TexasAIM Obstetric Hemorrhage Bundle Experience

Carey Eppes, MD, MPH

TexasAIM Medical Director

Collaborators

- Julie Stagg
- Jamie Morgan
- Shad Deering
- Postpartum Hemorrhage faculty and TexasAIM Department of State Health Services staff

OBH Faculty, Simulation Faculty, and TexasAIM Team

OBH Faculty


Carey Eppes, MD, MPH
TexasAIM Faculty Chair


Carlos Carreno,
MD


Carroll Deighton,
MSN, RNC-OB, C-EFM


Jamie Morgan,
MD


Karin Fox,
MD, M.Ed.


Kendra Folh,
BSN, RNC-OB


Linda H. Beaverstock,
BSN, RNC-OB, C-EFM


Rakhi Dimino,
MD, MMM, FACOG

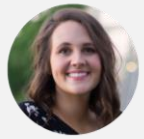

Renee' Jones,
DNP, RNC-OB, WHNP-BC


Suzanne Lundeen,
PhD, RNC-OB, NEA-BC


Patricia Heale,
DNP, RNC-OB, C-EFM

TexasAIM Team


Julie Stagg, MSN, RN
TexasAIM Program Director


Ashley Steenberger, MPH, CHES
DSHS Maternal Healrh and Safety


Megan Coulter, MPH, DSHS Maternal
Healrh and Safety Coordinator


Aliyah Abdul-Wakil, MPH
Maternal and Child Health
Epidemiologist

Simulation Faculty


Carey Eppes,
MD, MPH


Shad Deering,
MD, CHSE, COL(ret) USA


Carlos Carreno,
MD


Carroll Deighton,
MSN, RNC-OB, C-EFM


Shena Dillon,
MD


Rakhi Dimino,
MD, MMM, FACOG


Kendra Folh,
BSN, RNC-OB


Karin Fox,
MD, M.Ed.


Debbie Hart, BSN,
RNC-OB, C-EFM


Patricia Heale,
DNP, RNC-OB, C-EFM


Renee' Jones,
DNP, RNC-OB, WHNP-BC


Susan Leong-Kee,
MD


Jamie Morgan,
MD


Sarah M. Page-Ramsey,
MD, FACOG


Amber L. Pocrnich, BSN,
RNC-MNN(e), C-EFM


Brook A. Thomson,
MD, FACOG

TEXAS
Health and Human
Services

Texas Department of State
Health Services

why is it, when something happens

IT IS ALWAYS YOU THREE?


why is it, when something happens
IT IS ALWAYS YOU THREE?
Texas
California
Florida

Objectives

- Discuss experiences and opportunities in Texas' implementation
  - Texas Maternal Levels of Care and Regionalization
  - Simulated case review process, inclusive of cognitive bias training
  - Simulation/Team based training
  - Sustainability and Readiness reimplementation of Postpartum hemorrhage (PPH)/Quantitative Blood Loss (QBL)

TexasAIM Initiatives

Obstetric Hemorrhage (completed 2020)

Severe Hypertension (HTN) in Pregnancy (completed 2024)

Obstetric Care for Women with Opioid and other Substance Use Disorders (OSUD) (completed 2024)

Readiness

Recognition and Prevention

Response

Reporting and Systems Learning

Respectful, Equitable, and Supportive Care

Improvement Readiness and Sustainability

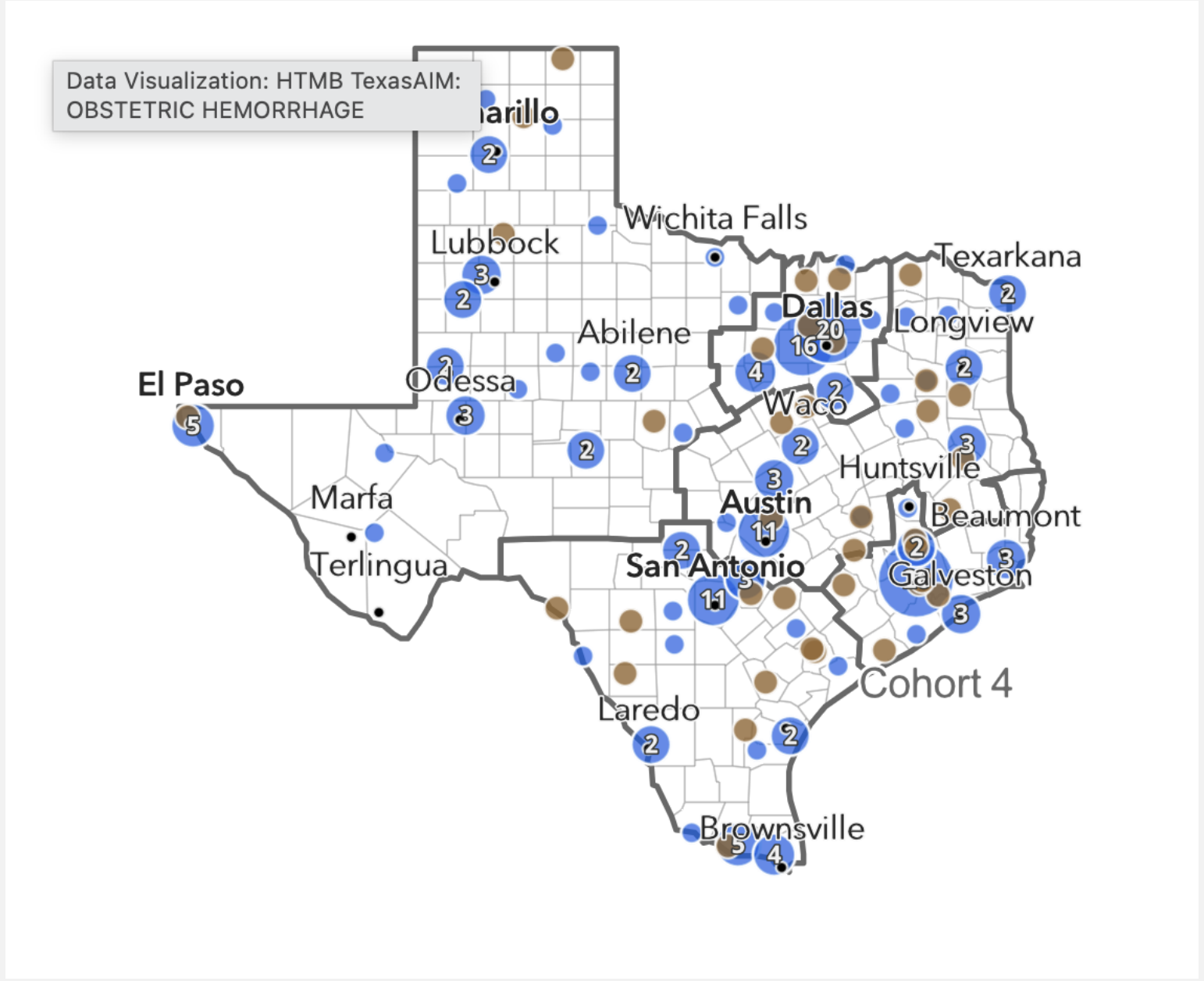
Sepsis in Obstetric Care (SOC)

Mental Health and Substance Use Disorders

Cardiac Conditions in Obstetric Care

TexasAIM: tinyurl.com/dshs-texasaim

AIM: saferbirth.org


Data Visualization: HTMB TexasAIM:
OBSTETRIC HEMORRHAGE
arillo
Wichita Falls
Lubbock
Texarkana
Dallas
Longview
Abilene
El Paso
Odessa
Waco
Huntsville
Marfa
Austin
Beaumont
Terlingua
San Antonio
Galveston
Cohort 4
Laredo
Brownsville

TexasAIM Enrollment
by the Numbers

Hospitals participating in TexasAIM serve:

>378,600 WOMEN EVERY YEAR

>99% OF TEXAS BIRTHS

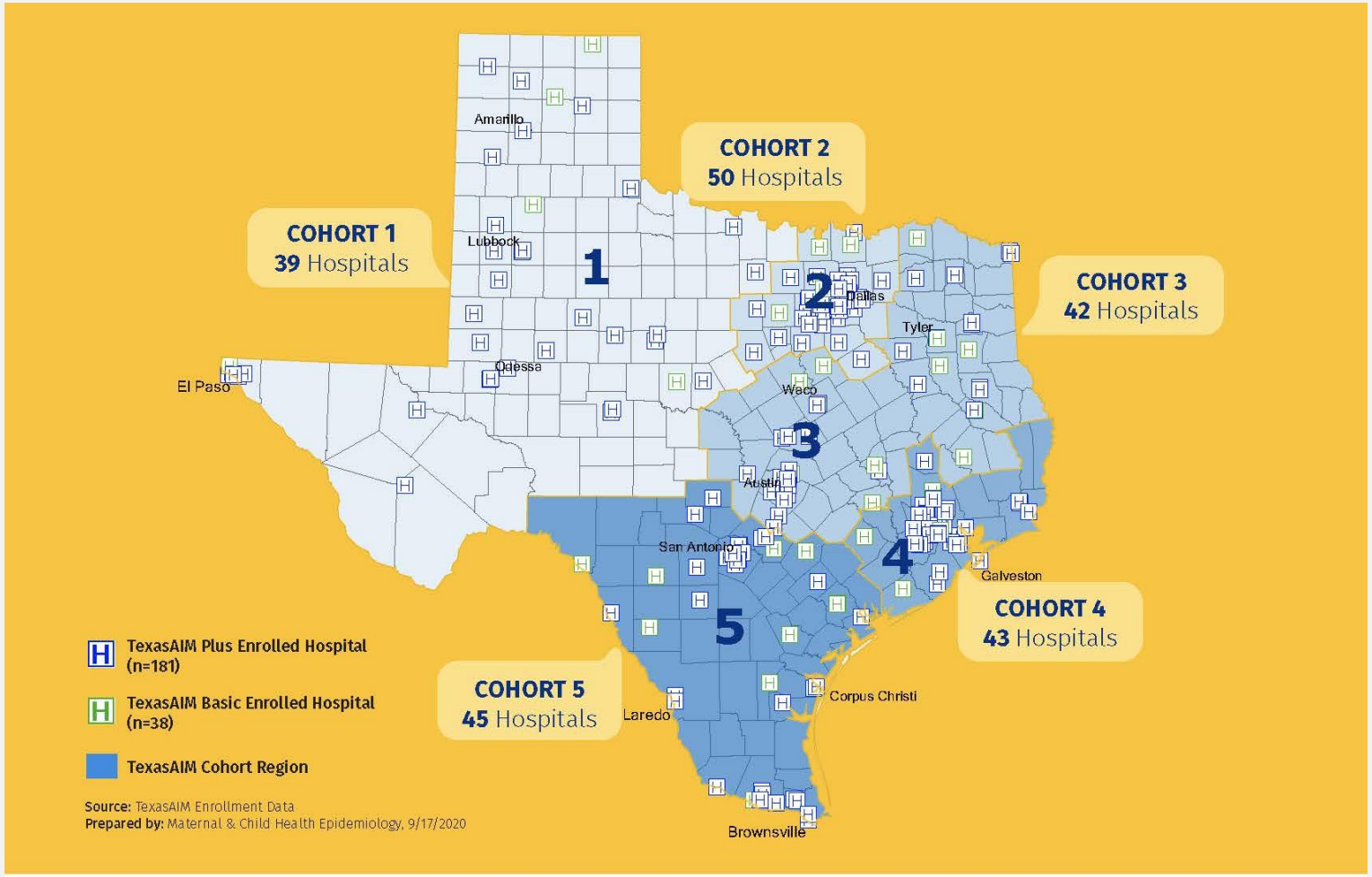
10% OF NATION'S BIRTHS

Hospital Enrollment:

