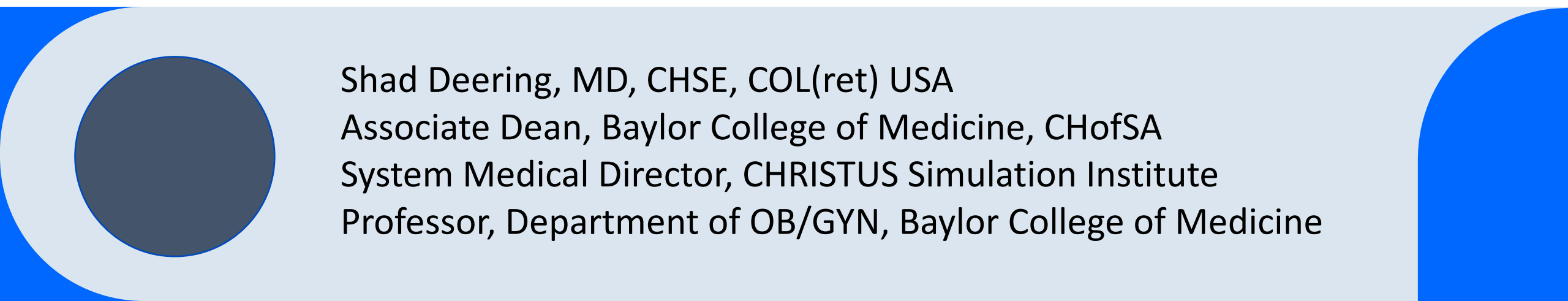


# Uniting Perinatal Care: Empowering Teams Through Simulation- Based Collaboration



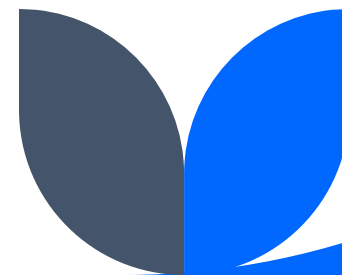
Shad Deering, MD, CHSE, COL(ret) USA  
Associate Dean, Baylor College of Medicine, CHofSA  
System Medical Director, CHRISTUS Simulation Institute  
Professor, Department of OB/GYN, Baylor College of Medicine

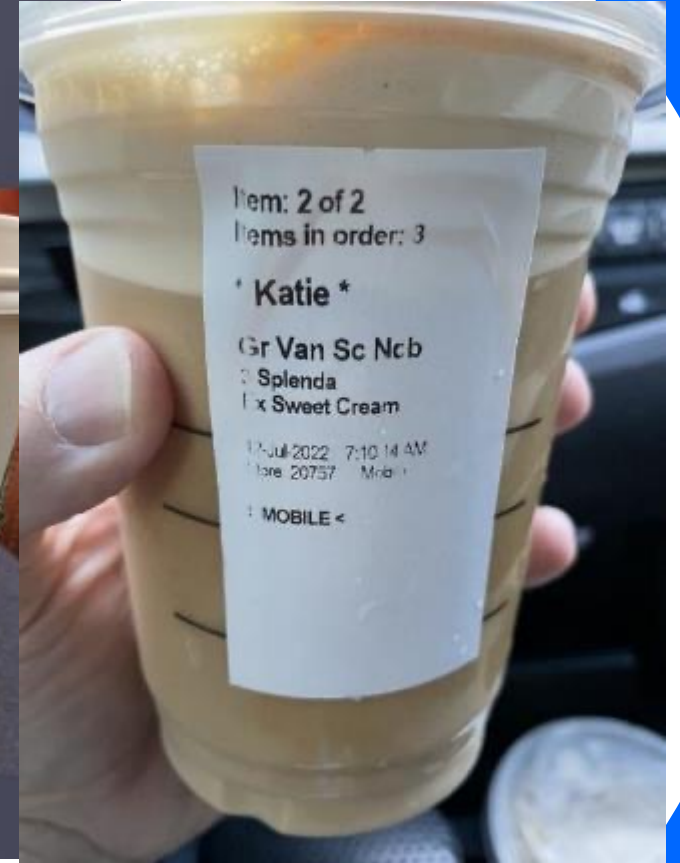
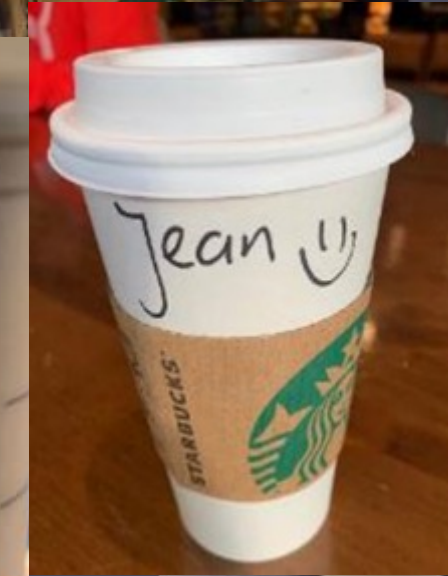
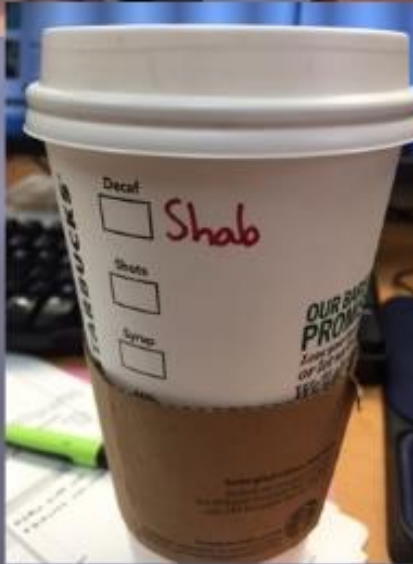
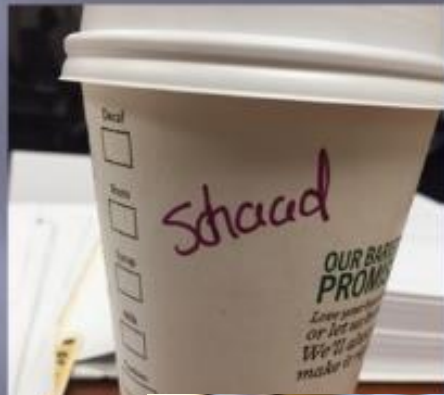
# FINANCIAL DISCLOSURE

No conflicts to  
disclose

“  
DOING THE RIGHT THING  
IS NEVER THE WRONG THING

-Ted Lasso





Dr. Shad Deering, MD



# Outline

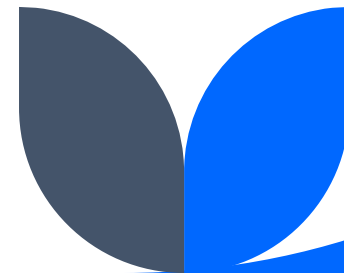
- Overview/Background
- Teamwork Training & Simulation - Evidence
- TX AIM – Simulation Training  
Implementation
- Teamwork Simulation Sustainment Plans
- Summary





# Learning Objectives

- Understand how simulation training impacts teamwork and obstetric outcomes
- Be able to describe what simulation training has been done through TX AIM to address maternal morbidity & mortality
- Understand how to implement a systems-based approach to sustain and expand teamwork simulation training in Texas



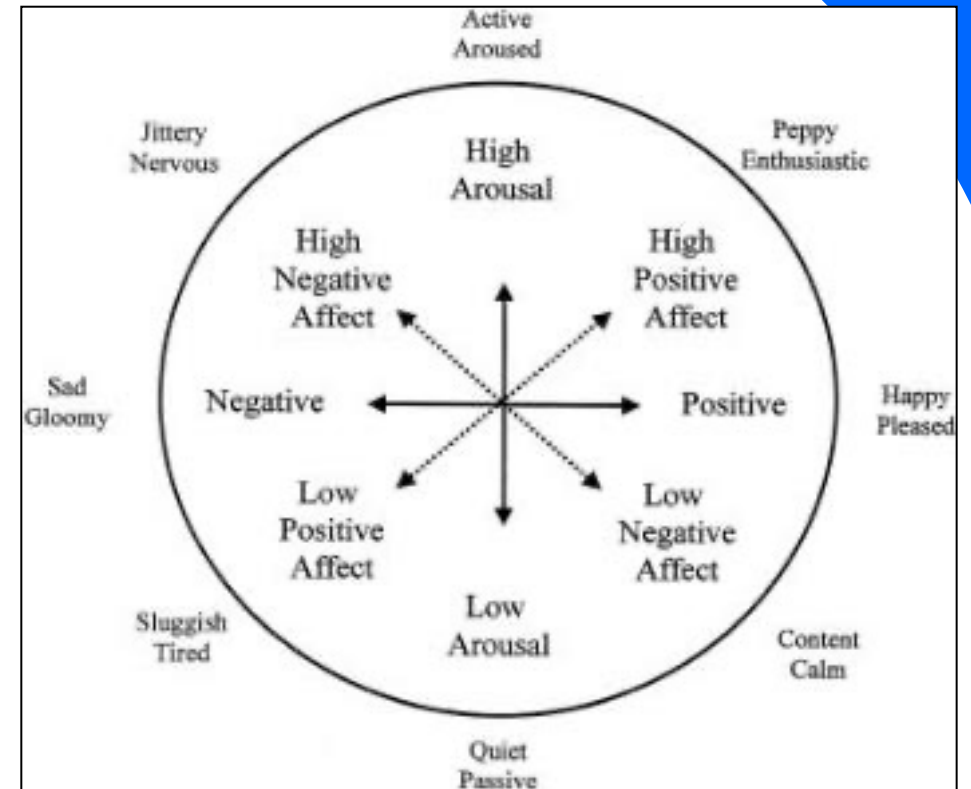
# Overview / Background

**KNOW  
YOUR  
WHY**



# WHY IS SIMULATION TRAINING HELPFUL?

- PowerPoint is necessary but **boreing**
- Does not permit significant activation
- No harm, no foul, practice
- Address rare but emergent situations with different variables that can be included
- Able to practice Teamwork principles in a stressful environment



A Circumflex Model of Affect," by J. A. Russell, 1980, *Journal of Personality and Social Psychology*, 39, p. 1164.



