

Criteria-Based Clinical Audit to assess the quality of Caesarean Section Practice in Rwanda

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Introduction

- Maternal Mortality Ratio (RDHS 203/100,000 live births) ≠ National Target (126/100.000 live births)
- Caesarean Section (CS) rate raised from 15% (2012-2013) to 24% (2021-2022)
- > 50% of Maternal deaths had CS
- No clear data on complications related to CS
- 80% of Maternal deaths could be prevented or avoided through effective and affordable actions
- ➔ Need to better understand the CS practice
- ➔ Need to introduce Quality Improvement tool

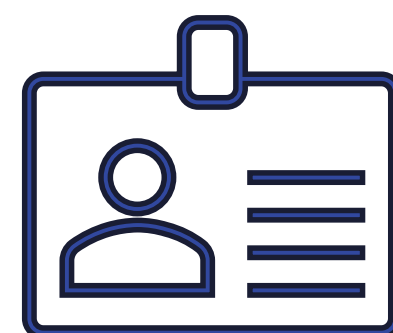
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Objectives

Assess the Caesarean Section Practice in Rwanda by introducing a quality assurance mechanism: Criteria Based Clinical Audits (CBCA) to reduce maternal and neonatal mortality and morbidity

Sub-Objectives

- Determine the frequency and types of complicated CS
- Determine the factors associated with complicated CS
- Analysis of the causes of not complying with the standards of optimal care for CS
- Determine if the identified causes are avoidable
- Provide recommendations to avoid complications
- Implement necessary actions
- Reassess the different data and the indicators



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Methodology

- **Study design:** A cross-sectional study using **Criteria-Based Clinical Audit tool**
- **Study population:** All women delivered by CS in seven districts in Rwanda from July 2022 to June 2023
- **Data collection:** Reference to criteria and standard of good practice applied or not
- **Data analysis:**
 - % patients receiving care meeting each criterion
 - % of each type of CS indication
 - % of type of complications linked to CS
 - % of different final outcomes for mother and newborn
- The association between the outcome of the pregnancy, and the complication of the CS with (1) the score for adherence to standard, (2) the indication of CS and other potential contributing factors (referred, etc.)



Examples of criteria assessed

V.21	Has the newborn baby been resuscitated?	☐ Yes by MD ☐ Yes by Nurse ☐ Yes by unspecified staff ☐ Not registered	Tick one answer
V.22	Oxytocin has been given?	☐ Yes After fetal birth ☐ Yes After delivery of placenta ☐ Yes After fetal birth AND after delivery of placenta ☐ Yes Unspecified time ☐ Not Registered	Tick one answer
V.23	Oxytocin dose given?	_ _ ☐ Less than 500 ml ☐ 500-1000 ml ☐ 1001-1500 ml ☐ More than 1500 ml ☐ Not Registered	Number (international units IU) [99: Not registered]
V.24	What is the estimation of blood loss?	☐ Less than 500 ml ☐ 500-1000 ml ☐ 1001-1500 ml ☐ More than 1500 ml ☐ Not Registered	Tick one answer
V.25	Were the instruments checked after the intervention?	☐ Yes ☐ No	Tick one answer
V.26	Was the number of gauzes checked after the intervention?	☐ Yes ☐ No	Tick one answer
V.27	Was the procedure report done?	☐ Yes ☐ No	Tick one answer
V.28	Which complication has occurred during the intervention?	☐ None ☐ PPH Uterine Atony ☐ PPH Uterine Tear ☐ PPH Tear extension Ut Angle ☐ PPH Uterine suture site ☐ PPH Coagulopathy ☐ PPH Abdominal vessels injury ☐ PPH Other ☐ PPH Unspecified Cause. ☐ Bladder Trauma ☐ Intestinal Trauma ☐ Fetal Injury ☐ Placenta related ☐ Others ☐ Not Registered	Tick one or more answer