98% of Birthing Hospitals in Texas

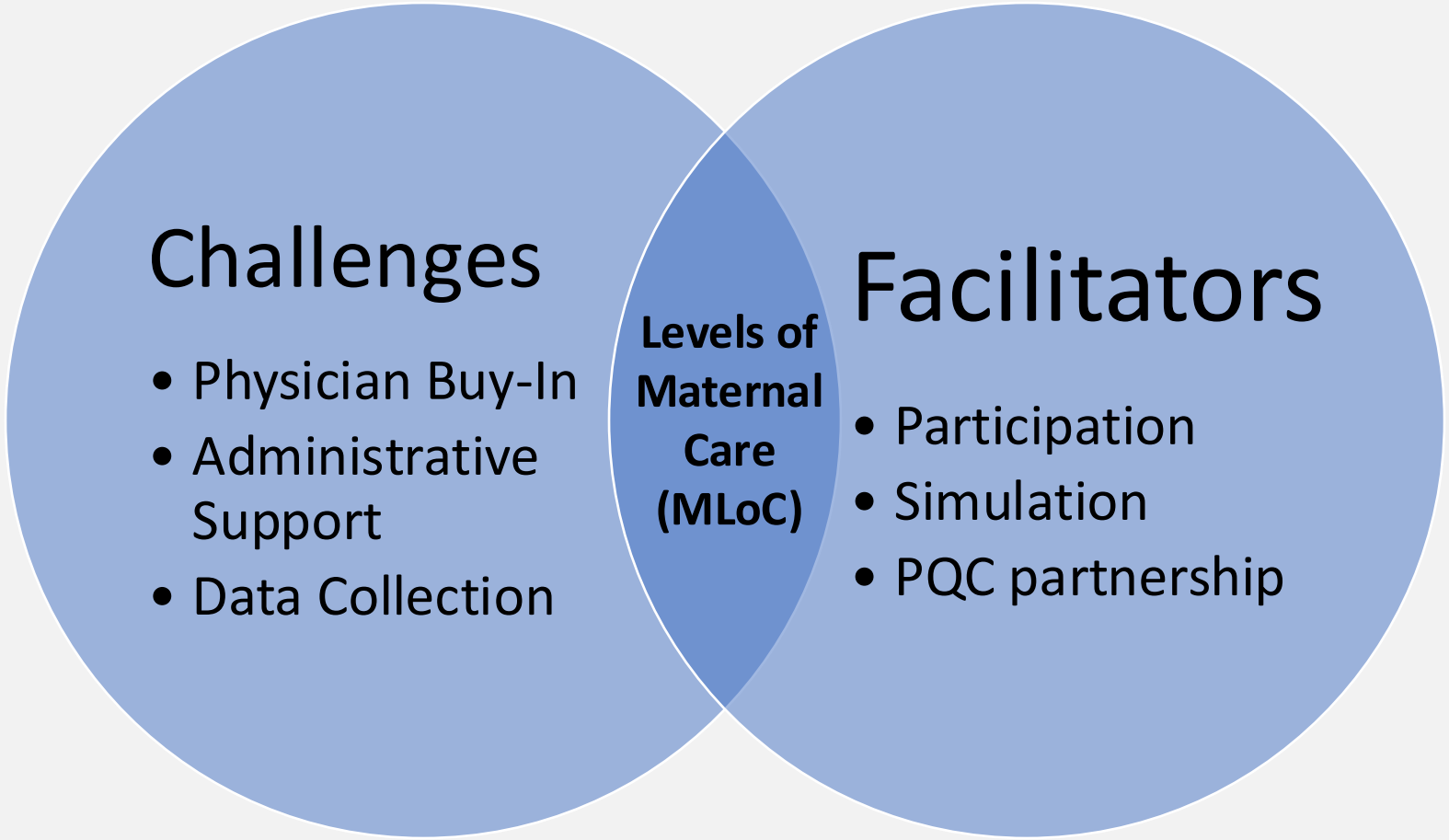
92% of Rural Texas Hospitals

100% of Urban Texas Hospitals



The data shown above is from 11/03/2020.

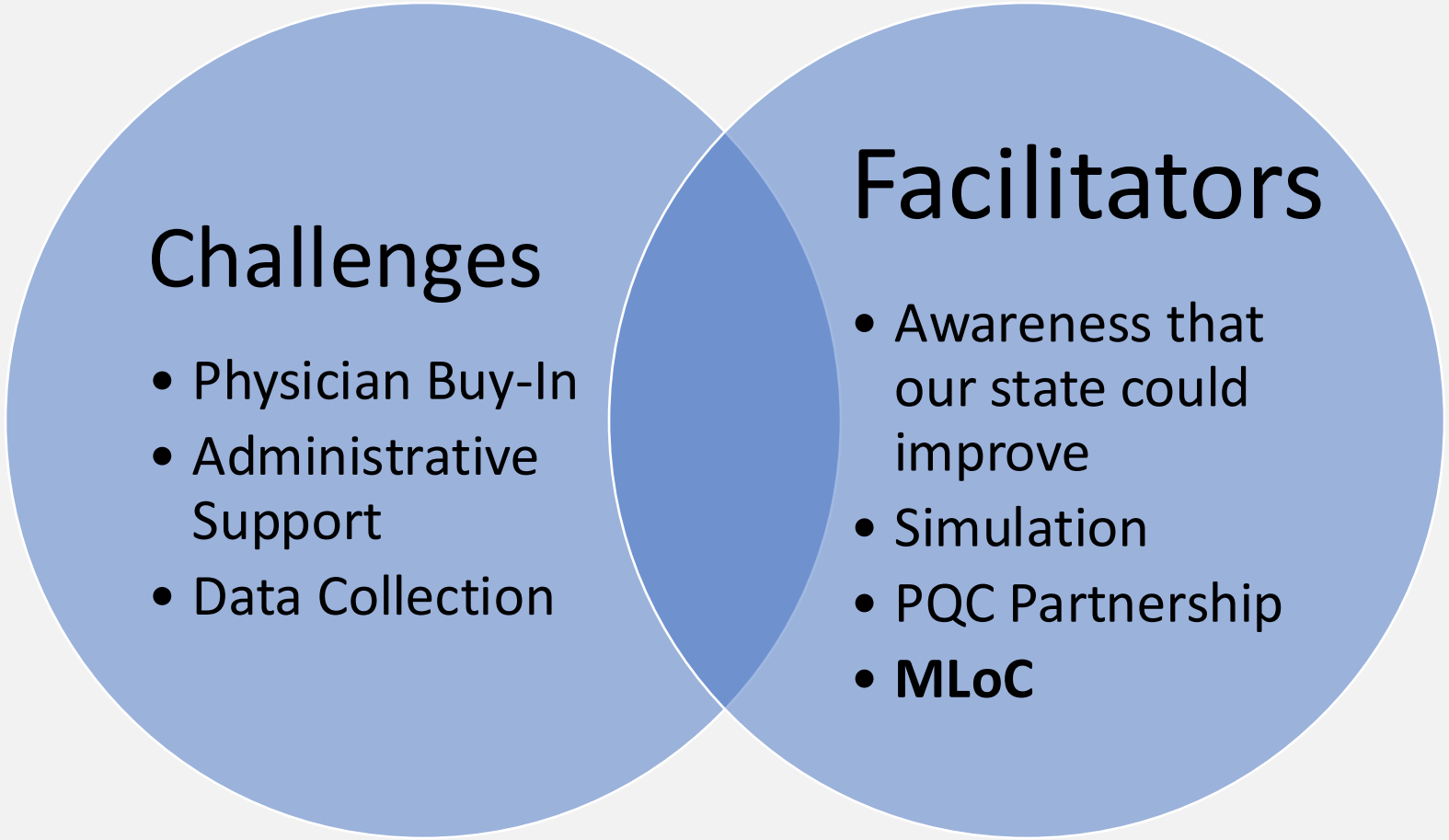
Facilitators and Challenges during PPH implementation (1 of 2)



TEXAS Health and Human Services

Texas Department of State Health Services

Facilitators and Challenges during PPH implementation (2 of 2)



Texas Maternal Levels of Care (MLoC) Designation

For Levels 2-4 Verification is required for Medicaid Reimbursement

Alignment of State and National Priorities

Bundle Element	Texas MLoC	AIM
Hemorrhage Risk Assessment	✅	✅
Stage-based management plan of PPH	✅	✅
Hemorrhage supply kit with medications	✅	✅
Role-specific education to all staff and providers for PPH	✅	✅
Conduct annual simulation for PPH	✅	✅
Multi-D Case review of PPH cases	✅	✅
Educate and support patients regarding PPH	✅	✅

TexasAIM Bundle Projects Alignment with MLoC Administrative Code General and/or Program Requirements

PPH	Severe HTN	OSUD	SOC
Obstetric Hemorrhage Bundle	Severe Hypertension Bundle	Opioid and Substance Use Disorder Bundle	Sepsis in Obstetrics Care

TexasAIM Infrastructure and Approach

Texas AIM's implementation model is the IHI Collaborative Model for Achieving Breakthrough Improvement.

In this model, it is all about "outreach" or peer sharing/learning - our motto is steal shamelessly and share seamlessly.

Each PCR region in the state is organized into one of 3-5 cohorts, which meet in person for 2 days 3x a year to share lessons learned, teach each other, share protocols, and do "train the trainer" simulations.

Teams meet monthly virtually for action period calls and have done separate team trainings and simulations together.

