

## Lean Ways to Break Down Barriers to Respond to Postpartum Hemorrhage

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# I have no conflicts of interest to report

#### **Objectives**

To identify barriers to responding quickly to a postpartum hemorrhage.

To recognize the impact of postpartum hemorrhage (PPH) response to outcomes.

To learn how to use Lean processes to identify process barriers.





# Introduction Why is this relevant?

Some statistics regarding postpartum hemorrhage (PPH)

- ➤ Leading cause of maternal mortality worldwide
- Leading cause of severe maternal morbidity in the United States
- > The rate of PPH increased 26% between 1994 and 2006
- > PPH occurs in approximately 1%-^% of deliveries

Practice Bulletin No. 183: Postpartum Hemorrhage. Obstetrics & Gynecology: October 2017 - Volume 130 - Issue 4 - p e168-e186 doi: 10.1097/AOG.000000000002351

Wormer KC, Jamil RT, Bryant SB. Acute Postpartum Hemorrhage. [Updated 2022 May 8]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan. Available from: https://www.ncbi.nlm.nih.gov/books/NBK499988 /

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### Background

Barriers related to postpartum hemorrhage medications were identified through use of the event reporting and frontline staff feedback utilizing the 4C tool.



## Real Time Problem Solving Use of the 4C Tool

Department:	Reported By:	Problem Location	n: Problem Date & Time:			
	1. CONCERN		3. COUNTERMEASURE			
	ap between what happened and what sh f events. State on the map the issues tha		Determine and test countermeasures to permanently address every root cause			
Use 5-Why to determine 1	<b>2. CAUSE</b> the root cause of each issue leading to th	ne problem.	<b>4. CHECK</b> Follow-up on actions to implement and validate the countermeasure recognize the people involved in problem solving and share learnin			
			What	Who	When	Done
Rule Violation: 🗆 Activity (Standa 🗆 Pathway (Simpl	ard Work) □ Connection (Una e & Direct, no Forks or Loops) □ Improvement{Us	mbiguous Communication) se of Scientific Method)				



#### **Barriers Identified**

- 1. TXA stocked in labor and delivery pyxis, not in the OR
- 2. The PPH cart was in labor and delivery, not in the OR
- 3. PPH medications were not ordered ahead of time for laboring patients
- 4. TXA was not stocked in the PPH boxes
- 5. Refrigerated PPH medications were not being signed out from the pyxis.



#### Removal of Barriers

Use of LEAN Methodology to modify the

location

access

and ordering process

for the medications used to treat Postpartum hemorrhage



#### Solutions

- 1. TXA now stocked in both OR pyxis machines
  - -Improved tracking and access
- 2. Purchased a second cart for the OR area
  - -Frontline staff implemented cart in OR area
- 3. Collaborated with provider staff PPH medications are ordered under signed and held
  - -Improved timing of access
- 4. Worked with the pharmacy team and added TXA to PPH box
  - -Rapid accessibility
- 5. Signs placed on pyxis to delineate sign out process



#### Results

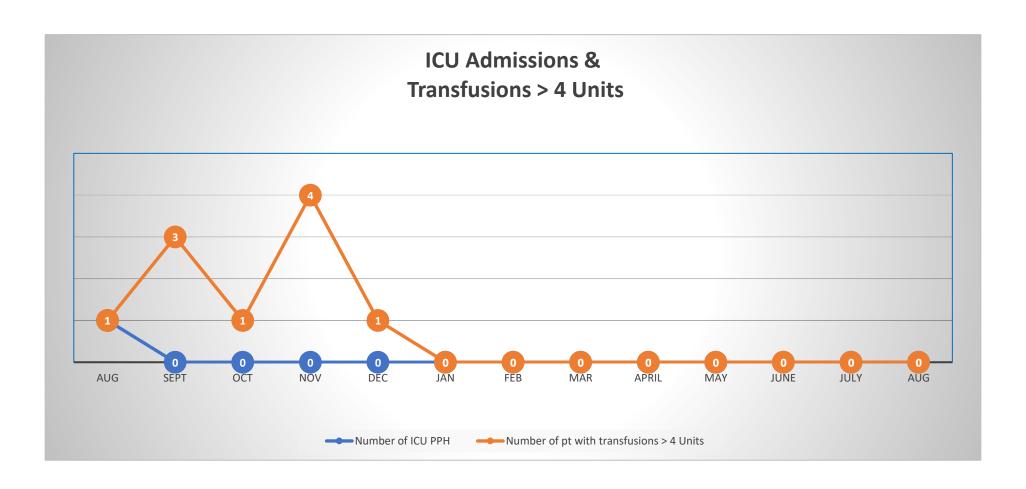
Result were measured by:

Incidence of ICU admissions

Transfusions greater than four units following a PPH event



#### Decreased to zero for 5 months straight



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#### **Implications**

- Use LEAN methodology to identify root cause barriers to improve
  - > The Location
  - > The Access
  - > The ordering process

Of emergency PPH medications

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#### Conclusion

There was an overall decrease in serious PPH events after the use of LEAN methodology to identify the root cause of barriers to access PPH medications.