

# Improving Safety for the Emergency Cesarean

## The Problem

- Emergency cesarean delivery is one of the most dangerous events for a mother and her fetus.
- During emergency cesarean delivery providers generally focus on their individual role rather than on the coordination of the team.
- Work is not standardized
- Safety practices that are used during routine care may be overlooked or bypassed when clinicians are focusing on emergency care.
- Safety requires a team effort.

## Aim/Goal

To develop a standardized coordinated team practice for emergency cesarean delivery that incorporates the best practices for patient safety.

## The Team

Tracey Pollard RNC, BSN –Labor & Delivery  
Susan Crafts MS RN- Labor & Delivery  
Toni Golen MD- Labor & Delivery  
Philip Hess MD - Anesthesia  
Amanda Russell RN- Labor & Delivery  
Leslie Guglielmo RN- Labor & Delivery  
Tom Laws- Media Services

## The Interventions

- We developed a process improvement project for emergency cesarean delivery, focusing on iterative cycles and plan-do-study act methodology.
- Simulated emergency cesarean deliveries were filmed by Media Services and reviewed. Drills were repeated at regular intervals using plan-do-study-act methodology.
- Staff involved in the simulation debriefed immediately to capture lessons learned
- Opportunities for improvement were identified:
  - Surgical counts – emergency cesarean delivery is a high risk time for retained surgical items.
  - Infection control – incorporation of the best practices to reduce surgical site infection.
  - Streamlined “time out”
  - Anesthetic Failed airway – high risk event for loss of airway during induction of general anesthesia.
  - Deep vein thrombosis prophylaxis (DVT) – application of compression boots to prevent DVT and its consequences.

## The Results/Progress to Date

The coordination of care has been standardized:

- A single nurse is now assigned to initiate instrument count upon entering the OR to allow for enough time to complete the count successfully.
- A single nurse is now assigned to perform a chloraprep cleansing of the incision site immediately on entering the room to allow the 3 minute drying time.
- The ‘Time out’ Script was modified to ensure maximum efficiency and safety. Components focus on considerations that would result in harm to the patient. After the fetus is delivered, the team can refocus on non-emergent components.
- As part of the re-designed coordinated process, a nurse is assigned to applying compression boots to the patient for DVT prophylaxis
- Advanced emergency airway equipment was relocated to accessible areas and large, visible signage was placed.
- Observations made during drills included RN lack of knowledge with opening of instrument kit, importance of immediate count with ST, physicians unaware of need to self-gown and use of chloraprep instead of betadine, poor communication of notification to NICU, poor organization of tasks required causing confusion, noise and crowds.

## Lessons Learned

- Safety does not have to take a back seat to speed! By improving the efficiency and coordination of the team, safe practices can be standardized as part of the process of emergency care
- Process improvement of a complex task and a slow process requiring iterative cycles.
- Participation of the staff in both practicing and developing improvements is paramount.

## Next Steps/What Should Happen Next

- We will continue simulation and process improvement events at regular intervals to ensure effective training of all staff in a plan-do-stay-act fashion.
- Simulated events will be evaluated for opportunities for additional safety initiatives.
- Actual clinical events will be audited to evaluate the improvements in care.

**For more information, contact:**

Tracey Pollard RNC, BSN L&D  
tpollard@bidmc.harvard.edu