MLoC/TexasAIM ALIGNMENT: Guidelines and Policies

Texas Administrative Code Minium MLoC Designation Requirements for PPH Hospital-Based Care

PROGRAM REQUIREMENTS (Maternal Program Plan)

- clinical guidelines based on current standards of maternal practice, and policies and procedures that are adopted, implemented, and enforced by the maternal program;
- written triage, stabilization, and transfer guidelines for pregnant and postpartum patients that include consultation and transport services;
- written guidelines or protocols for prevention, early identification, early diagnosis, and therapy for conditions that place the pregnant or postpartum patient at risk for morbidity or mortality

AIM Obstetric Hemorrhage Bundle and TexasAIM: Develop processes for the management of patients with obstetric hemorrhage, including:

- A standardized, facility-wide, stage-based obstetric hemorrhage emergency management plan
- Emergency release and massive transfusion protocols
- A protocol for patients who decline blood products
- Assess and communicate hemorrhage risk
- Measure and communicate cumulative qualitative blood loss
- Actively manage the third stage of labor
- Review of policies to identify and address organizational root causes of disparities in outcomes

MLoC/TexasAIM ALIGNMENT: QAPI Integration

Quality Assessment Performance Improvement

MLoC PROGRAM REQUIREMENTS (Maternal Program Plan): The facility must have a documented QAPI Plan. The maternal program must measure, analyze, and track quality indicators and other aspects of performance that the facility adopts or develops that reflect processes of care and is outcome based

PPH

- ***Perform multidisciplinary reviews of serious complications per established facility criteria to identify system issues.***
- ***Monitor outcomes and process measures related to obstetric hemorrhage, with disaggregation by race and ethnicity due to known racial and ethnic disparities in obstetric hemorrhage outcomes.***

Suggested Alignment Opportunities for MLoC

Verify

- Incorporation of PPH into case review and quality improvement process

Consider

- Asking about structure, process and outcome measures for PPH

Evaluate

- If data is stratified according to racial, ethnic, language and payor status

TexasAIM Guidance on Medical Record Review and Case Abstraction

Triggers for Case Review

Outcome Related	Process Related	Specific events
• > 4 units packed red blood cells • Hysterectomy • ICU Admission	• Activation of PPH • Identified delays in debriefs	• QBL >1000, 1500, 2000 • Unanticipated PASD

Disease specific questions to guide SMM Review Process

Hemorrhage

- Was the hemorrhage recognized in a timely fashion?
- Were signs of hypovolemia recognized in a timely fashion?
- Were transfusions administered in a timely fashion?
- Were appropriate interventions (e.g. medications, balloons, sutures, etc.) used?
- Were modifiable risk factors (e.g., Pitocin, induction, chorioamnionitis, delay in delivery) managed appropriately?
- Was sufficient assistance (e.g. additional doctors, nurses, or others) requested and received?

Standardized Process for PPH Case Review

- What was the outcome?
- Were management guidelines followed?
- Was the system response appropriate?
- What were the circumstances surrounding the event?
- Was the team's response timely?
- Who was involved and what safety goals were related?
- What were the pre-existing conditions that may have contributed to the morbidity?
- Were staffing and resources appropriate?
- Were there knowledge and skill variations?
- Were there associated performance or behavioral events?
- Was there evidence of health inequity due to bias?
- Did social and/or structural determinants of health contribute to the underlying morbidity?

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

SMM Review Form v6-28-2016_short

Abstraction

SMM (recorded cause) _____ SMM Date _____
MR # or PATIENT ID _____ Zip code of patient residence _____
Abstraction Date ____/____/____ Abstractor _____
Birth Facility _____
Hospital Level ☐1 ☐ 2 ☐3 ☐4 ☐ Birth center ☐ Other (Specify) _____

Patient Characteristics

Age __ Weight/Height / Body mass index (BMI) at first prenatal visit Most recent BMI ____

Race (Indicate race patient identifies)
Choose an item.

Hispanic or Latina
No ☐ Yes ☐ Unknown ☐

Obstetric History
Gravida _____
Para ___ Term ___ Premature __ Aborted __ Living ___
Previous fetal deaths ____
Previous infant deaths ____

Prenatal Care (PNC)

Yes ☐ Week PNC began ____ Week unknown Yes ☐ No ☐ Number of PNC visits ____ Visit # unknown Yes ☐ No ☐ No ☐
Unknown PNC status ☐

Discipline of Primary PNC Provider (choose one) Choose an item.	Prenatal care source/location Choose an item.
Planned/intended place of delivery Choose an item.	Timing of maternal morbidity Choose an item.
Maternal Transport (during peripartum period) No Choose an item. Yes ☐ From facility _____ to facility _____ Unknown ☐	Perinatologist consultation (during peripartum period) No Choose an item. Yes ☐ Provider type: _____ Unknown ☐

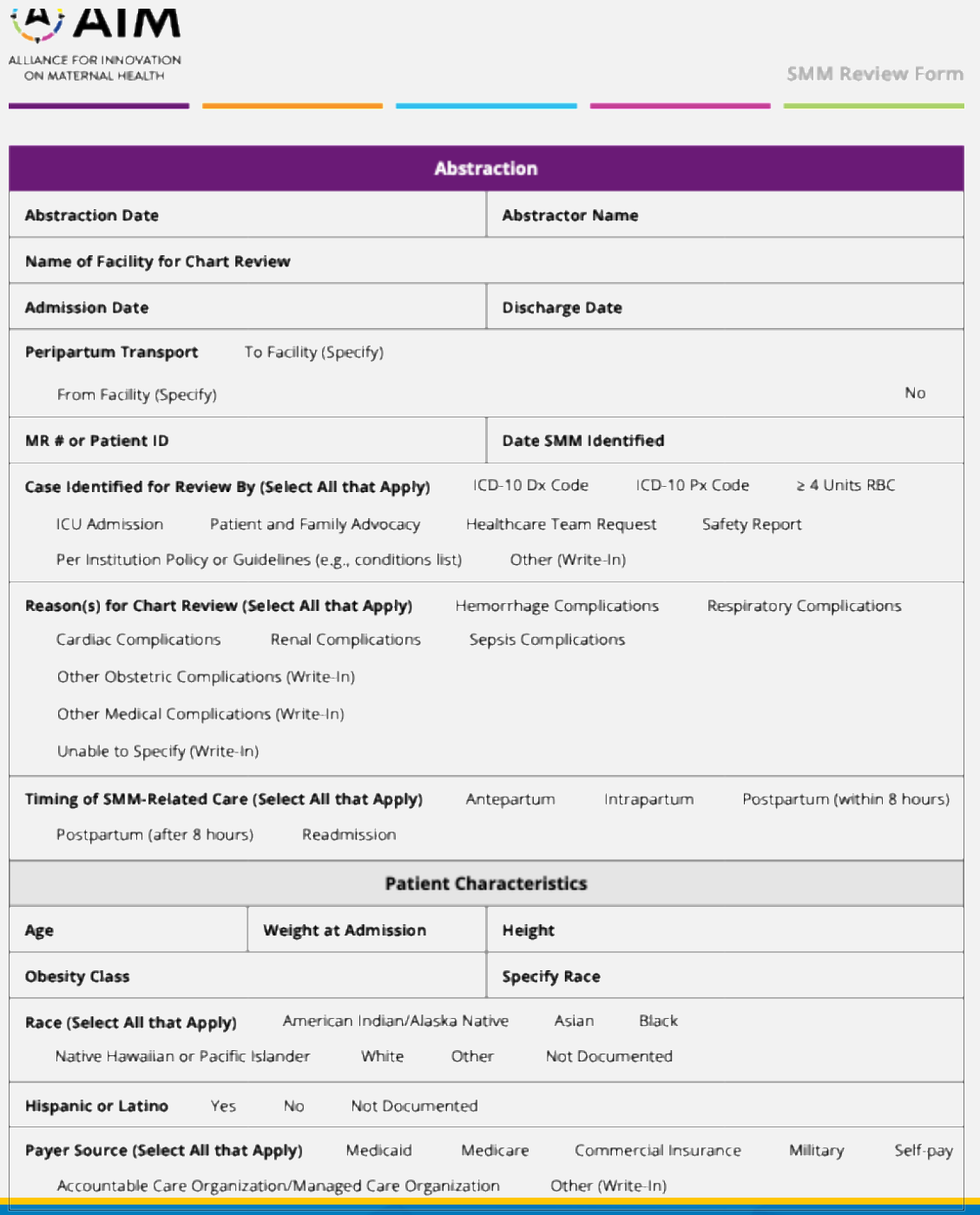
Delivery Information
Gestational age at time of morbidity _____
Singleton ☐ Multiple ☐ (If multiple fill out additional delivery information per fetus)

Birth status Choose an item.	Labor Yes ☐ No ☐	Delivery type Choose an item.
If C-Section Type of C-section Choose an item.	If C-Section Primary reason for C-Section Choose an item.	
Type of anesthesia Choose an item.	Primary payer source Choose an item.	

AIM SMM Case Review Form

Standardize Case Review Process

- AIM Severe Maternal Morbidity Case Review Form



AIM
ALLIANCE FOR INNOVATION ON MATERNAL HEALTH

SMM Review Form

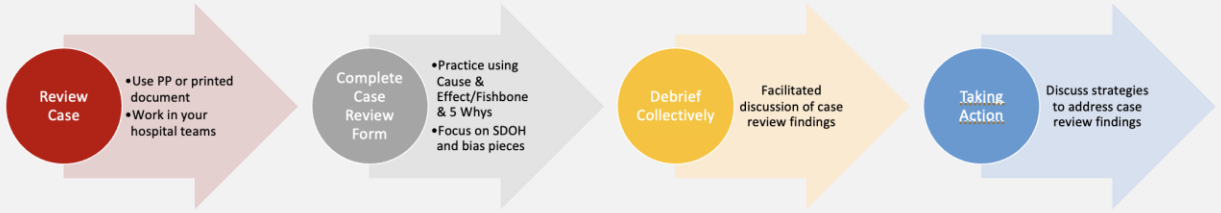
Abstraction		
Abstraction Date		**Abstractor Name**
Name of Facility for Chart Review		
Admission Date		**Discharge Date**
Peripartum Transport To Facility (Specify) From Facility (Specify) No		
MR # or Patient ID		**Date SMM Identified**
Case Identified for Review By (Select All that Apply) ICD-10 Dx Code ICD-10 Px Code ≥ 4 Units RBC ICU Admission Patient and Family Advocacy Healthcare Team Request Safety Report Per Institution Policy or Guidelines (e.g., conditions list) Other (Write-In)		
Reason(s) for Chart Review (Select All that Apply) Hemorrhage Complications Respiratory Complications Cardiac Complications Renal Complications Sepsis Complications Other Obstetric Complications (Write-In) Other Medical Complications (Write-In) Unable to Specify (Write-In)		
Timing of SMM-Related Care (Select All that Apply) Antepartum Intrapartum Postpartum (within 8 hours) Postpartum (after 8 hours) Readmission		
Patient Characteristics		
Age	**Weight at Admission**	**Height**
Obesity Class		**Specify Race**
Race (Select All that Apply) American Indian/Alaska Native Asian Black Native Hawaiian or Pacific Islander White Other Not Documented		
Hispanic or Latino Yes No Not Documented		
Payer Source (Select All that Apply) Medicaid Medicare Commercial Insurance Military Self-pay Accountable Care Organization/Managed Care Organization Other (Write-In)		

