

Improve Decision-to-Delivery Interval Time through Implementation of "STAT OB" Response Team

(As part of the CUSP Improvement Project 2021 in Labor and Delivery Unit)

Team : Dr. Asia Shaikh (General Obstetrician/Gynecologist), Dr. Etedal Amri (Anesthesiology subspecialist), Nabeelah Abandi (Nurse Manager), Dr.Fahad AL Gurashi (Chair Anesthesiology & Critical Care), Joseph Dhanalutchmee (Clinical Nurse Educator), Fatimah AlFageeh (Nurse Advance Clinician), Savera Arain (Pharmacist), Muna Shehadeh (Process Improvement specialist), Rabie Kilan (Process Improvement specialist), and all providers in Labor and Delivery, NICU and Anesthesia.

Background

The Labor and Delivery Unit is one of the high acuity closed units where continuous monitoring and one-to-one care is provided. Sudden and unexpected emergencies may arise without any warning signs and require an immediate cesarean section delivery to save the mother and baby's life and reduce the risk of possible associated morbidity. Decision-to-Delivery Interval (DDI) is the timeline between a decision to conduct an emergency cesarean section and the actual delivery of the baby. The current standard of Decision-to-Delivery interval accepted by ACOG and NICE is no more than 30 minutes. Prolonged DDI constitutes a third phase delay in the provision of emergency obstetric care. Interventions designed to minimize DDI are vital, in an attempt to prevent maternal morbidity and neonatal morbidity and mortality. The CUSP Multidisciplinary team identified Emergency Cesarean Section as an opportunity for improvement

Aim

To reduce the Decision-to-Delivery time by developing STAT OB policy on the management of Crash Cesarean Section to ensure that all relevant team members respond in less than 5 minutes.

Objectives

Structure Objective

By the end of June 2021, STAT OB policy will be developed and polished in JHAH.

Process Objective

By the end of June 2021, the Response time of STAT OB team to be less than 5 minutes.

Outcome Objective

By the end of October 2021, the compliance to Decision-to -Delivery time will be decreased by 20%.

Methodology

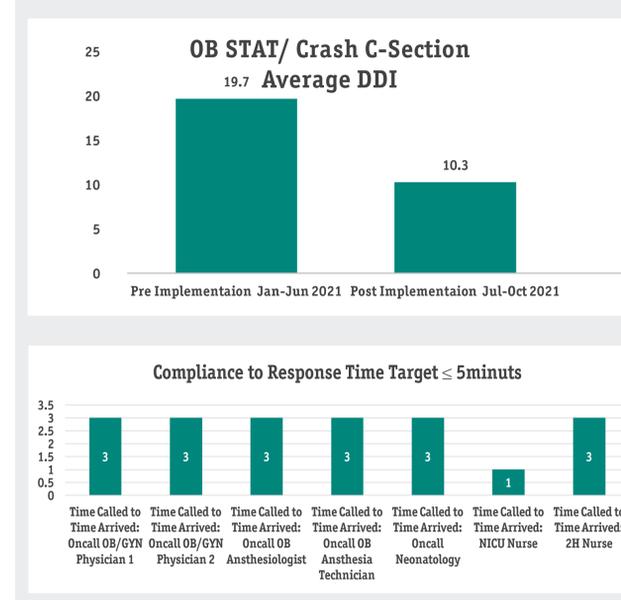
A specialized multidisciplinary team was convened, with representation from OB team staff (OB Consultant, OB staff physician, Midwives, OB Anesthesiologist, Anesthesia technician, Neonatologist, NICU nurse and 2H OR Nurses), aligned with process improvement experts. The PDCA methodology was followed:

A retrospective cross-sectional study of inpatient cases who underwent emergency cesarean section was conducted, and data collected from January 2020 to October 2021 revealed a total of 78 cases of Category E1 Emergency cesarean section, which constituted roughly 14% of the total number of cesarean sections (557). The current practice was reviewed and root cause analysis was conducted. Major challenges identified was due to:

Epic C/Section case request: It was lengthy, time consuming and does not always appear in 2H OR screen, Activated emergency alarm can only be heard within 2J and 2H units, therefore the team members outside these units are only alerted by phone, challenging with Preparing and administering essential pre-operative medication, Communication between team members ,Variation in practice and Lack of policy to standardize the response and clarify roles and responsibilities of the team members.

Based on the gaps identified during the RCA, an action plan was developed and included: Create Stat OB policy to standardize care processes. Stat OB will be announced hospital wide , conducting Crash cesarean section simulation , Create crash-C/S case request Button in Epic , All essential medications are made available and overridden in Omnicel , Two Crash Cesarean section trays equipped with all necessary items may be required for crash cesarean section are made ready . Continuous monitoring on compliance to the interventions and a performance feedback communicated through communication meeting regularly.

Result



Conclusion

After implementing STAT OB, following the latest guidelines, and applying evidence-based practice for E1 cesarean sections, no adverse events happened in the L&D unit during 2021. There was also a positive team dynamic, which enhanced team effectiveness and encouraged good communication. The healthy environment allows team members to do their best work as well.

References

- <https://pathways.nice.org.uk>
- <https://www.rcog.org.uk>
- <https://www.acog.org>