## 737 Max 8 pilots transitioned with **self-administered online course**

By Oren Liebermann, CNN 4 hrs ago

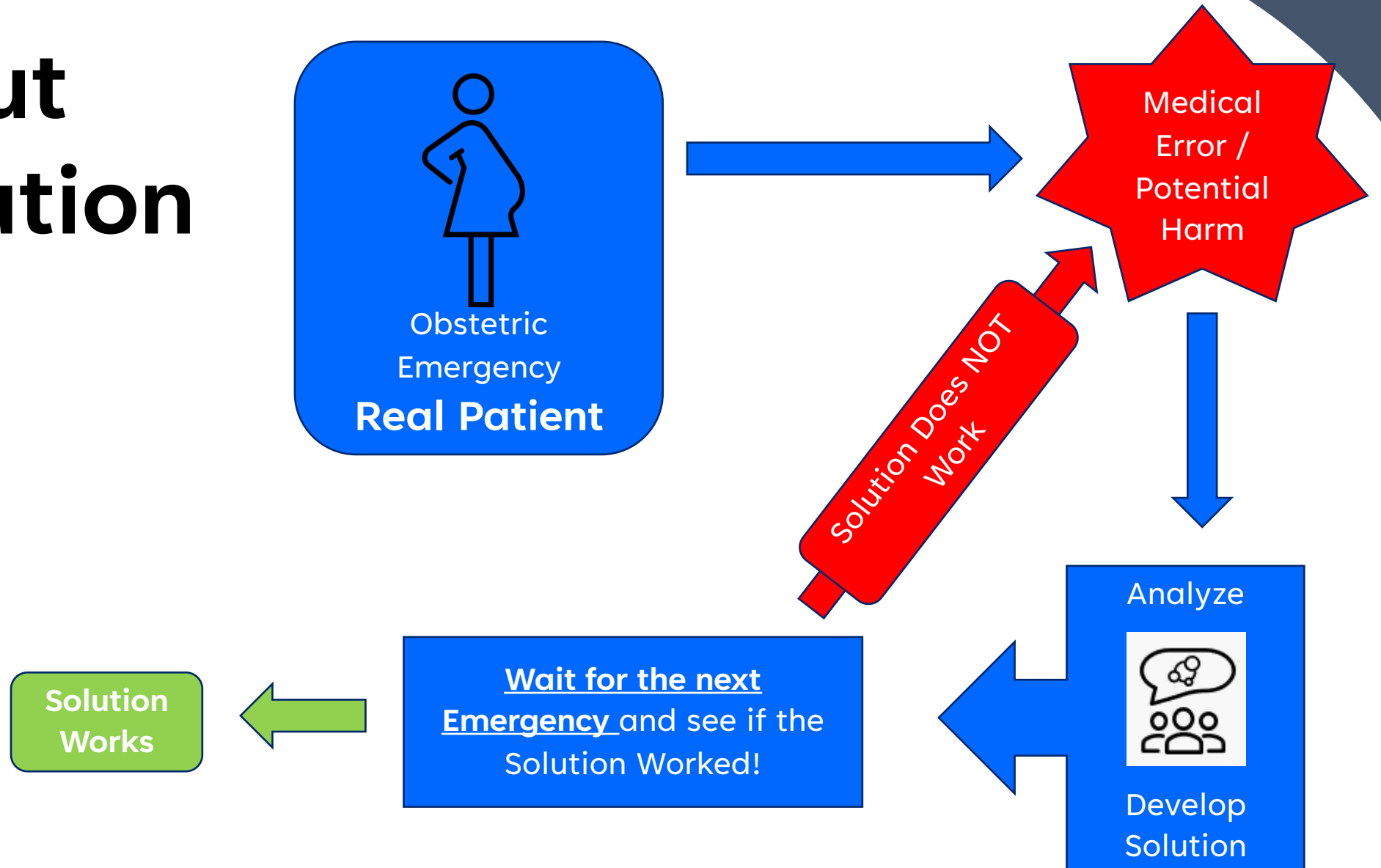


© Ted S. Warren/AP Pilots were permitted to transition to 737 Max 8 aircraft following short, self-administered online courses.

Pilots transitioning to the Boeing 737 Max 8 aircraft from older 737 models were given a **short, self-administered online course** that made no mention of a new system now at the center of two crash investigations, pilots' unions spokesmen for two American carriers told

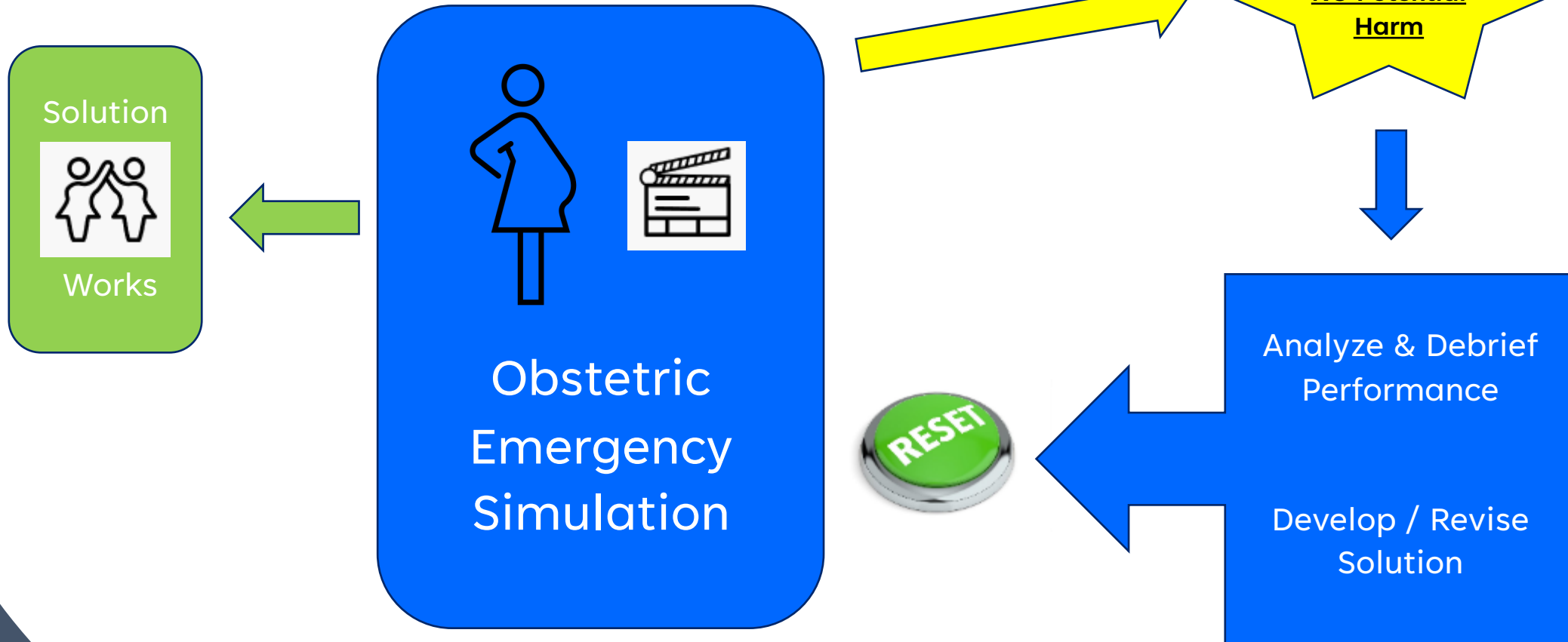


# Without Simulation





# With Simulation



- **NO Risk to Patients**
- **Practice, Practice, Practice**

# In-Situ Obstetric Simulation Training

- Allows actual teams to train together
- Permits hospitals to practice and refine protocols
- Ability to identify systems / facilities issues
- Can be used to test new wards / procedures



# National Simulation Requirements

<b>Rationale</b>	Having all supplies to treat hemorrhage in one place is essential to minimizing delays in treatment. Using defined processes during emergencies has been shown to improve adherence to recommended processes of care. Each organization should complete an assessment to determine the number of kits needed and the location to store them for easy access.
<b>Reference</b>	<p>Agarwala AV, et al. "Bringing Perioperative Emergency Manuals to Your Institution: A "How To" From Concept to Implementation in 10 Steps." <i>The Joint Commission Journal on Quality and Patient Safety</i>. 2019;45(3):170-179.</p> <p>Bereknyei MS, et al. "Use of an Emergency Manual During an Intraoperative Cardiac Arrest by an Interprofessional Team: A Positive-Exemplar Case Study of a New Patient Safety Tool." <i>The Joint Commission Journal on Quality and Patient Safety</i>. 2018;44(8):477-484.</p> <p>World Health Organization. WHO Recommendations for the Prevention and Treatment of Postpartum Hemorrhage. Geneva, Switzerland: World Health Organization. 2012.</p>
<b>Requirement</b>	EP 4: Provide role-specific education to all staff and providers who treat pregnant and postpartum patients about the organization's hemorrhage procedure. At a minimum, education occurs at orientation, whenever changes to the processes or procedures occur, or every two years.
<b>Rationale</b>	For the care team to function optimally in a true emergency, it is essential that all members know the procedures they should follow in the event of hemorrhage. Although not required, in situ simulations that allow staff to practice organizational procedures in actual clinical settings are encouraged.
<b>Reference</b>	<p>Committee on Practice, Bulletins-Obstetrics. "Practice Bulletin No. 183: Postpartum Hemorrhage." <i>Obstetrics &amp; Gynecology</i>. 2017;130(4):e168-e186.</p> <p>American College of Obstetricians and Gynecologists. "Preparing for Clinical Emergencies in Obstetrics and Gynecology." ACOG Committee Opinion No. 590. <i>Obstetrics &amp; Gynecology</i>. 2014;123:722-725.</p>
<b>Requirement</b>	EP 5: Conduct drills at least annually to determine system issues as part of on-going quality improvement efforts. Drills include representation from each discipline identified in the organization's hemorrhage response procedure and include a team debrief after the drill.
<b>Rationale</b>	Multidisciplinary drills give an organization the opportunity to practice skills and identify system issues (e.g., unwillingness of the blood bank to release blood products despite authorization for this in the procedure) in a controlled environment. It is crucial to have members from as many disciplines identified in the organization's response procedure as possible available during drills to be able to test each level of the emergency and identify areas of improvement. This is crucial for identifying weaknesses in the response system and to identify opportunities for improvement. Organizations should assess their level of proficiency to determine the frequency drills should be performed; organizations that have