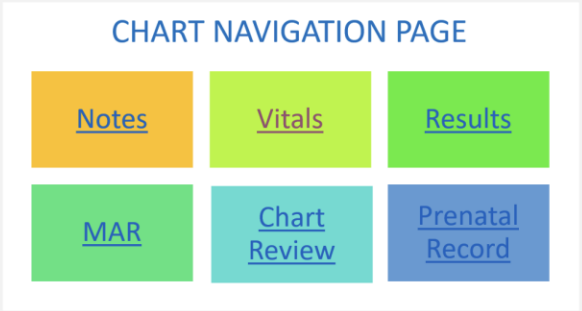
Clinical team education in health disparities and cognitive bias - TOOLS

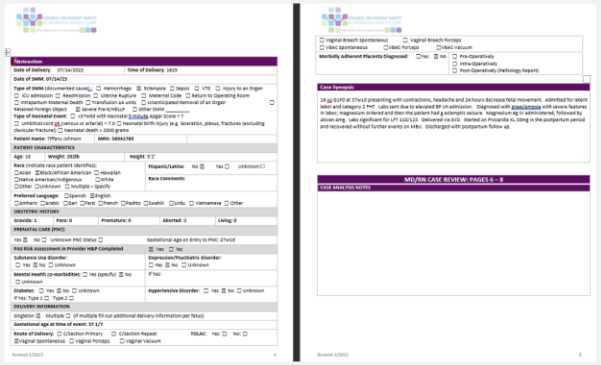
Previous TexasAIM Severe Hypertension Cognitive Bias in Case Review simulation and tools[1]

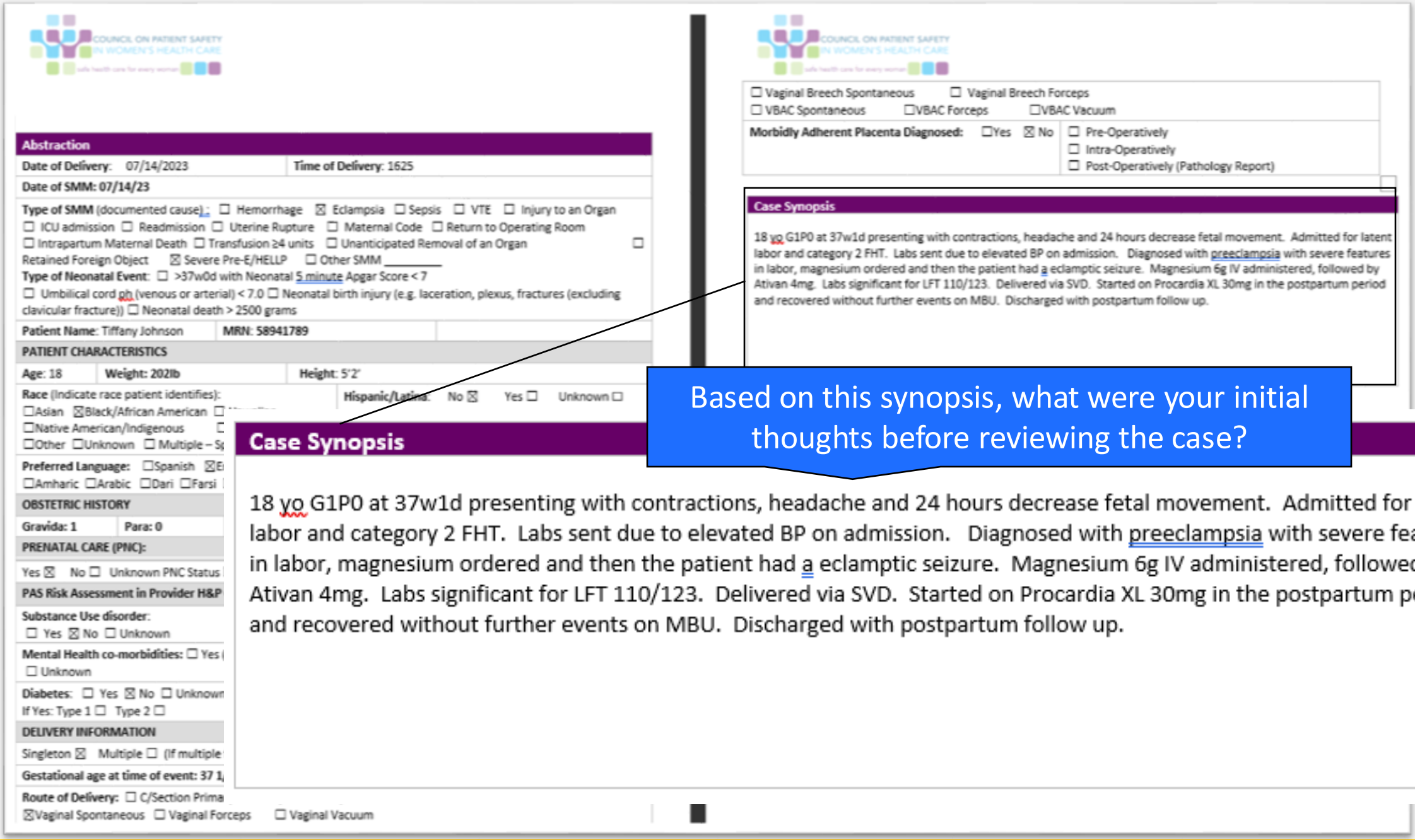
Integrating Cognitive Bias Assessment into Case Review

Session Logistics








Abstraction
Date of Delivery: 07/14/2023
Time of Delivery: 1625
Date of SMM: 07/14/23
Type of SMM (documented cause): ☐ Hemorrhage ☒ Eclampsia ☐ Sepsis ☐ VTE ☐ Injury to an Organ
☐ ICU admission ☐ Readmission ☐ Uterine Rupture ☐ Maternal Code ☐ Return to Operating Room
☐ Intrapartum Maternal Death ☐ Transfusion ≥4 units ☐ Unanticipated Removal of an Organ
Retained Foreign Object ☒ Severe Pre-E/HELLP ☐ Other SMM _____
Type of Neonatal Event: ☐ >37w0d with Neonatal 5 minute Apgar Score < 7
☐ Umbilical cord ph (venous or arterial) < 7.0 ☐ Neonatal birth injury (e.g. laceration, plexus, fractures (excluding clavicular fracture)) ☐ Neonatal death > 2500 grams
Patient Name: Tiffany Johnson
MRN: 58941789
PATIENT CHARACTERISTICS
Age: 18
Weight: 202lb
Height: 5'2"
Race (Indicate race patient identifies):
☐Asian ☒Black/African American
☐Native American/Indigenous
☐Other ☐Unknown ☐ Multiple – Sp
Hispanic/Latina: No ☒ Yes ☐ Unknown ☐
Preferred Language: ☐Spanish ☒E
☐Amharic ☐Arabic ☐Dari ☐Farsi
OBSTETRIC HISTORY
Gravida: 1
Para: 0
PRENATAL CARE (PNC):
Yes ☒ No ☐ Unknown PNC Status
PAS Risk Assessment in Provider H&P
Substance Use disorder:
☐ Yes ☒ No ☐ Unknown
Mental Health co-morbidities: ☐ Yes
☐ Unknown
Diabetes: ☐ Yes ☒ No ☐ Unknown
If Yes: Type 1 ☐ Type 2 ☐
DELIVERY INFORMATION
Singleton ☒ Multiple ☐ (If multiple
Gestational age at time of event: 37 1
Route of Delivery: ☐ C/Section Prima
☒Vaginal Spontaneous ☐ Vaginal Forceps ☐ Vaginal Vacuum
☐ Vaginal Breech Spontaneous ☐ Vaginal Breech Forceps
☐ VBAC Spontaneous ☐VBAC Forceps ☐VBAC Vacuum
Morbidly Adherent Placenta Diagnosed: ☐Yes ☒ No
☐ Pre-Operatively
☐ Intra-Operatively
☐ Post-Operatively (Pathology Report)
Case Synopsis
18 yo G1P0 at 37w1d presenting with contractions, headache and 24 hours decrease fetal movement. Admitted for latent labor and category 2 FHT. Labs sent due to elevated BP on admission. Diagnosed with preeclampsia with severe features in labor, magnesium ordered and then the patient had a eclamptic seizure. Magnesium 6g IV administered, followed by Ativan 4mg. Labs significant for LFT 110/123. Delivered via SVD. Started on Procardia XL 30mg in the postpartum period and recovered without further events on MBU. Discharged with postpartum follow up.
Based on this synopsis, what were your initial thoughts before reviewing the case?
Case Synopsis
18 yo G1P0 at 37w1d presenting with contractions, headache and 24 hours decrease fetal movement. Admitted for latent labor and category 2 FHT. Labs sent due to elevated BP on admission. Diagnosed with preeclampsia with severe features in labor, magnesium ordered and then the patient had a eclamptic seizure. Magnesium 6g IV administered, followed by Ativan 4mg. Labs significant for LFT 110/123. Delivered via SVD. Started on Procardia XL 30mg in the postpartum period and recovered without further events on MBU. Discharged with postpartum follow up.

