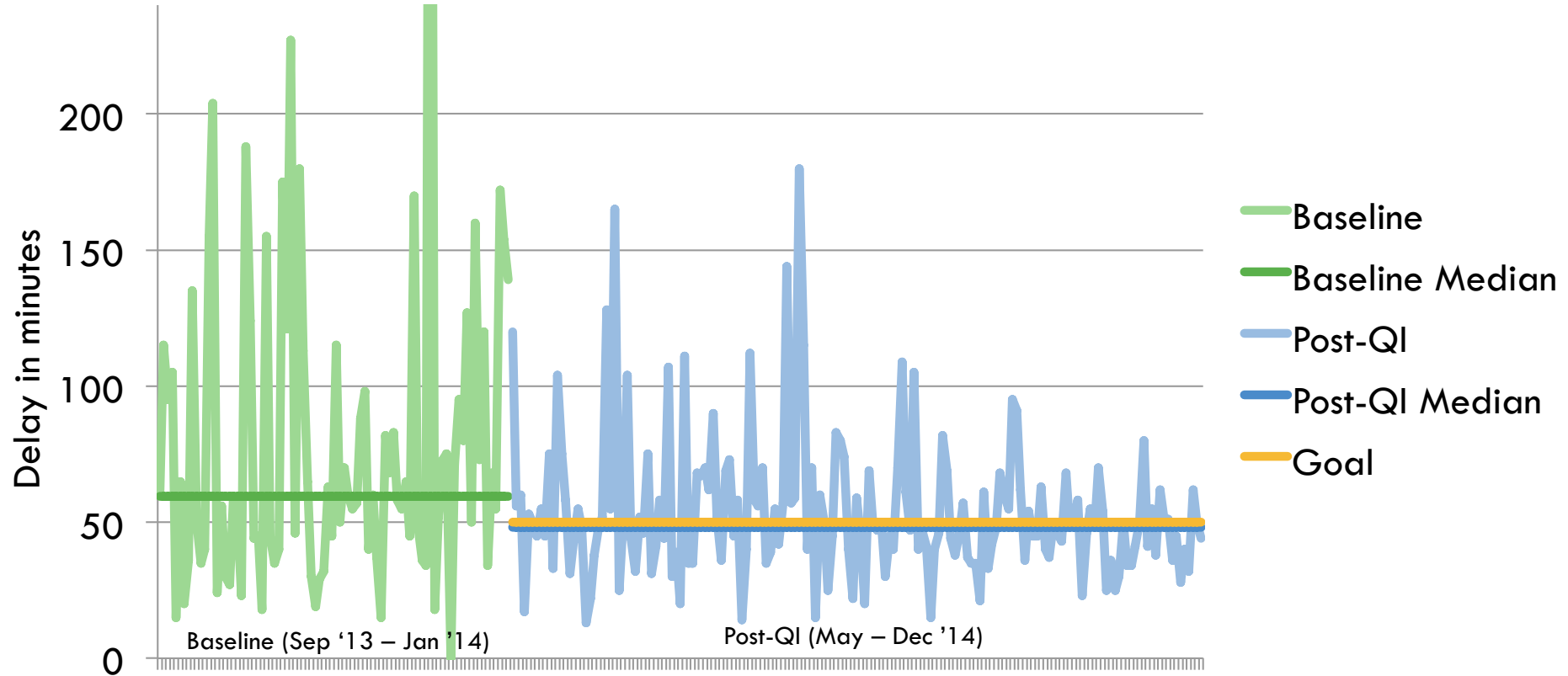
- Tracked data for process and outcome indicators
 - Process: Number of QI meetings held, number of teaching sessions
 - Outcome: Delay between decision and intervention
- A random sample of approximately 20 files per month were taken to track the outcome indicator
- Data were analyzed using descriptive 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]	0.004
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]	0.046
Night (Post-QI)	80	50 [43.5-62]	

Decision Delivery Interval Run Chart



Conclusions

- 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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