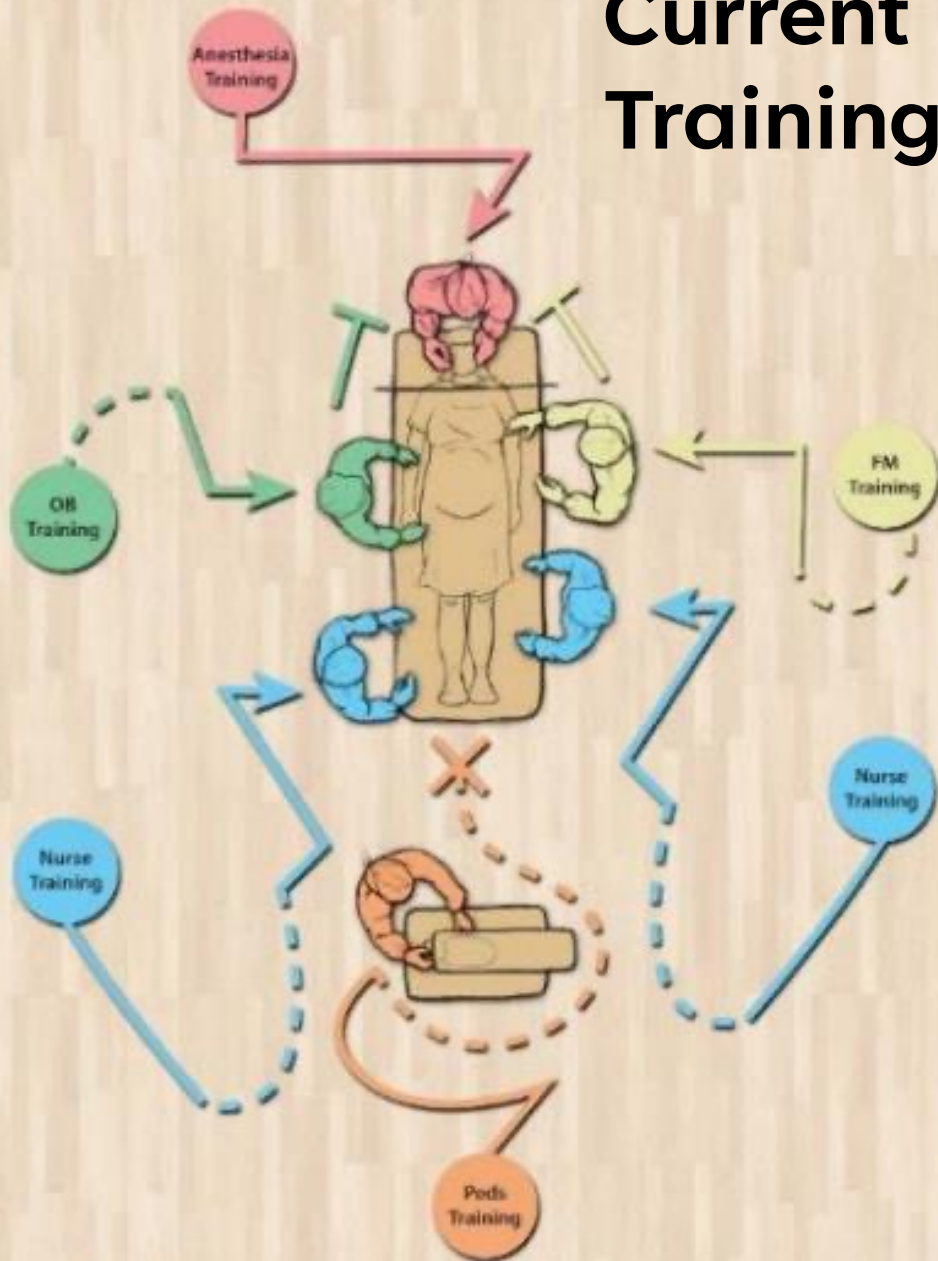
# Joint Commission Requirements 1 January 2021



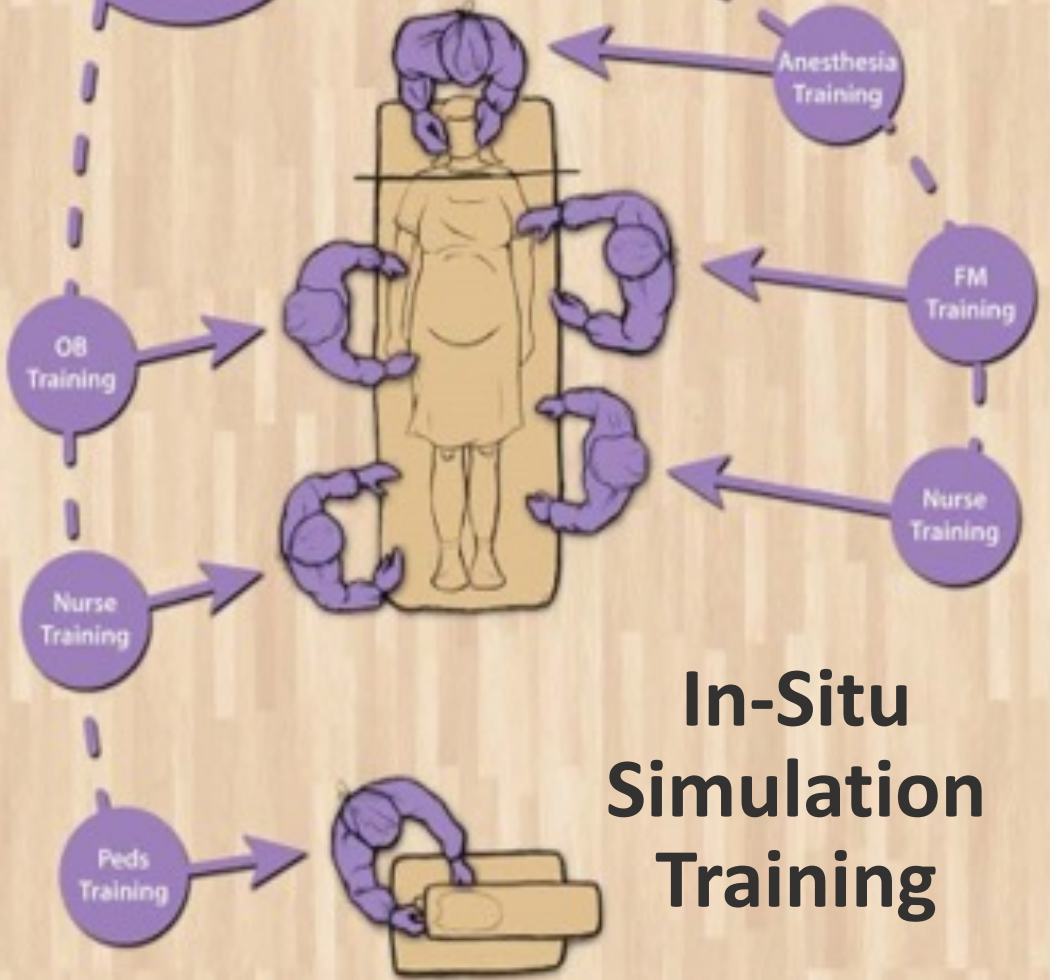
# Teamwork Training



# Current Training



# Standardized Training



# In-Situ Simulation Training



# TEAMWORK & COMMUNICATION

*The Joint Commission Journal on Quality and Patient Safety*

## Teamwork and Communication

### Didactic and Simulation Nontechnical Skills Team Training to Improve Perinatal Patient Outcomes in a Community Hospital

*William Riley, Ph.D.; Stanley Davis, M.D.; Kristi Miller, R.N., M.S.; Helen Hansen, Ph.D., R.N.; Francois Sainfort, Ph.D.; Robert Sweet, M.D.*

Birth trauma is a low-frequency, high-severity event that makes obstetrics a major challenge for patient safety in the hospital setting. At least 1.5% of hospitalized obstetric patients in the United States experience an adverse event,<sup>1</sup> and communication failure is associated with 72% of root cause analyses of sentinel events in perinatal units.<sup>2</sup> Despite tremendous individual commitment and the conscientious efforts of superbly trained professionals, high reliability is not a dominant feature of the health care delivery system.<sup>3</sup> The United States ranks 17th in the world in the perinatal mortality rate, largely because of obstetric causes,<sup>4</sup> and 29th worldwide in infant mortality—near the bottom of industrialized nations.<sup>5</sup>

Nontechnical skills (NTS) are the cognitive and interpersonal skills, supplementing clinical and technical skills, necessary to ensure safe patient care.<sup>6,7</sup> Two of the foremost NTS in health care are communication and teamwork,<sup>8,9</sup> both of which have

#### Article-at-a-Glance

**Background:** Birth trauma is a low-frequency, high-severity event, making obstetrics a major challenge for patient safety. Yet, few strategies have been shown to eliminate preventable perinatal harm. Interdisciplinary team training was prospectively evaluated to assess the relative impact of two different learning modalities to improve nontechnical skills (NTS)—the cognitive and interpersonal skills, such as communication and teamwork, that supplement clinical and technical skills and are necessary to ensure safe patient care.

**Methods:** Between 2005 and 2008, perinatal morbidity and mortality data were prospectively collected using the Weighted Adverse Outcomes Score (WAOS) and a culture of safety survey (Safety Attitudes Questionnaire) at three small-sized community hospitals. In a small cluster randomized

Prospective Pre / Post-Intervention evaluation of 3 community hospitals

Hospital 1: No Interventions (Control)

Hospital 2: TeamSTEPPS Didactic Training only

Hospital 3: TeamSTEPPS Didactic Training + In-situ Simulation Drills

Collected data prospectively from 2005-2008

Measured the Weighted Adverse Outcomes Score (WAOS)

Set of 10 adverse outcomes weighted based on severity

**Study Design**



# Results

*The Joint Commission Journal on Quality and Patient Safety*

**Table 2. Pre-Intervention and Postintervention WAOS Means (and Standard Deviations)\***

Hospital	Pre-intervention Mean (SD)	Postintervention Mean (SD)	% Change (Pre to Post)
Full Intervention	1.15 (0.47)	0.72 (0.12)	-37.4%†
Didactic-Only	1.46 (1.05)	1.45 (0.82)	-1.0%
Control	1.05 (0.79)	1.50 (0.35)	+42.7%

\* WAOS, Weighted Adverse Outcomes Score; SD, standard deviation.  
† Significant at the .05 level.