Cognitive Bias

Flaws or distortions in judgement or thinking and decision-making

More than 100 different types have been identified

Contribute significantly to patient safety events

Associated with 6-17% of adverse events and 28% of diagnostic errors

An abbreviated list of known biases in clinical practice[4,8]

Bias name	Definition	Example
Anchoring	Prematurely attaching undue importance to initial clinical facts or characteristics	The clinician assumes that mental status changes in a disheveled, malodorous patient are due to psychiatric conditions rather than diabetic ketoacidosis.
Availability	Making a diagnosis based on how easily it comes to mind, rather than its clinical likelihood	After a publicized settlement for a missed pulmonary embolism, patients with symptoms atypical of embolism are worked up for this condition in the local emergency department.
Commission	The tendency in the midst of uncertainty to err on the side of action, regardless of the evidence	Despite evidence advising against pain medication for simple lumbar strain, physicians continue to prescribe opioid analgesics.
Confirmation	Assigning preference to findings that confirm a diagnosis (eg, focusing on an historic item that reinforces the clinician's pre-existing opinion regarding a diagnosis)	When a patient with a history of drug-seeking is seen for lower back pain, the clinician focuses on the patient's apparent lack of discomfort and minimizes his complaint of bowel dysfunction and lower extremity weakness.
Diagnostic momentum	The tendency of clinicians to accept a diagnosis without questioning its validity or reexamining the initial decision process	A patient whose medical record lists a diagnosis of "dementia" transfers to a new physician. The patient exhibits symptoms atypical of dementia; yet, the correct diagnosis, neurosyphilis, is not explored.
Framing effect	Assembling elements that support a diagnosis (similar to confirmation bias)	With a patient believed to be malingering, his history of psychiatric illness is emphasized during a presentation to the attending physician.
Gambler's fallacy	The pretest probability of a diagnosis might be influenced by preceding—but independent—events.	Because the last 5 patients seen in the emergency department had noncardiac chest pain, the next one with chest pain is more likely to be thought to have a serious cardiac condition.
Omission	The natural progression of a disease is more acceptable as an explanation for a patient's outcome than are actions attributable to the physician.	During cardiac resuscitation, chest compressions are not performed to the proper depth so as to avoid causing rib fractures, thereby possibly rendering the procedure ineffective.

Source: Yuen T, Derenge D, Kalman N. Cognitive bias: Its influence on clinical diagnosis. J Fam Pract. 2018 Jun;67(6):366;368;370;372. PMID: 29879236.

Prenatal Record: Tiffany Johnson, MRN 58941789

Obstetric Care Provider	Dr. Alice Care
Dating Summary	Working EDD: 8/3/2023 ☒ LMP 10/27/2023 ☐ Ultrasound 5/2/23 – 27w0d
Allergies	No Known Drug Allergies
OB History	G1 P0 A0
Surgical History	Laparoscopic Appendectomy

Prenatal Vitals

Encounter Date	GA	Vitals	FH (cm)	Weight (lbs)	Notes
5/2/23	27w1d	102/68	28	177	New to care. No PMH/PSH. Good FM, no ctx/VB/LOF. S=D on US. NOB labs, 1 hr gtt. RTC 2 wks.
5/18/23	29w2d	130/88	30	180	No complaints. +FM. Denies ctx, VB or pain. Tdap given. RTC 2 weeks.
6/1/23	31w2d	-------	------	-------	No Show
6/6/23	32w0d	-----	------	-------	No Show
6/13/23	33w0d	---------	----------	---------	No Show
6/28/23	34w4d	138/84	33	198	C/o almost daily Has. +FM, no labor complaints. Check PIH labs, VUP. GBS today. RTC 1 week.
7/5/23	35w6d	-------	------	-------	No Show
7/12/23	36w6d	-------	------	-------	No Show

Medications	Prenatal vitamins

Prenatal Labs (5/2/23)

Blood type/Rh: A+	Creatinine: 0.47	Hemoglobin: 10.1	Hematocrit: 30.6	Platelets: 196 x 10(9)	50gGTT: 106
HBsAg: nonreactive	HIV: nonreactive	Syphilis: nonreactive	Urine culture: negative	GC: negative	CT: negative

How might review of this prenatal record influence medical care as well as case review?

Prenatal Record: Tiffany Johnson, MRN 58941789

Obstetric Care Provider	Dr. Alice Care
Dating Summary	Working EDD: 8/3/2023 ☒ LMP 10/27/2023 ☐ Ultrasound 5/2/23 – 27w0d
Allergies	No Known Drug Allergies
OB History	G1 P0 A0
Surgical History	Laparoscopic

Ascertainment Bias: Shaping decision-making based on prior expectation aka stereotyping

Late presentation to care

Multiple "no show" visits

Prenatal Vitals

Encounter			FH (cm)	Weight (lbs)	Notes
5/2/23	27w1d	102/68	28	177	New to care. No PMH/PSH. Good FM, no ctx/VB/LOF. S=D on US. NOB labs, 1 hr gtt. RTC 2 wks.
5/18/23	29w2d	130/88	30	180	No complaints. +FM. Denies ctx, VB or pain. Tdap given. RTC 2 weeks.
6/1/23	31w2d	-------	------	-------	No Show
6/6/23	32w0d	-----	------	-------	No Show
6/13/23	33w0d	---------	----------	---------	No Show
6/28/23	34w4d	138/84	33	198	C/o almost dail mplaints. Check PIH labs, VUP. GBS today. RTC 1 week.
7/5/23	35w6d	-------	------	-------	No Show
7/12/23	36w6d	-------	------	-------	No Show

Medications	Prenatal vitamins					
Prenatal Labs (5/2/23)	Blood type/Rh: A+	Creatinine: 0.47	Hemoglobin: 10.1	Hematocrit: 30.6	Platelets: 196 x 10(9)	50gGTT: 106
	HBsAg: nonreactive	HIV: nonreactive	Syphilis: nonreactive	Urine culture: negative	GC: negative	CT: negative

Triage Note

3/15/2023 1745

Hope Wells, CNM

18 yo G1P0 at 22 weeks presents with RLQ pain radiating to the groin area. Hasn't started PNC yet. Claims this is due to lack of insurance and transportation.

BP 98/60 HR 79 RR 12 O2 sat 100%

Comfortable, well developed
Abd gravid, soft, nontender

FHTs 149

A/P: 22 wk non-clinic pt with benign exam, likely discomforts of pregnancy.
- Discharge home
- Clinic resources given

Hope Wells, CNM

What information is signaled by this triage documentation?

Triage Note

3/15/2023 1745 Hope Wells, CNM

Late presentation to care

Questioning credibility

18 yo G[illegible]P0 at 22 weeks presents with RLQ pain radiating to the groin area. Hasn't started PNC yet. Claims this is due to lack of insurance and transportation.

BP 98/60 HR 79 RR 12 O2 sat 100%

Comfortable, well developed
Abd gravid, soft, nontender

FHTs 149

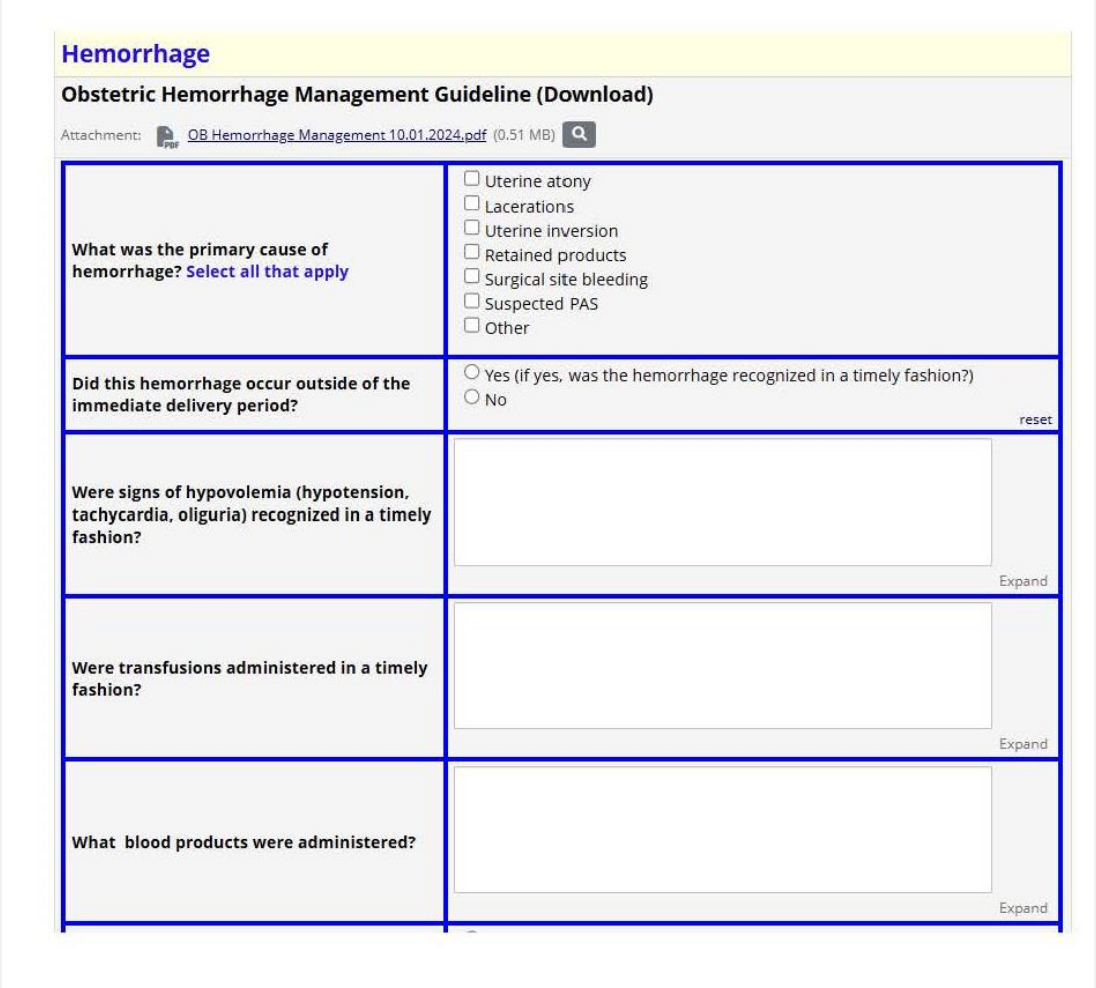
A/P: 22 wk non-clinic pt with benign exam, likely discomforts of pregnancy.
- Discharge home
- Clinic resources given

Hope Wells, CNM

Ascertainment Bias: Shaping decision-making based on prior expectation aka stereotyping

Stigmatizing Language: systematic asymmetry in word choice that reflects the social-category cognitions that are applied to the described group or individual(s)

PPH Specific Questions or Probes



Hemorrhage

Obstetric Hemorrhage Management Guideline (Download)

Attachment: OB Hemorrhage Management 10.01.2024.pdf (0.51 MB)

What was the primary cause of hemorrhage? Select all that apply	☐ Uterine atony ☐ Lacerations ☐ Uterine inversion ☐ Retained products ☐ Surgical site bleeding ☐ Suspected PAS ☐ Other
Did this hemorrhage occur outside of the immediate delivery period?	○ Yes (if yes, was the hemorrhage recognized in a timely fashion?) ○ No reset
Were signs of hypovolemia (hypotension, tachycardia, oliguria) recognized in a timely fashion?	Expand
Were transfusions administered in a timely fashion?	Expand
What blood products were administered?	Expand

Texas Children's Pavilion for Women
SMM Case Review Form

Cognitive Bias and Environmental Factors (1 of 2)

System & Provider Factors: How did these factors contribute to the morbidity?