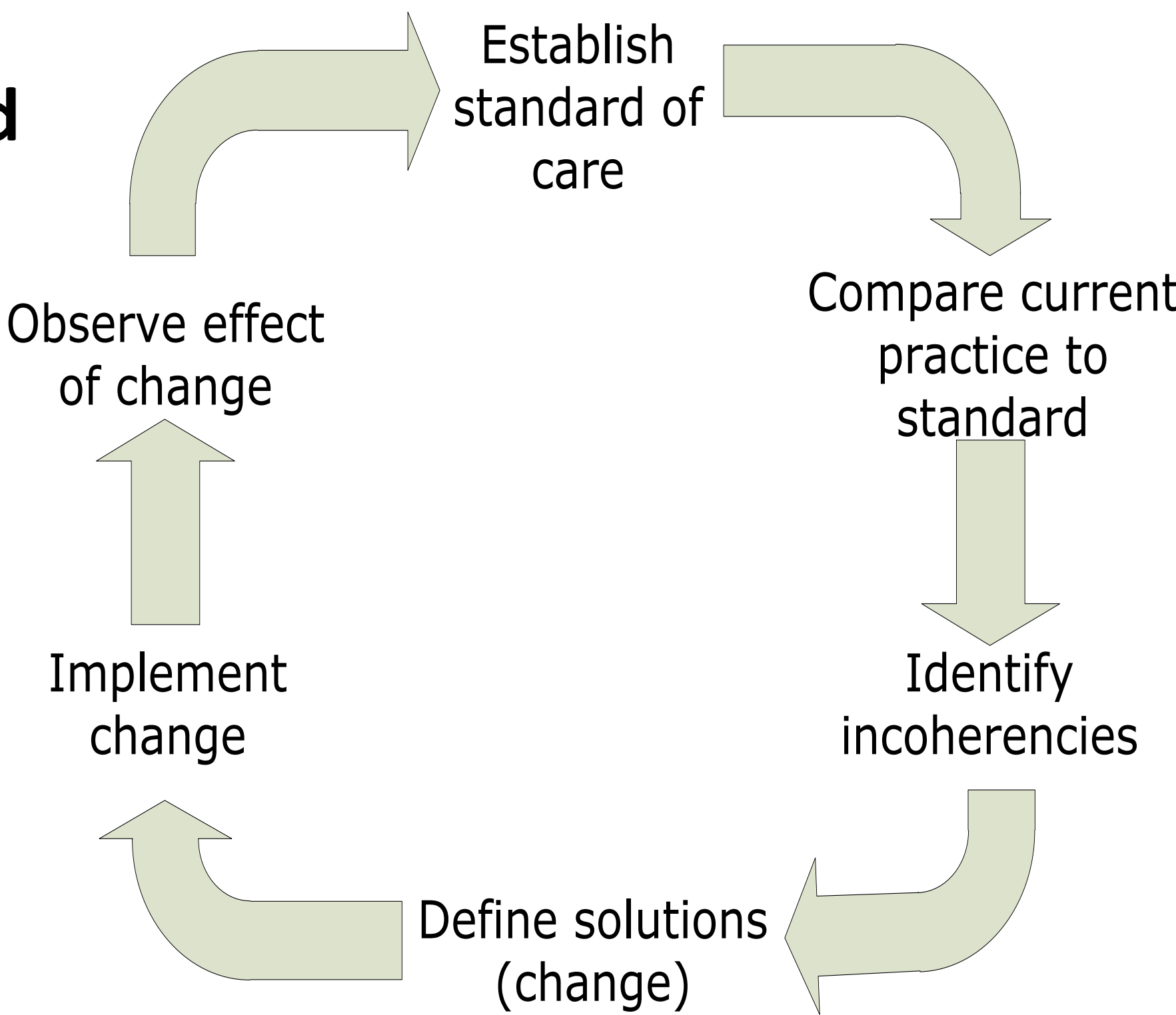
Part III: Preoperative period			
III.1	US done before CS	☐ Yes ☐ No	Tick one answer
III.2	US indication	☐ Mandatory ☐ Confirm the diagnosis ☐ Other ☐ Not applicable ☐ Not registered	Tick one answer
III.3	Anesthetic pre-assessment	☐ Yes ☐ No	Tick one answer
III.4	Blood group & X-match	☐ Yes ☐ No ☐ Not registered	Thick one answer
III.5	Labor phase	☐ Latent phase ☐ Active phase ☐ Not in labor ☐ Not registered	Tick one answer Some definitions: <ul style="list-style-type: none">• Latent phase: < 4 cm cervix dilatation, irregular contractions• Active phase ≥ 4cm cervix dilatation & regular contractions
III.6	IV line in place	☐ Yes ☐ No ☐ Not Registered	Tick one answer
III.7	Antibiotic given before CS	☐ Yes ☐ No	Tick one answer
III.8	If yes, Which Antibiotic	_ _	Text [99: not registered] [77: not applicable]
III.9	Corticoid given if GA <35 weeks	☐ Yes ☐ No ☐ Not Applicable	Tick one answer
III.10	Antacid given before CS	☐ Yes ☐ No	Tick one answer
III.11	Urinary catheter inserted	☐ Yes ☐ No ☐ Not Registered	Tick one answer

Criteria-Based Clinical audit

Systematic review of care against explicit criteria/standard of care and the implementation of change to improve patient care and outcomes

Define the criteria

- Measurable appropriate activities
- Clearly defined,
- Rigorously objectivable
- Relating to optimal care



Examples of results that can be obtained

	% Yes
AB prophylaxis given before the intervention	90%
Blood group and X-Match done before intervention	76%
Oxytocin given after deliveryl	95%
Number of gauzes checked after the intervention	98%

After a pilot testing phase, the data collection will start in December 2023, results are expected to be shared in May 2024

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Conclusion

- Hypothesis advocate CBCA to become routine strategy to enhance decision making and to better comply with standards of **good practice = Right decision, practice & follow-up**
- Ultimately: Reduction of Morbidity and Mortality linked to CS



Belgium
partner in development