Riley et al, 2011

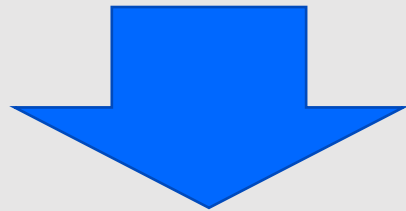
“Thus, in situ simulation appears necessary to realize the full potential of teamwork and communication training.”



# California Maternal Quality Care Collaborative (CMQCC)

Distributed PPH Safety Bundle with unit-based simulation drills

99  
hospitals implemented PPH  
training program



20.8%  
Reduction in  
SMM

48  
hospitals did NOT implement



1.2%  
Reduction  
in SMM

# OB-STaT Program

- Mobile teams deployed to sites to implement program over 2-5 days
  - Subject matter experts / Trainers:
    - OB
    - Anesthesia
    - Nursing
    - Pediatrics
    - Simulation operators
    - Standardized patients
- Program Components
  - 4-hour interprofessional team-based postpartum hemorrhage simulation training.
  - Pre-training knowledge assessment
  - Formative simulation session with debriefing / skills station practice
  - Summative simulation scenario with debriefing and post-training knowledge assessment

Trained 54 teams at 8 U.S. Navy MTFs (hospitals)

Over 1,000 providers underwent training with the OB-STaT program

Clinical outcomes documented for 9,980 deliveries before/after training

# Results – Knowledge & Teamwork

- Knowledge test scores increased after training

(8.3 +/- 1.6 vs. **8.6** +/- 1.5,  $P < 0.01$ )

- Clinical Teamwork Scale Scores improved between scenarios

(5.8 +/- 2.0 vs. **7.25** +/- 1.9,  $P < 0.01$ )

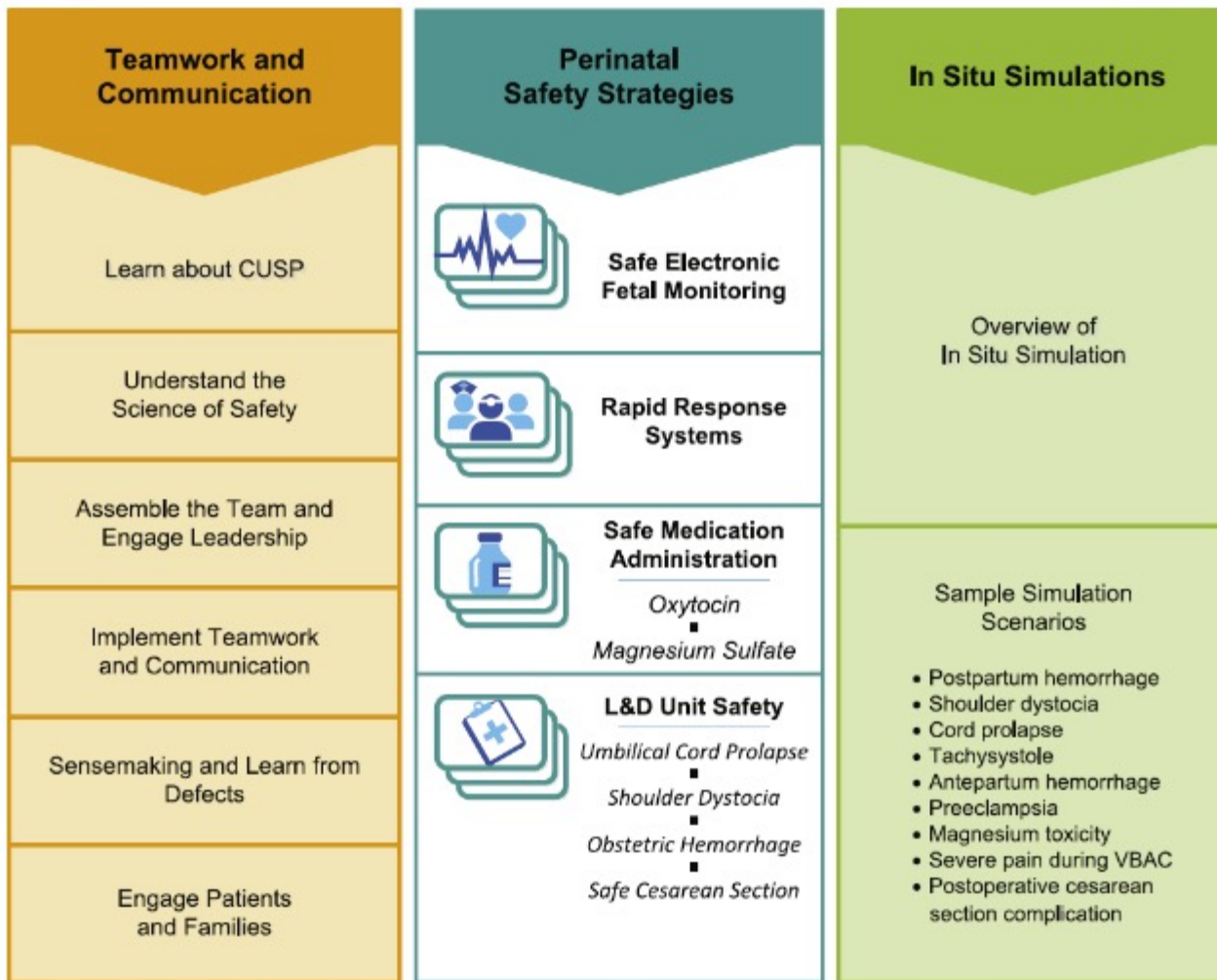


# Results – Clinical Outcomes

- Significantly more teams gave medications to treat postpartum hemorrhage (**51% after vs 15% before**)
- Tranexamic acid (TXA) was used more frequently after simulation training



- Maternal morbidity decreased significantly from **6.3% to 5.2% (p = 0.028)**



- 46 Institutions Participated



**Figure 1:** The AHRQ Safety Program for Perinatal Care consisted of three components: (1) teamwork and communication training (largely based on the comprehensive unit-based safety program (CUSP)); (2) specific perinatal safety strategies such as safe electronic fetal monitoring, rapid response systems, safe medication administration, and L&D unit safety for specific conditions or care processes); and (3) a program of in situ simulation.

29% of institutions had in-situ simulation program



58% had in-situ simulation programs by the end of the study

“During the pilot implementation phase, in situ simulation was the most challenging pillar to implement and units requested additional guidance and resources.”

## Challenges:

- Staff time
- Physician engagement
- Competing priorities
- Lack of time for cultural change

*“I think they [in situ simulations] have been so incredibly helpful; it gets people talking...WE learned so much every time WE [did] one. A lot of times, you learn stuff that you had no idea was an issue until you play it through.”*

# Statewide Implementation of Obstetric Simulation Training

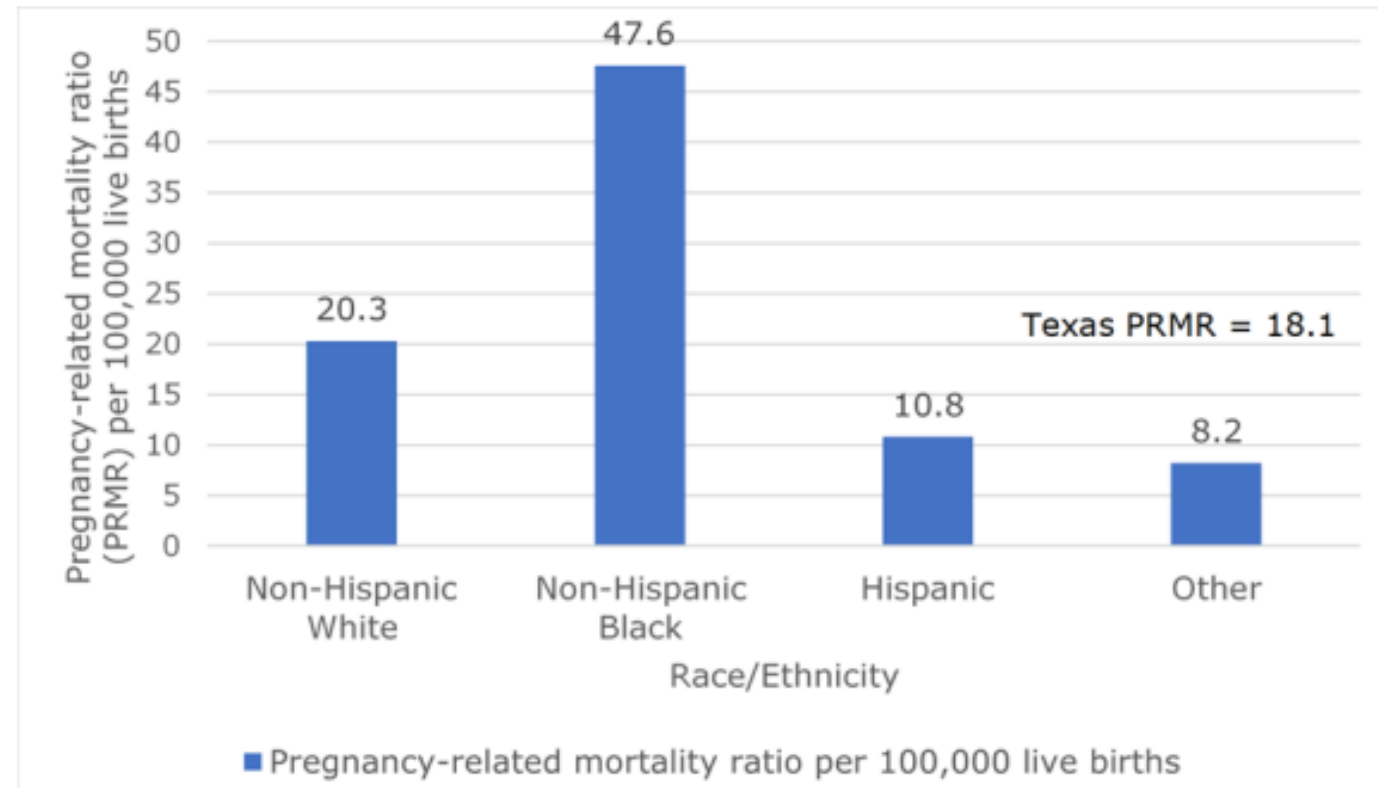
# Texas Maternal Mortality & Morbidity Review 2022

90% of all pregnancy-related deaths were preventable

Majority of cases resulting in death related to:

- Obstetric hemorrhage (25%)
- Mental health conditions (17%)
- Thrombotic embolism (12%)
- Injury (10%)
- Cardiovascular conditions (8%)
- Infection (8%)

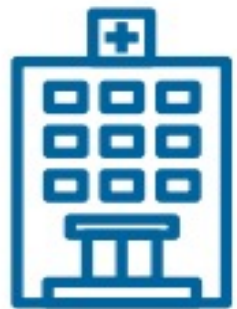
Figure E-1. PRMR by Race and Ethnicity, Texas, 2013





# TexasAIM Initiative

A collaboration of the Texas Hospital Association, Texas Department of State Health Services and Texas hospitals.