Which system and provider factors may have contributed to morbidity and could be an opportunity to improve care or outcome? Select all that apply	☐ Incorrect/delayed diagnosis ☐ Referral/transfer to higher level of care (i.e. barriers or delays with consultants and/or transfer) ☐ Inappropriate/ineffective treatment ☐ Patient care team hierarchy (i.e. RN to physician, resident to attending) ☐ Team communication ☐ Policies and procedures ☐ Documentation ☐ Discharge planning and process ☐ Infrastructure (i.e., staffing, supplies/equipment, bed availability) ☐ Language translation services for patient care ☐ Delivery planning ☐ Referral process (i.e., barriers, delays) ☐ Follow up Process ☐ Other ☐ None

Texas Children's Pavilion for Women SMM Case Review Form

Patient Factors: How did these factors contribute to the morbidity?

Which patient factors contributed to this case? Select all that apply	☐ Pre-pregnancy existing medical conditions ☐ Non-obstetric medical complication/condition that occurred during pregnancy ☐ Psychiatric/behavioral health ☐ Significant stressors ☐ Barriers to seeking healthcare or healthcare access ☐ Language barrier/limited English proficiency ☐ Existing obstetric condition (initially noted in pregnancy - eg, IVF) ☐ New obstetric conditions (evolved throughout care - eg, PPROM) ☐ Mental health condition (ie, depression, anxiety, bipolar disorder) ☐ Substance use ☐ None
Specify, which patient factors contributed to this case	
Is there documented screening for social determinants of health?	○ Yes ○ No reset
Did any barriers contribute to limiting optimal health:	☐ Intimate Partner Violence ☐ Food insecurity ☐ Housing insecurity ☐ Inability to pay for medications or care ☐ Other ☐ None identified
Did any barriers contribute to limitations in patient ability to seek healthcare or health access?	☐ Recent immigration ☐ Current immigration status ☐ Unmet transportation needs ☐ Unmet health insurance needs ☐ Cultural or faith beliefs not congruent with recommended care ☐ Limited English proficiency ☐ Other ☐ None Identified
Was social work consulted inpatient?	○ Yes ○ No reset
Was social work consulted outpatient?	○ Yes ○ No reset

Cognitive Bias and Environmental Factors (2 of 2)

- Texas Children's Pavilion for Women SMM Case Review Form

Bias Factors: How did these factors contribute to the morbidity?

From your review of the medical record/discussion with the care team, did you identify any of the following:	☐ Negative patient/provider/facility interaction ☐ Excessive gatekeeping (eg, inability to reach provider, leaving messages) ☐ Leaving against medical advice ☐ Repeated WAC visits in a short time frame ☐ Implicit/unconscious bias: attitudes or stereotypes that affect our understanding, actions and decisions in an unconscious manner ☐ Judgement Words (ex: Adamant, Apparently, Claims, Insists) ☐ Stigmatizing Language (ex: Non-Compliant, Refused, Difficult or Challenging, Non-Cooperative, Substance Abuse(r), Addict, Alcoholic) ☐ None Identified
Specify, which judgement words and/or stigmatizing language	
From your review of the medical record/discussion with the care team, do you perceive that any of these factors might have impacted this patient's course:	☐ Anchoring bias: Giving weight and reliance on initial information/impressions and not adjusting from this (anchor) despite availability of new information. "Jumping to conclusions" can lead to missed/delayed diagnoses ☐ Availability bias: Judging likelihood of a diagnosis based on the ease with which examples can be retrieved (more familiar, common, recent, memorable) (e.g., diagnosing a patient based on frequently seen conditions such as the flu, or not considering less common diagnoses) ☐ Confirmation bias: Selectively noticing/seeking information that confirms opinion/impression versus seeking information that disconfirms. Evidence in support of beliefs is given more weight; evidence that refutes may not be noticed (e.g., not noticing a warning label on medication or performing procedure on incorrect site) ☐ Diagnostic momentum/"bandwagon" effect: Once a label (diagnosis) has been assigned, momentum takes hold and reduces ability to consider other alternatives. Can affect future work-up of patient and how handoffs are "framed." ☐ None identified

MLOC/AIM ALIGNMENT: Education and Competencies

MLoC GENERAL REQUIREMENTS: For level I, II, III, IV have skilled personnel with documented training, competencies, and annual continuing education specific for the patient population served

PROGRAM REQUIREMENTS (Program Plan): Provisions for providing continuing staff education, including annual competency and skills assessment that is appropriate for the patient population served;

PROGRAM REQUIREMENTS (Medical Staff): The maternal medical staff must participate in ongoing staff and team-based education and training in the care of the maternal patient

PPH

- Readiness includes having a stage-based PPH protocol and ***education*** to all team members
- A protocol, including ***education*** and consent practices, to collaborate with patients who decline blood products
- ***Conduct interprofessional and interdepartmental team-based drills with timely debriefs that include the use of simulated patients***

Suggested Alignment Opportunities & Strategies

Verify	• Highlight completion these education elements in the surveys
Validate	• Ongoing simulations for PPH are taking place regularly
Confirm	• Ongoing education for Medical Doctor/Nurse Practitioner/Certified Nurse Midwife/Nurses for PPH

Simulation During PPH

- 120 hospitals and 297 attendees
- Most participants trained 20-50 team members in their hospital

Teamwork, Communication and Simulation Train the Trainer Event

Day 1: *Safety Program in Perinatal Care-II (SPPC-II)*, by Johns Hopkins University and Agency for Health Care Research and Quality

Day 2: TexasAIM *Practicing for Patients Obstetric Hemorrhage* Simulation Program

Trainer team: one physician leader, one nurse leader and one educator or maternal health coordinator (optional)

Simulation stats: 120 hospitals and 297 attendees

Training 1: Lubbock

➢Sunday, February 9	SPPC-II
➢Monday, February 10	SIM

Training 2: Dallas Fort Worth

➢Monday, February 10	SPPC-II
➢Tuesday, February 11	SIM

Training 3: Dallas Fort Worth

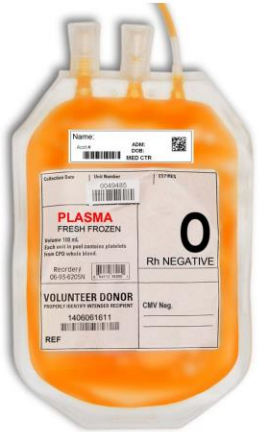
➢Tuesday, February 11	SPPC-II
➢Wednesday, February 12	SIM

Training 4: San Antonio

➢Wednesday, February 19	SPPC-II
➢Thursday, February 20	SIM

Training 5: Houston

➢Thursday, February 20	SPPC-II
➢Friday, February 21	SIM



QBL: 500 cc

QBL: 750 cc

QBL: 1000 cc

QBL: 1500 cc

QBL: 2000 cc

UT Southwestern Medical Center

Patient MR#

Date of PPH

PPH Recap

Vag or C-Sect if QBL is >1000ml

Date: | Time:

QBL: | Location:

Transfer to (Unit/Room Number)
ICU/CVICU/MICU…

Delivery Mode:
- ○ SVD
- ○ C/S
- ○ Forceps or vacuum assisted

Cause:
- ○ Atony
- ○ Laceration
- ○ Retained Placenta
- ○ Other

Measures Taken:
- ○ Fundal Massage
- ○ IV Pitocin
- ○ Bladder drained
- ○ Hemabate
- ○ Methergine
- ○ Miso (rectal)
- ○ TXA
- ○ Bakri
- ○ Other

Blood Products Given:
- ○ PRBC's: _____
- ○ FFP: _____
- ○ Cryo: _____
- ○ Platelets: _____
- ○ Other: _____
- ○ Other:
- ○ MTP Ordered?

Risk Factors:
- ○ Prior Uterine Surgery
- ○ Multiple gestation
- ○ >4 previous vag births
- ○ Chorio
- ○ Hx of PPH
- ○ Uterine Fibroids >2cm
- ○ Prolonged Second Stage
- ○ Oxytocin infusing >24 hrs
- ○ Magnesium Sulfate
- ○ HCT <30
- ○ Placenta Previa
- ○ Low lying placenta (within 2cm of cervical os)
- ○ Platelets <100K
- ○ Active bleeding
- ○ Known coagulopathy
- ○ Suspected accreta or percreta

Any System Delays? No / Yes (comments):

What went well?

What could staff have done differently?

Not part of patient's medical record - do not send to HIM. Once completed slide under Manager or ANM's door.

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

PRACTICING FOR PATIENTS

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)

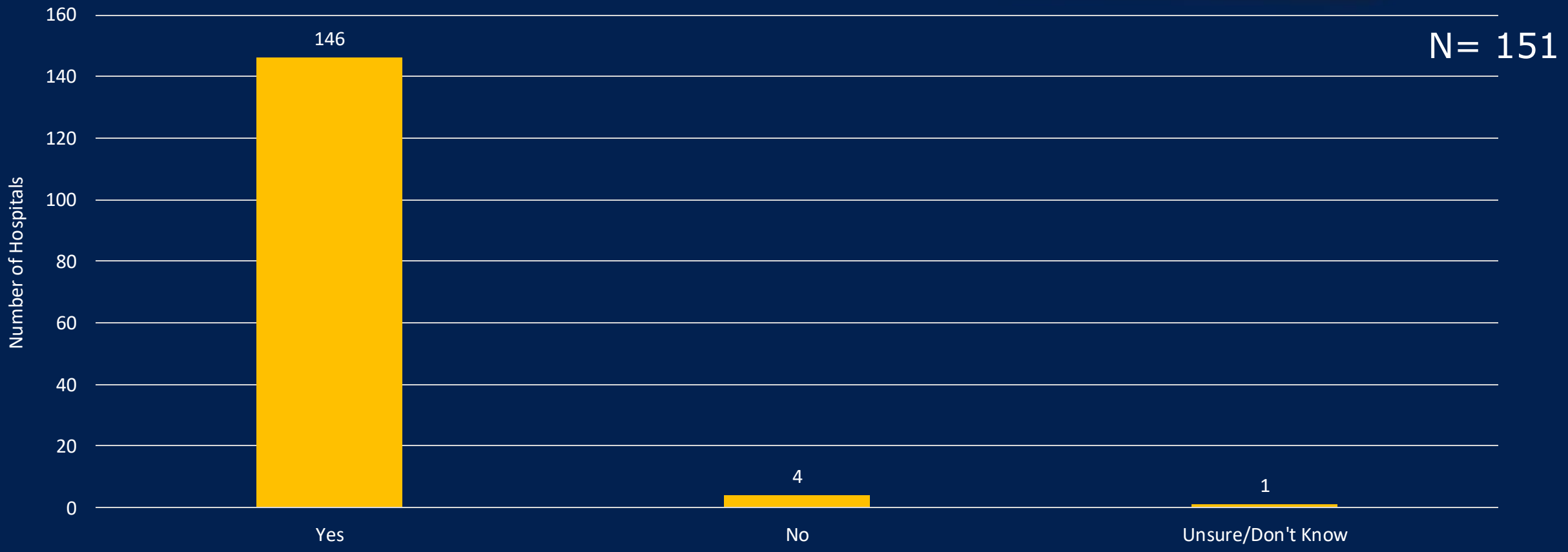
RESPONSE

ASSESSMENT/ACTION	EVALUATION			
	Done	Not Done	Improvement Opportunity	Notes
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 uterotronics				
Team communicates about ongoing blood loss				
Team places second IV				
Team orders labs (CBC/PR/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				

Do you conduct drills at least annually to determine system issues as part of on-going quality improvement efforts?