**219**  
TEXAS  
HOSPITALS  
Participating

**98%**

of Hospitals in  
THE STATE  
that Provide  
**BIRTHING SERVICES**





# Alliance for Innovation on Maternal Health (AIM)

AIM is a national data-driven maternal safety and quality improvement initiative based on interdisciplinary consensus-based practices to improving maternal safety and outcomes.

The program provides implementation and data support for the adoption of evidence-based patient safety bundles.

AIM works through state teams and health systems to align national, state, and hospital level engagement efforts to improve overall maternal health outcomes.

# PATIENT SAFETY BUNDLES



## WHAT ARE PATIENT SAFETY BUNDLES (PSBs)?

Patient Safety Bundles are a structured way of improving the processes of care and patient outcomes. Patient safety bundles are collections of evidence-informed best practices, developed by multidisciplinary experts, which address clinically specific conditions in pregnant and postpartum people.

The goal of PSBs is to improve the way care is provided to improve outcomes. A bundle includes actionable steps that can be adapted to a variety of facilities and resource levels.

# CORE AIM PATIENT SAFETY BUNDLES



Obstetric Hemorrhage



Severe Hypertension in Pregnancy



Safe Reduction of Primary Cesarean Birth



Cardiac Conditions in Obstetric Care



Care for Pregnant and Postpartum People with Substance Use Disorder



Perinatal Mental Health Conditions



Postpartum Discharge Transition



Sepsis in Obstetrical Care



ALLIANCE FOR INNOVATION  
ON MATERNAL HEALTH



Obstetric Hemorrhage  
Patient Safety Bundle

# AIM Patient Safety Bundle Components

READINESS



RECOGNITION & PREVENTION



RESPONSE



REPORTING & SYSTEMS LEARNING

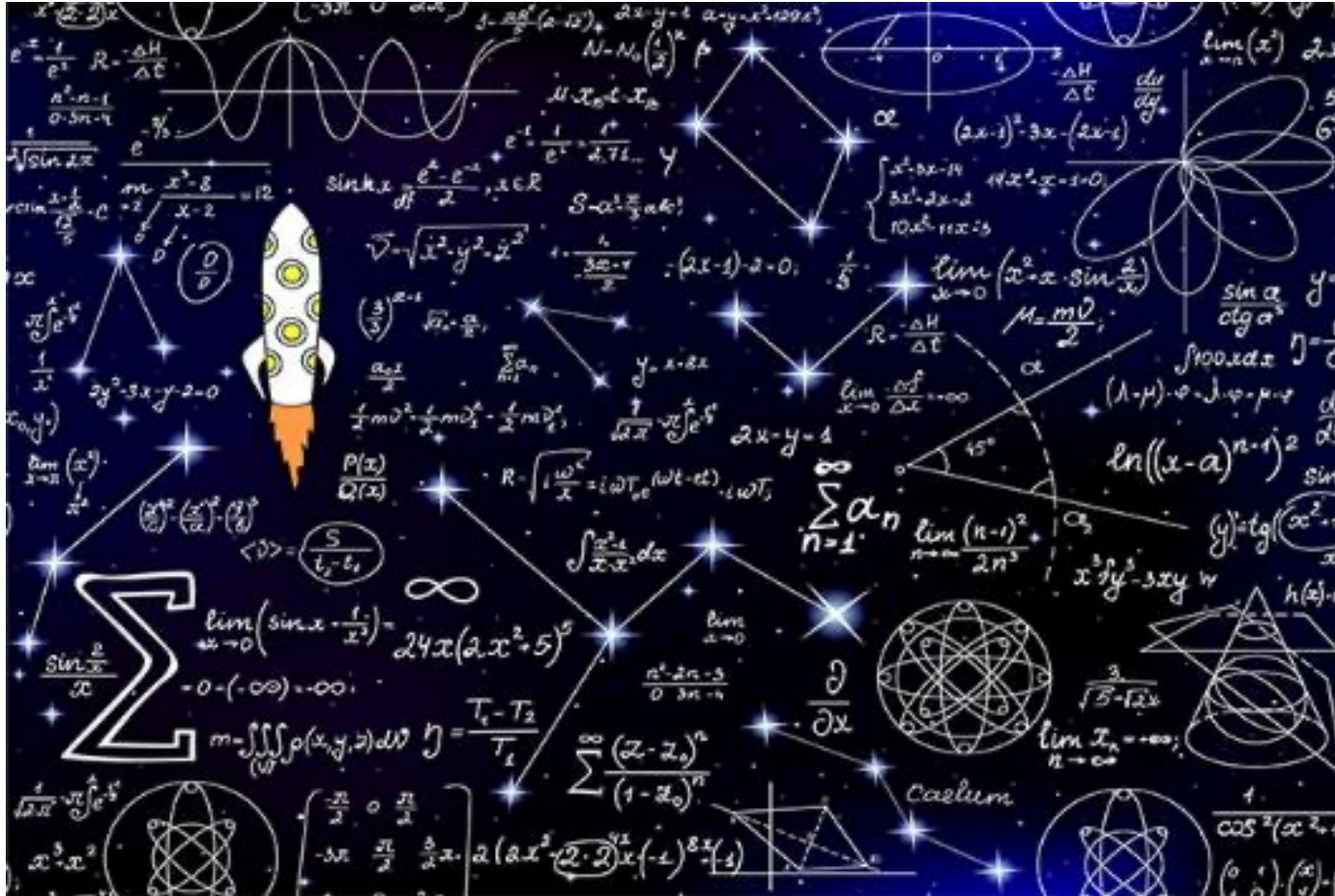


RESPECTFUL, EQUITABLE & SUPPORTIVE  
CARE





# Implementation



It's not rocket science ....

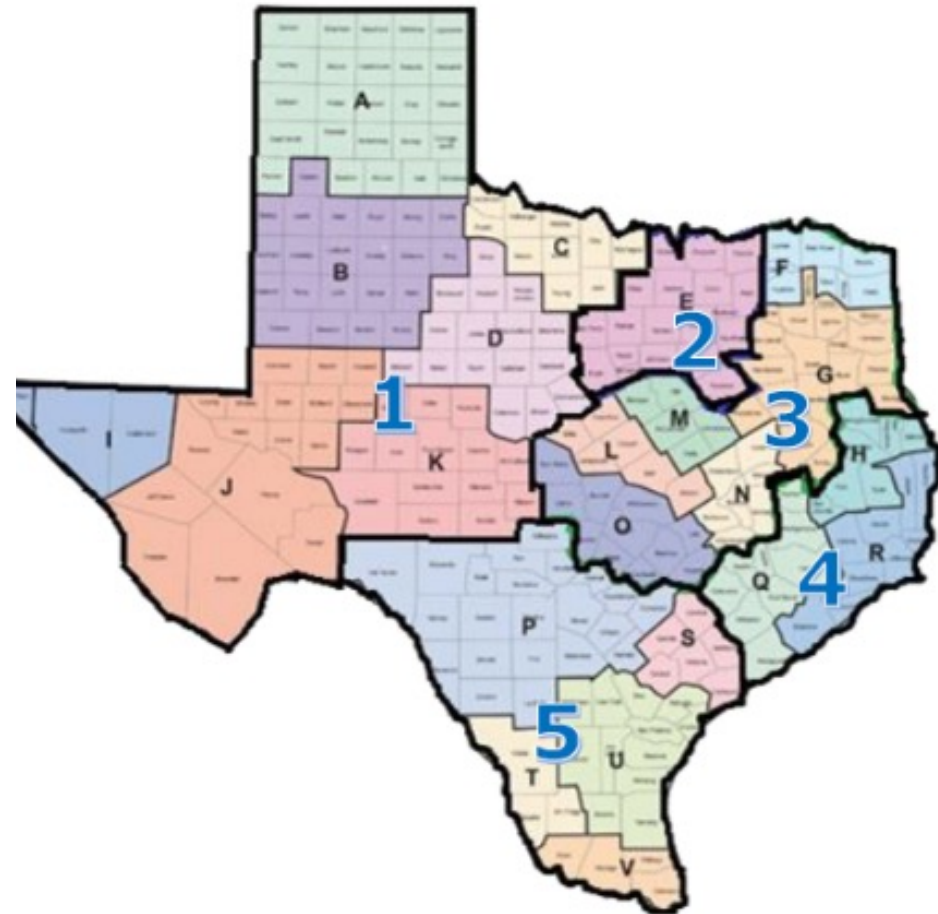
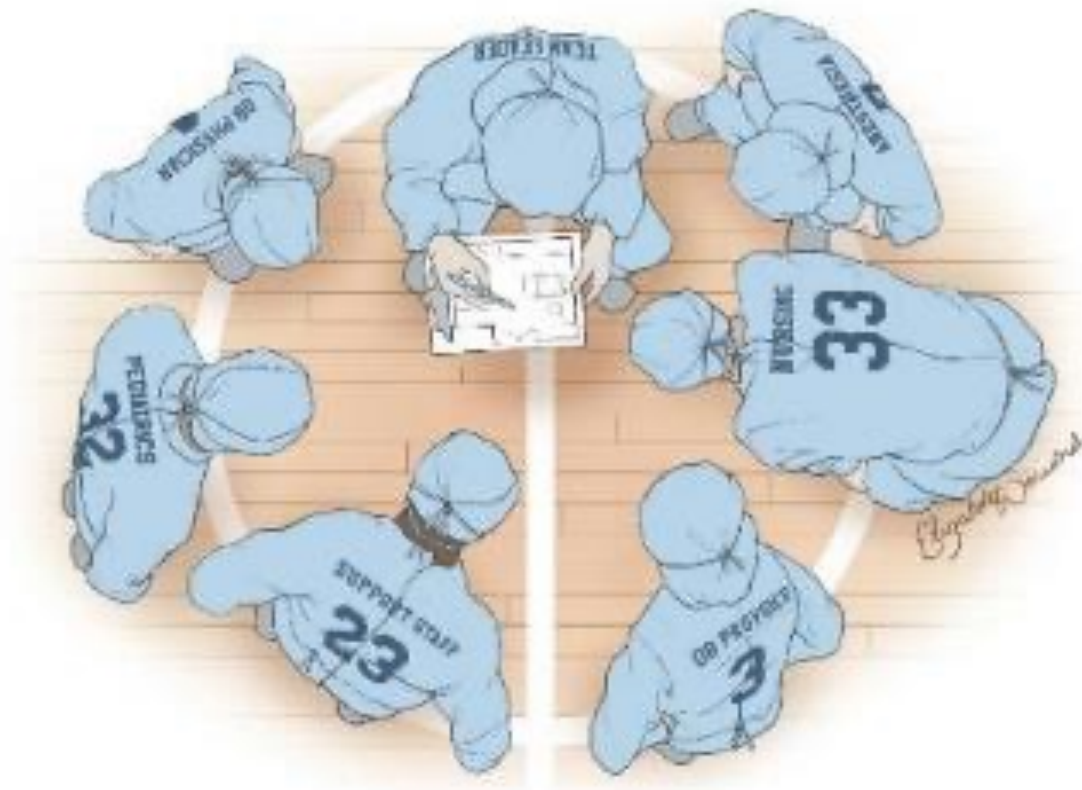
It's harder!