TEXAS Health and Human Services

Texas Department of State Health Services

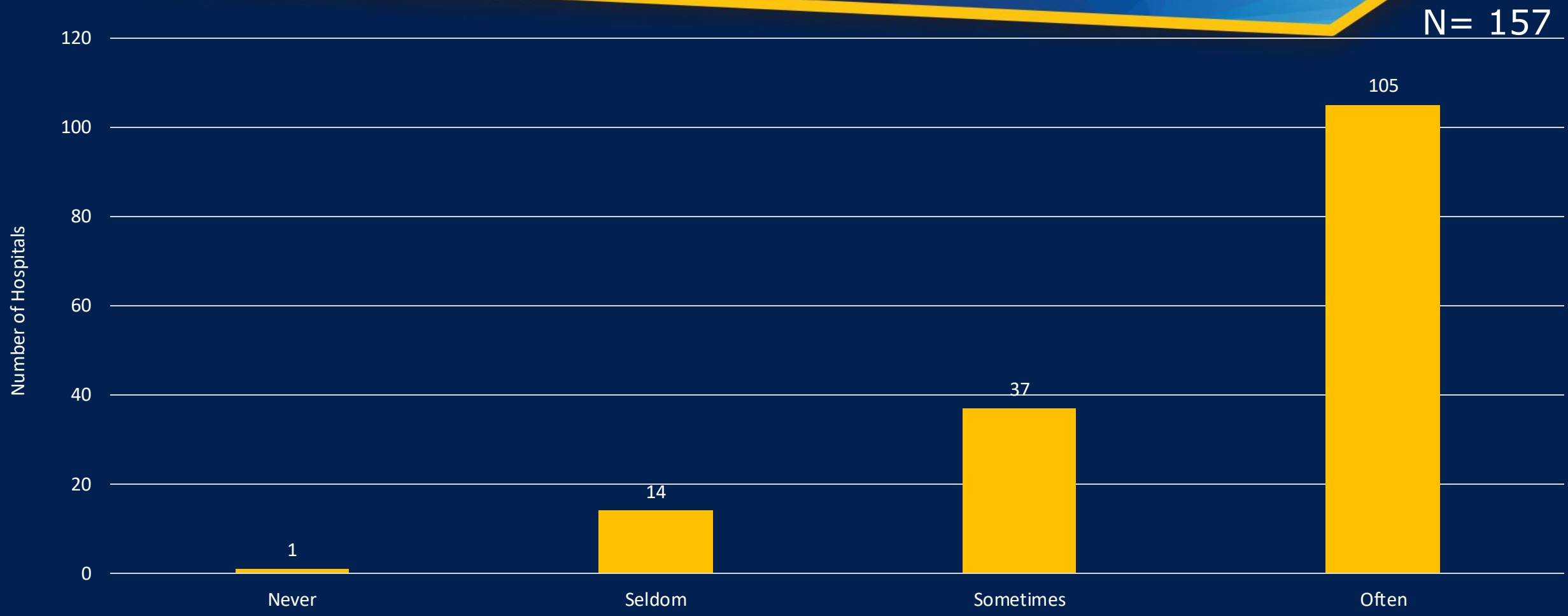


TexasAIM Obstetric Hemorrhage Action Period 3 Status Survey.

How often do OBH drills include post-drill debriefs at your hospital?

TEXAS Health and Human Services

Texas Department of State Health Services

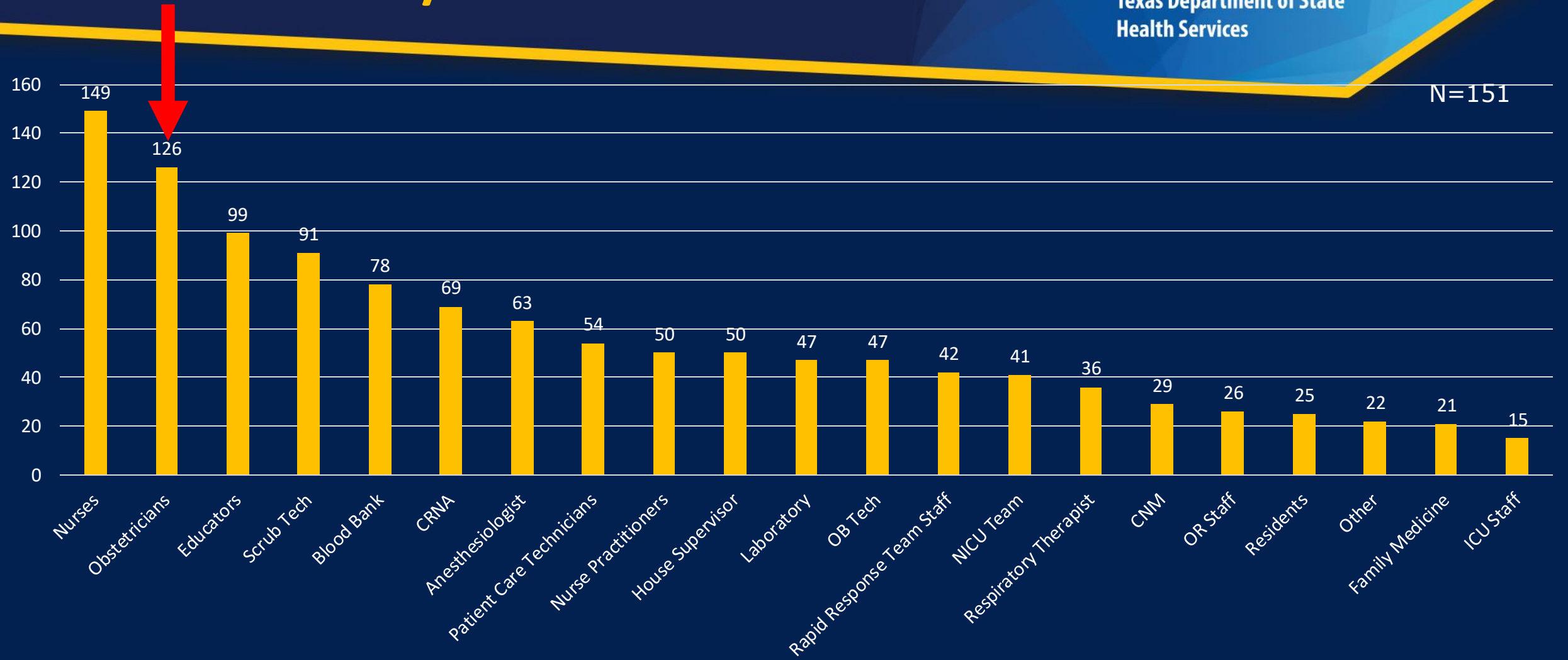


TexasAIM Obstetric Hemorrhage Action Period 3 Status Survey.

Who participates in OBH drills and/or simulations?

TEXAS Health and Human Services

Texas Department of State Health Services

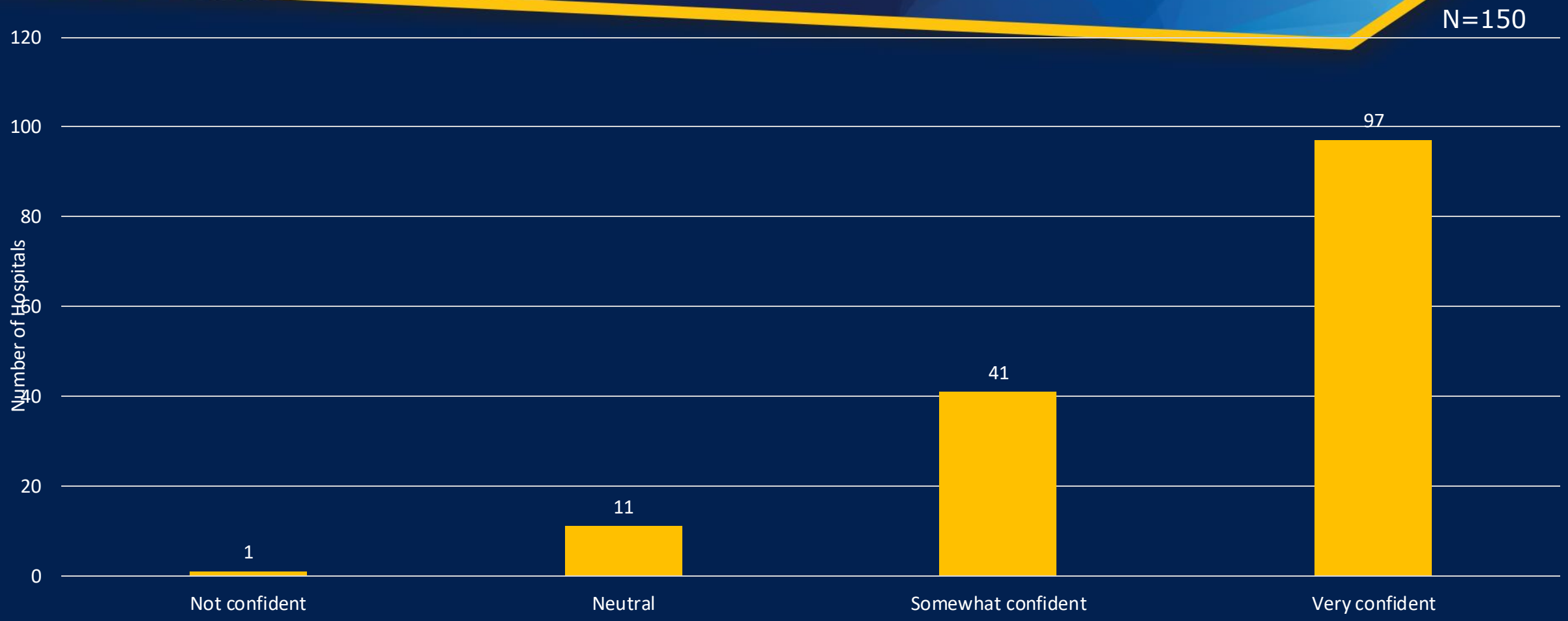


TexasAIM Obstetric Hemorrhage Action Period 3 Status Survey.