# Implementation Strategy

Use Council on Patient Safety endorsed postpartum hemorrhage simulation program manual to do team training/mentoring with Texas Hospital teams

Strategically locate sim events to facilitate regional access by 5 Texas cohorts





## ALLIANCE FOR INNOVATION ON MATERNAL HEALTH

A quality improvement initiative to support best practices that make birth safer, improve maternal health outcomes and save lives.

[HOME](#) [ABOUT US](#) [PATIENT SAFETY BUNDLES](#) [AIM CORNERSTONES](#) [RESOURCES](#) [AIM DATA](#) [COLLABORATIVE STRATEGIES](#) [CONTACT](#)



## AIM PATIENT SAFETY BUNDLES

AIM develops multidisciplinary, clinical-condition specific patient safety bundles to support best practices that make birth safer. [LEARN MORE](#)

---

## SIMULATION AND DRILLS FOR PATIENT SAFETY

Imagine your favorite sports team. Now imagine them making a mistake on a critical play because they have not had enough time to practice together. Lack of structured team practice can lead to minimal connection and chemistry between team members – call this culture.

It is critically important that members of the health care team are educated and are readily able to recognize, diagnose, treat, and manage medical emergencies in pregnancy and the postpartum period.

<https://saferbirth.org/aim-resources/aim-cornerstones/simulations/>





## Practicing for patients: obstetric in-situ drills program


Implementation of In-Situ Obstetric Simulation for  
Alliance for Innovation on Maternal Health (AIM) Bundles




# What is Practicing For Patients?

Built by the ACOG Simulation Working Group in collaboration with the Council on Patient Safety in Women's Health Care

National multi-disciplinary program to help hospitals run in-situ postpartum hemorrhage simulations that directly relate to AIM safety bundles



COUNCIL ON PATIENT SAFETY  
IN WOMEN'S HEALTH CARE  
safe health care for every woman



PRACTICING FOR  
PATIENTS

**Obstetric Drill Program Manual  
Postpartum Hemorrhage**

**Case 1: Postpartum Hemorrhage Secondary to Uterine Atony**

**Learning Objectives**  
By the end of this scenario, each care team member should be able to successfully do the following:

- Recognize risk factors for postpartum hemorrhage.
- Identify postpartum hemorrhage due to uterine atony and be able to treat with appropriate medical management.
- Demonstrate teamwork and communication skills during a simulated postpartum hemorrhage.

**Planned Completion Points**  
To successfully complete this scenario, the care team should successfully do the following:

- Recognize uterine atony as the etiology for postpartum hemorrhage.
- Perform uterine massage.
- Administer two different uterotonic medications.
- Call for blood (e.g. 2 units of PRBCs).

OR

- If 10 minutes has elapsed after recognition of hemorrhage and the team has not corrected the hemorrhage or called for blood.

**Expected Duration**  
Approximately 60 minutes (30 minutes for simulation / 30 minutes for debriefing).

**Case Scenario**

▶ **Patient: Maria Smith**  
Mrs. Maria Smith is a 38-year-old G3P2012 who was admitted in active labor at 39+3 weeks and had a spontaneous vaginal delivery 30 minutes ago. Her delivery was uncomplicated. She had a first-degree laceration that did not require repair. She is approximately 30 minutes postpartum and has just called out because she feels dizzy and has more bleeding.

▶ **Patient Information**

- She has no significant past medical history.
- She has no known drug allergies.
- Her pregnancy was uncomplicated except for an elevated 1-hour glucose screen with a normal 3-hour glucose tolerance test.

**Team Review and Debriefing Form: Postpartum Hemorrhage**

**READINESS**

	Yes/No	Opportunity for Improvement
Hemorrhage cart stocked with all needed supplies		
Hemorrhage medications immediately available		
Emergency response team established		
Massive transfusion protocol available		
Emergency blood release protocol available		

**RECOGNITION & PREVENTION**

Review risk factors for hemorrhage in this patient. (List factors)

\_\_\_\_\_











\_\_\_\_\_

\_\_\_\_\_

**RESPONSE**

ASSESSMENT/ACTION	EVALUATION		
	Done	Not Done	Improvement Opportunity
Provider/Team recognizes PPH in timely manner			
Team calls for hemorrhage cart			
Provider/Team calls for additional assistance			
Team inspects for lacerations			
Provider checks for retained products of conception			
Team diagnoses etiology of hemorrhage accurately			
Team administers uterotonics			
Team communicates about ongoing blood loss			
Team places second IV			
Team orders labs (CBC/PT/PTT)			
Team considers placements of Foley catheter to monitor urine output			
Team considers administering TXA			
Team places uterine balloon or uterine packing			
Team recognizes need for operative management of PPH in timely manner			
Team counsels the patient/family on the need for operative management, including potential need for hysterectomy			
Team considers transfer to other facility			

## SAMPLE CASE SCENARIOS

-  HYPERTENSION CASE SCENARIO 1
-  HEMORRHAGE CASE SCENARIO 1
-  HYPERTENSION CASE SCENARIO 2
-  HEMORRHAGE CASE SCENARIO 2
-  HYPERTENSION CASE SCENARIO 3
-  HEMORRHAGE CASE SCENARIO 3
-  HYPERTENSION SCENARIO TRAINING AIDS
-  FETAL HEART RATE TONES TRAINING AIDS
-  HEMORRHAGE SCENARIOS VISUAL AIDS
-  ADDITIONAL HEMORRHAGE CASE SCENARIOS



### TEAM REVIEW AND DEBRIEFING

- SEVERE HYPERTENSION FORM
- OBSTETRIC HEMORRHAGE FORM









### TEAM BASED COMMUNICATION TRAINING

- TEAM STEPPS

### PROTOCOL CHANGE FORM AND IMPLEMENTATION ACTION PLAN

- IN-SITU DRILLS FACILITY PROTOCOL CHANGE FORM
- PRACTICING FOR PATIENTS IMPLEMENTATION ACTION PLAN

## SAMPLE CASE VIDEOS

-  SEVERE HYPERTENSION CASE 1
-  SEVERE HYPERTENSION CASE 2
-  SEVERE HYPERTENSION CASE 3
-  OBSTETRIC HEMORRHAGE - REQUIRING UTERINE TAMPONADE
-  OBSTETRIC HEMORRHAGE - REQUIRING UTEROTONICS
-  OBSTETRIC HEMORRHAGE WITH RETAINED PRODUCTS





**BP: 130/80 | HR: 105**  
**EBL: 500cc**

Practicing for Patients: PPH Requiring Uterotonics

7,268,139 views • May 15, 2019

10K DISLIKE SHARE SAVE ...



Council on Patient Safety in Women's Health Care  
26.9K subscribers

SUBSCRIBE



# SIMULATION CASE EXAMPLE



## 5.0 Case Flow/Algorithm with branch point and completion criteria:

Simulation facilitator will introduce the scenario to the team outside the room and then bring primary bedside provider to the patient's room and then read them the patient scenario.

The OB Nurse should then enter the room, assess the patient, and then call for assistance as seizure begins.

"Initial" Vital Signs and FHR tracing should be on monitor. Vital signs may be repeated but will remain in mild HTN range.

Patient should explain symptoms (headache and blurry vision). After brief history is taken she will begin to have an eclamptic seizure.



OB Provider/team enters room when called and are briefed by OB Nurse  
"During seizure" Vital Signs and FHR tracing should be available



OB Team should care for patient (put up handrails/place patient in left lateral position/continuous maternal pulse oximeter in place)  
IV magnesium sulfate should be initiated.  
IV antihypertensives should be administered for severe range HTN



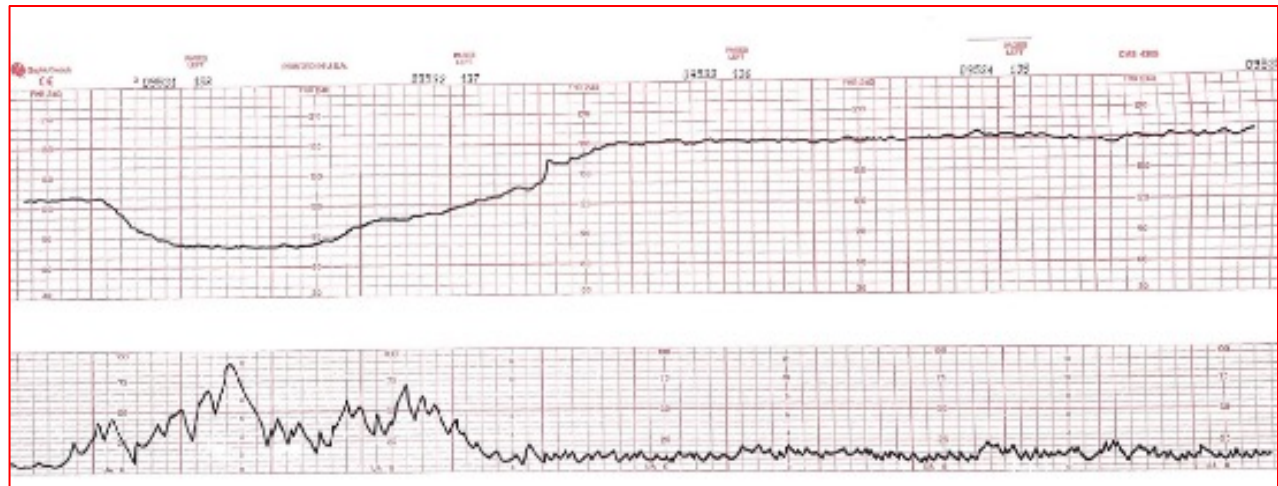
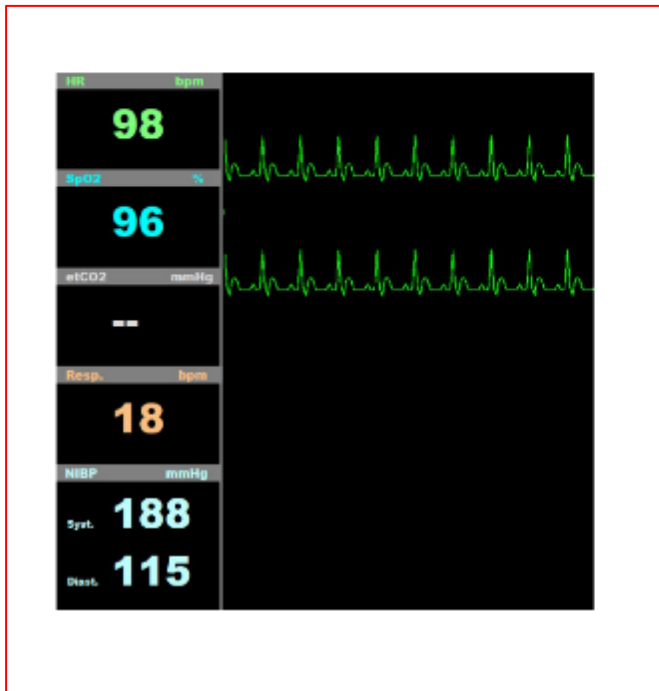
After approximately 2 minutes, the patient will stop seizing.  
"After seizure" Vital Signs and FHR tracing should be on monitor\*

\* The vitals shown will depend on whether or not antihypertensive medications were administered



Team should discuss the delivery plan and further management. They may talk with the patient/ family members about additional care and delivery.

VITAL SIGNS
START
BP: 145/99
HR: 81 bpm
O2 sat: 98% on RA
RR: 18
VITALS DURING SZ
BP: 170/105
HR: 110 bpm
O2 sat: 82% (increase to 93% with supplemental O2)
RR: 6
VITALS AFTER ANTIHYPERTENSIVE MED GIVEN
BP: 150/97
HR: 110 bpm
O2 sat: 82% (increase to 93% with supplemental O2)
RR: 8
VITALS AFTER SEIZURE ENDS
BP: 155/92 (if antihypertensive given) OR 179/107 (if no antihypertensives were given)
HR: 100 bpm
O2 sat: 98% on RA
RR: 18



VITAL SIGNS DURING THE ECLAMPTIC SEIZURE





Teamwork and communication are essential to quality healthcare and patient safety. TeamSTEPPS® (Team Strategies and Tools to Enhance Performance and Patient Safety) is an evidence-based teamwork system aimed at optimizing patient outcomes by improving communication and other teamwork skills among healthcare professionals.

## KEY TeamSTEPPS® CONCEPTS AND TOOLS RELATED TO OBSTETRIC EMERGENCIES

### READINESS

- **Brief:** a short planning session prior to an event or shift.  
Ex: patient has risk factors for PPH, let's be prepared with equipment/medications.
- **Huddle:** a quick meeting to share information and regain situation awareness.  
Ex: team discusses causes for PPH, uterotonics given, plans for going to the OR or obtaining additional help as needed.

### RECOGNITION & PREVENTION

- **Situation Awareness:** state of mindfulness and knowing external factors that may affect care.
- **Cross Monitoring:** watching each other's back and speaking up if you notice something.

### RESPONSE

- **SBAR:** brief summary of Situation-Background-Assessment-Recommendation that is critical information provided to team members as they arrive to an event.  
Ex: "We are having a postpartum hemorrhage with uterine atony. Patient is a 42y/o G5P5 s/p NSVD 1 hour ago. QBL is 1200cc, BP 95/60. I have given oxytocin and called for methergine."
- **Call-Out:** critical information that is relayed clear, concise and timely to team  
Ex: "The patient's blood pressure has increased to 180/60 and we need to administer an antihypertensive medication."



## Teamwork and Communication in Obstetrical Emergencies



- **Check Back:** closed-loop communication to ensure that information conveyed by the sender is understood by the receiver and acknowledged  
Ex: Doctor "The patient's blood pressure has increased to 180/106 and we need to administer an antihypertensive medication."  
Nurse "Doctor, what medication would you like me to administer to treat the increased blood pressure?"
- **Psychological Safety:** team members are encouraged to speak up for patient safety.
- **Role Clarity:** assign specific tasks to team members.
- **Shared Mental Model:** team members have a common goal which is communicated.
- **Handoff:** transfer of information during transitions in care.

### REPORTING

- **Debrief:** a nonjudgmental team meeting after an event discussing lessons learned and reinforcing positive behaviors, essential to process improvement.  
Ex: all team members after event, what went well, what should we change



## Teamwork and Communication in Obstetrical Emergencies



## Team Review and Debriefing Form: Severe Hypertension

### READINESS

	Yes/No	Opportunity for Improvement
Standard early warning signs, monitoring and diagnostic criteria established for severe preeclampsia/eclampsia		
Severe hypertension treatment algorithm available		
Triage process for pregnant/postpartum hypertensive women established for all service areas, including outpatient and non-obstetric areas		
Anti-hypertension medications immediately available		
Escalation plan in place, including criteria for consultation and maternal transport (if indicated)		

### RECOGNITION & PREVENTION

Review proper technique for measurement of blood pressure (describe proper technique):

\_\_\_\_\_

\_\_\_\_\_

Review maternal early warning signs for preeclampsia/eclampsia (list signs):

\_\_\_\_\_

\_\_\_\_\_

### RESPONSE

ASSESSMENT/ACTION	EVALUATION				Notes
	Done	Not Done	Improvement Opportunity	N/A for Scenario	
<b>Provider or team:</b>					
Recognizes severe hypertension in a timely manner					
Calls for additional assistance					
Elicits patient history of severe symptoms (headache, vision changes and/or RUQ pain)					
Orders labs (CBC, Cr, AST) and urine protein/creatinine					
Administers antihypertensive agent for severe range hypertension					
Orders magnesium sulfate for seizure prophylaxis					
Considers Foley catheter placement to monitor urine output					
Reassesses BP and re-treats severe range blood pressures at appropriate intervals					
Communicates about preeclampsia/eclampsia diagnosis and management plan					

Date of In-situ Drill: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

### IDENTIFIED ISSUES

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### POTENTIAL SOLUTIONS

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Individual Assigned to Complete this Project: \_\_\_\_\_

Date Solution Implemented: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Date of Repeat Drill to Evaluate Solution(s): \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Note: publicize finding, publicize solution with dates

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Standardization of health care processes and reduced variation has been shown to improve outcomes and quality of care. The Council on Patient Safety in Women's Health Care disseminates patient safety tools to help facilitate the standardization process. This tool reflects emerging clinical, scientific, and patient safety advances as of the date issued and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed. Although the components of a particular tool may be adapted to local resources, standardization within an institution is strongly encouraged.

The Council on Patient Safety in Women's Health Care is a broad consortium of organizations across the spectrum of women's health for the promotion of safe health care for every woman.

# Simple and inexpensive simulators

Ideal to train all institutions on the same equipment they will use when running drills at their hospitals

Excellent low-cost, realistic simulation model is available for postpartum hemorrhage (and can also be used for other simulations as well).

These are being sent out to all Texas AIM hospitals participating

Shipped out in 2021





# Implementation Action Plan

- Goal is to help teams and fill out an action plan specific to their institution
- Handouts provided
- Gave time for questions and mentoring during this course



## Practicing For Patients Implementation Action Plan

**Goal: Implement Practicing For Patients Simulation Drills on your Obstetric Unit to Improve Communication and Patient Outcomes**

1. Who do you need to include for your presentation on the program to obtain support?

a. Leadership:

Position	Name	Email
Administration		
Department Chair/Chief		
Nursing Leadership		
Other		

b. Key staff / Faculty:

Position	Name	Email
Nursing Lead		
Physician Lead		
Anesthesia		
Blood Bank		
Laboratory		
Other		

2. Define when Simulation training will occur (scheduled vs. unannounced, after morning rounds, before shift changes, etc.)



Holiday Inn  
San Antonio - Riverwalk  
217 North Saint Mary's St.  
San Antonio, TX



# TexasAIM Safe Care for Every Mother

## TexasAIM Plus Severe Hypertension in Pregnancy Learning Collaborative 2.0

### Cohort 5 Learning Session 2 Agenda

September 25 & 26, 2023

Day 1: Monday, Sept. 25 7:00 AM - 5:00 PM

7:00 AM

**New Members Orientation Session**  
Registration, Storyboard Set-Up, Continental Breakfast

8:00 AM

Welcome, Overview, & Introductions  
State of the Collaborative  
Learning from Patients

**Break**

**Model for Improvement: Accelerating Improvement**  
Practicing for Patients – Severe Hypertension in Pregnancy In Situ Simulation Train the Trainer Course Overview

**Lunch**

Practicing for Patients – Severe Hypertension in Pregnancy In Situ Simulation Train the Trainer Course Simulation Stations 1 & 2

Learning from Each Other: Storyboards

Team Time: From Ideas to Action  
Preparing for Day 2

**Adjourn**

5:00 PM

Optional Office Hours at 5:15 PM







# 2021 Transition - Virtual!



Created HTN / Eclampsia simulation module based on Practicing for Patients



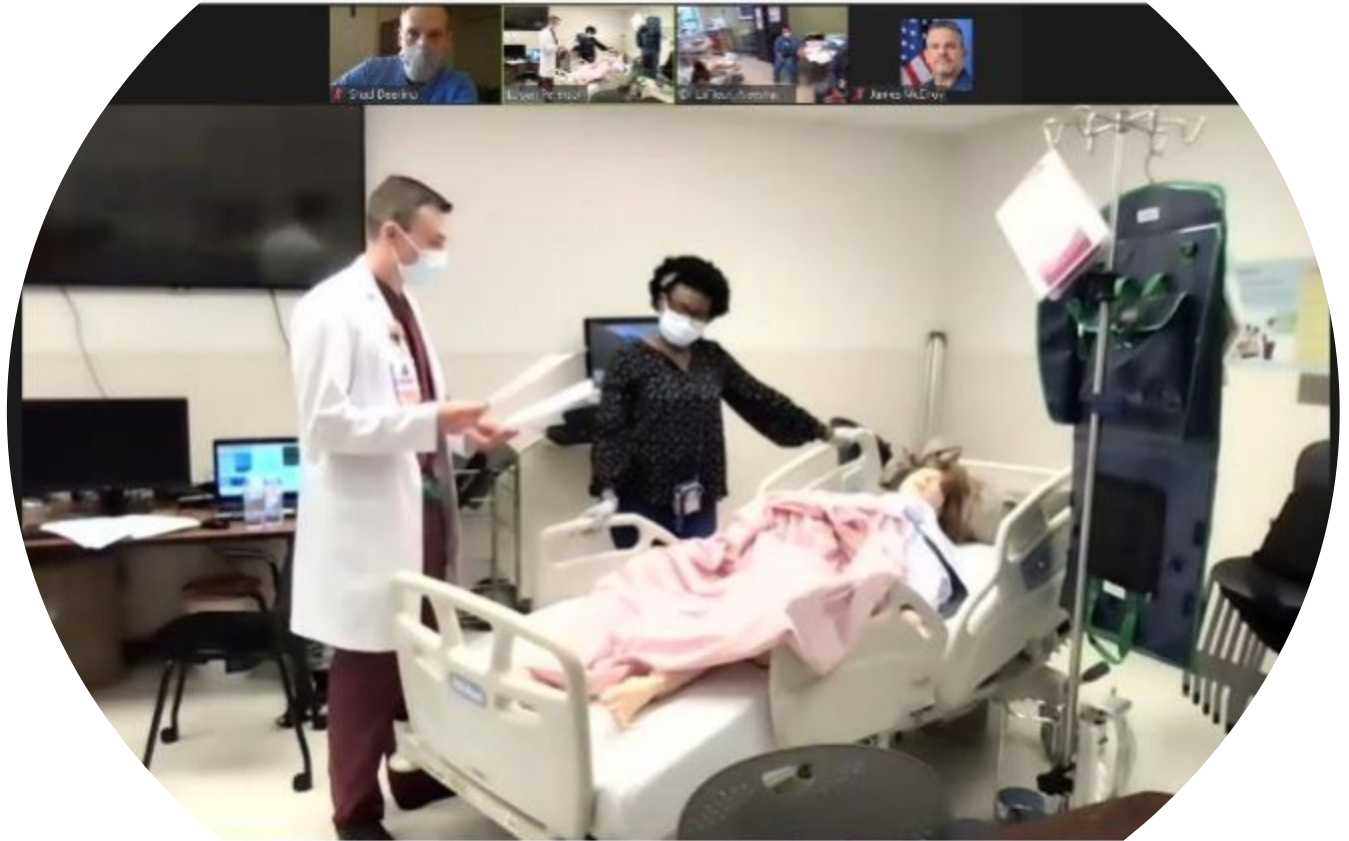
Made main manual more generic so that additional topics can be added



Checklists for debriefing and evaluation rolled out virtual simulation instructor courses



Worked with all Cohorts to train to run in-situ simulations



**# Hospitals**

**98**

**# Participants**

**554**

# TexasAIM Initiative

2023



## HTN SIMULATION REBOOT/UPDATES

- Revised simulations for Hypertensive Emergencies
- Included Social Drivers/Determinants of Health (SDOH)
- Hospital level SDOH Simulation



# Teamwork Simulation

## Sustainment Options



# Goals for TX AIM Teamwork Simulation Program

1

Maintain the **momentum** and gains from the current learning collaborative.

2

Build on the simulation training **foundation** already created through training to date.

3

Create a program that will be an **example and guide** for other state and national programs.

4

Prepare all TX AIM institutions to implement **future AIM bundles** and initiatives.

# Create Simulation Leadership Teams

- Consist of a Physician AND Nurse
- Recruit a Leadership Team for each Cohort
- Responsible for oversight of training within their Cohort and mentoring / follow-up coaching



Program implementation required active participation from multidisciplinary teams. Although safety improvements in many L&D units were relentlessly spearheaded by nurses, some had limited effectiveness due to lack of physician engagement. Physician champions had to carve out time for the program activities around other responsibilities and thus were minimally involved. Many nurses described engaging physicians on their units as “insanely difficult” and “almost impossible.” Hospitals that had active physician champions were more likely to engage other physicians and disciplines.

The Joint Commission Journal on Quality and Patient Safety 2019; 45:231–240

## Impact of the Agency for Healthcare Research and Quality's Safety Program for Perinatal Care

*Leila C. Kahwati, MD, MPH; Asta V. Sorensen, MA; Stephanie Teixeira-Poit, PhD; Sara Jacobs, PhD; Samantha A. Sommerness, DNP, APRN, CNM; Kristi K. Miller, RN, MS; Elizabeth Pleasants, BA; Hanna Margaret Clare, BA; Charles L. Hirt, MD; Stanley E. Davis, MD; Thomas Ivester, MD, MPH; Donna Caldwell, PhD; Janet H. Muri, MBA; Kamila B. Mistry, PhD, MPH*

# Simulation Leader Instructor Course

- Create a more comprehensive but focused **simulation leader instructor course**
- Run this course on a regular basis to ensure there are always trained simulation instructors for all institutions
- Identify and recruit Simulation Leadership teams, consisting of at least one physician and one nurse, for all 5 TX AIM Cohorts. These leadership teams will attend the simulation leader instructor course.



# Cohort Simulation Training

Through in-person meetings with the cohort member institutions, the Simulation Leadership Teams will train sites in their Cohort on how to manage the in-situ simulation program at their site to include:

- Setup and engagement of local leadership and teams
- Simulation equipment needs and usage
- Debriefing and feedback techniques
- Data collection and reporting
- Provide and teach a simulation template that will allow institutions to create their own unique simulations and then share them with all of TX AIM after they are validated by the TX AIM Simulation Chair



## Cohort Sim Leadership Team **Mentoring**

- Virtual or in-person mentoring times within the next 3-4 months. These will include:
  - Virtual mentoring for in-situ simulations
  - Provide regularly scheduled days to have simulation experts virtually attend and provide feedback on an institution's in-situ simulation drills

## **Follow Up Meetings**

- Quarterly open Teams calls to discuss simulation training progress and “office hours” format to answer any questions that simulation trainers may have.
- Recognition of high performing teams



# Simulation Training Data Collection

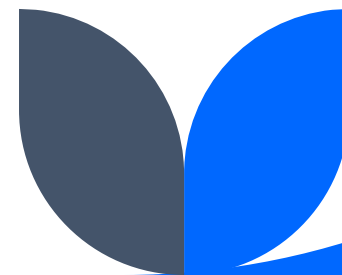
- Create an online survey tool to allow for the following:
  - Hospitals will use the tool to debrief and keep records of their performance
  - Identify common care issues which need to be addressed
- Upload information to the central TX AIM database and provide statewide feedback that can be acted upon in a timely manner.



# Locations / Specialties to be Trained

- Initial focus has been on Obstetric Units
- Identification of need to expand training from TX AIM members
- Comprehensive Approach to Include:

- Labor and Delivery Units
- Postpartum Units
- Emergency Departments
- Intensive Care Units



# Ability to Implement Additional Clinical Bundles

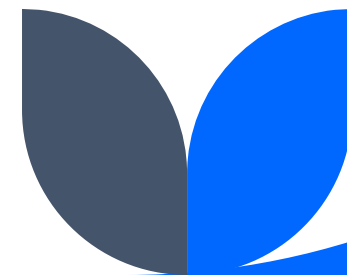
Clinical Topic	Implement	L&D / Postpartum	Emergency Dept
Maternal Hemorrhage	2020	X	X
Hypertension / Eclampsia	2021-2023	X	X
Opioid Use Disorder	TBD	X	X
Maternal Sepsis	TBD	X	X
Maternal Cardiac Arrest	TBD	X	X

- Utilize standard simulation template
- Provides ability to easily build additional simulation clinical topics



# Summary

- Simulation is a critical part of effective any AIM bundle implementation strategy
- Texas AIM has made significant progress and created a program that can be an example to other States
- Maintaining momentum is key at this time



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Thu, Nov 30, 09:37

Sir, I love simulation

Mon. Dec 4. 18:04



# Thank you

Shad Deering

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