What confidence level would you rate your team's ability to conduct an obstetric hemorrhage simulation?

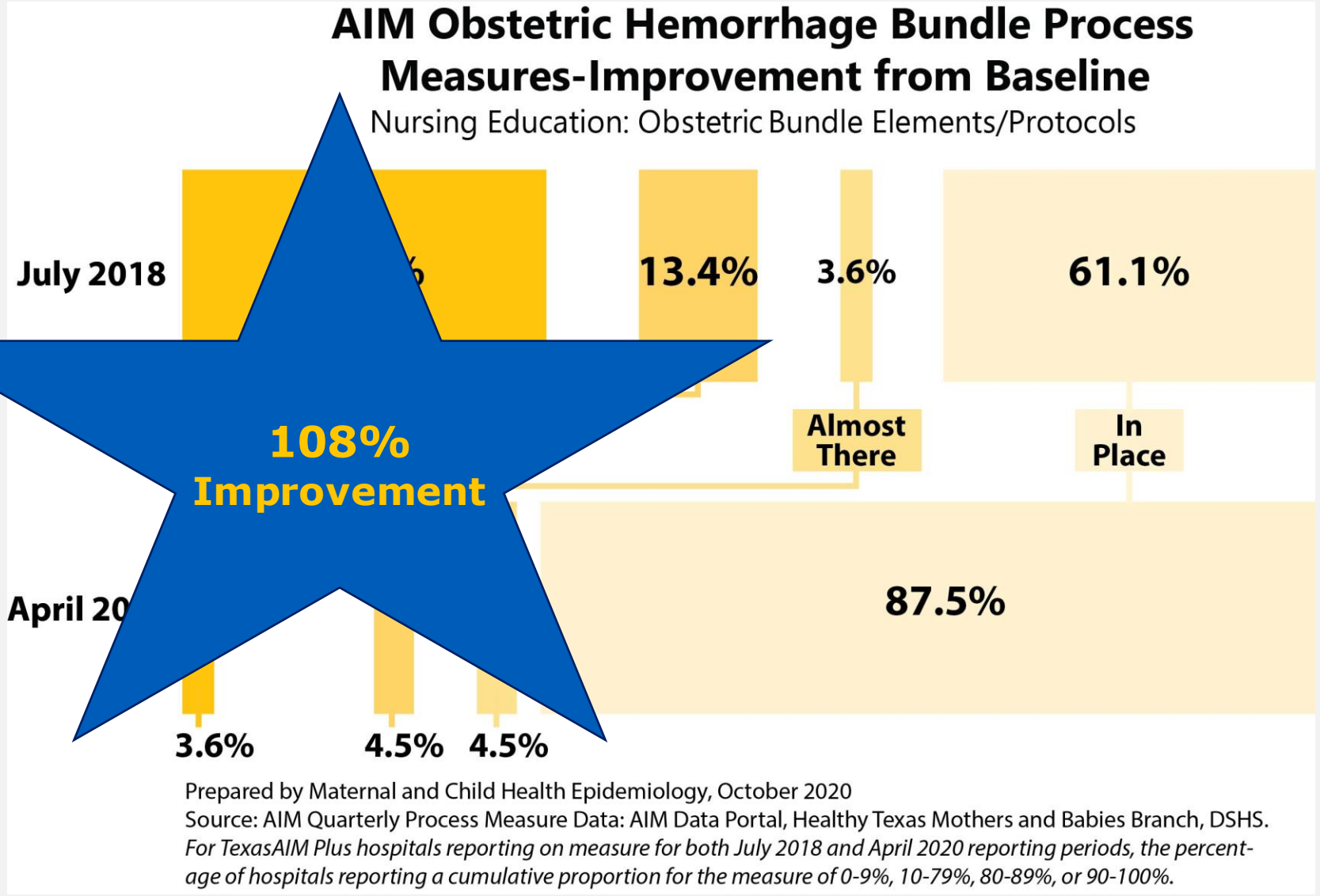
TEXAS Health and Human Services

Texas Department of State Health Services

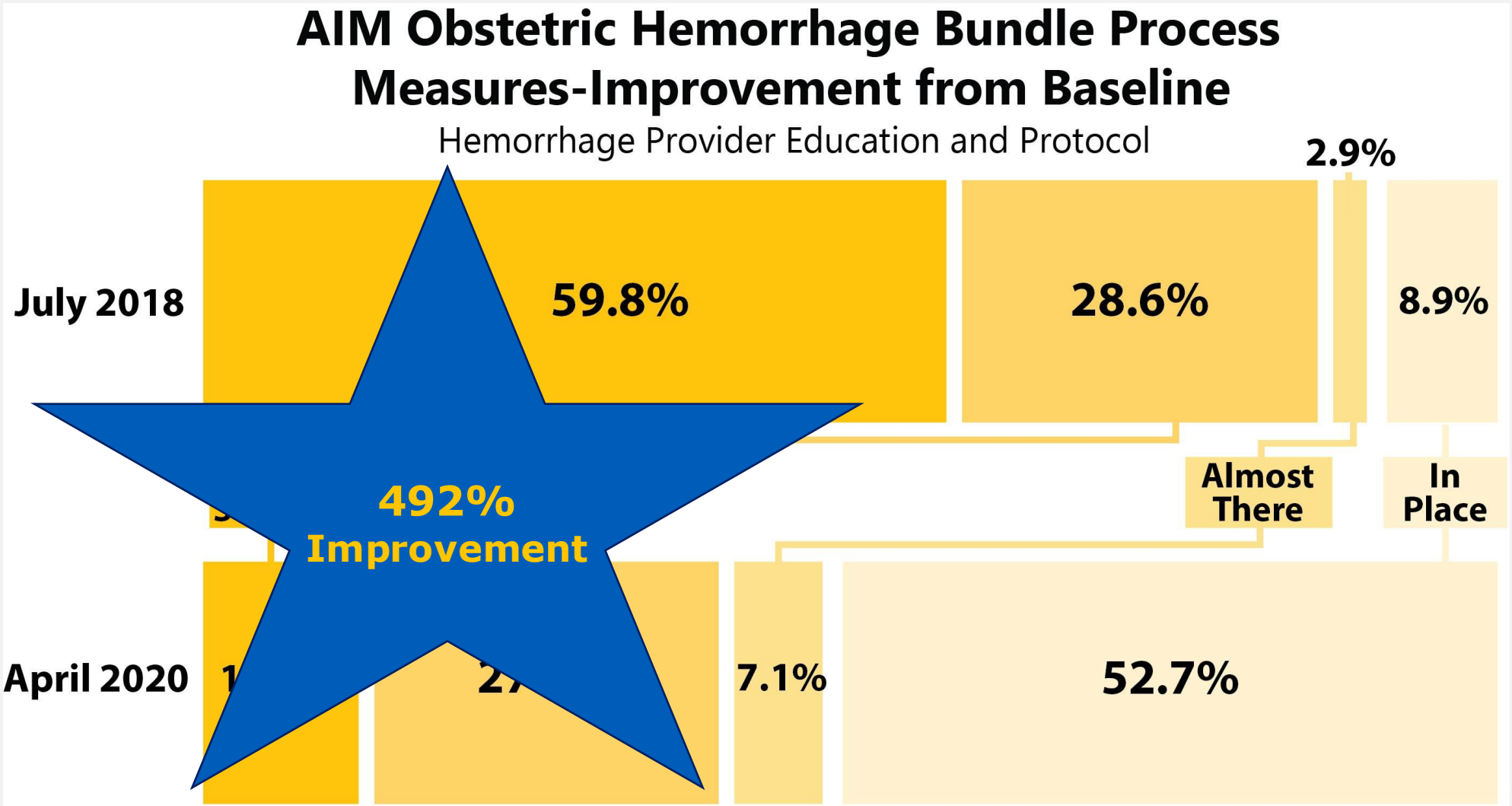


TexasAIM Obstetric Hemorrhage Action Period 3 Status Survey.

Provider Engagement and Buy-In


AIM Obstetric Hemorrhage Bundle Process Measures-Improvement from Baseline
Nursing Education: Obstetric Bundle Elements/Protocols
July 2018
13.4%
3.6%
61.1%
Almost There
In Place
108% Improvement
April 20
87.5%
3.6%
4.5%
4.5%
Prepared by Maternal and Child Health Epidemiology, October 2020
Source: AIM Quarterly Process Measure Data: AIM Data Portal, Healthy Texas Mothers and Babies Branch, DSHS.
For TexasAIM Plus hospitals reporting on measure for both July 2018 and April 2020 reporting periods, the percentage of hospitals reporting a cumulative proportion for the measure of 0-9%, 10-79%, 80-89%, or 90-100%.

AIM Obstetric Hemorrhage Bundle Process Measures-Improvement from Baseline



Prepared by Maternal and Child Health Epidemiology, October 2020
Source: AIM Quarterly Process Measure Data: AIM Data Portal, Healthy Texas Mothers and Babies Branch, DSHS.
For TexasAIM Plus hospitals reporting on measure for both July 2018 and April 2020 reporting periods, the percentage of hospitals reporting a cumulative proportion for the measure of 0-9%, 10-79%, 80-89%, or 90-100%.

MLoC/AIM ALIGNMENT: Maternal Medical Director Maternal Program Manager Roles

MLOC PROGRAM REQUIREMENTS (Maternal Program Plan): The MMD and the Maternal Program Manager (MPM) must participate in the PCR meetings, QAPI regional initiatives, and regional collaboratives, and submit requested data to assist with data analysis to evaluate regional outcomes as an element of their maternal QAPI Plan

PPH

- Did the MPM and/or MPM attend Obstetric Hemorrhage AIM learning sessions?
- Do one or both participate in PPH-related AIM data submission?

Severe HTN

- Did the MPM and/or MPM attend Severe HTN AIM learning sessions?
- Do one or both participate in Severe HTN-related AIM data submission?

OSUD

- Did the MPM and/or MPM attend OSUD AIM learning sessions?
- Do one or both participate in OSUD-related AIM data submission?

Suggested Alignment Opportunities

1

Ask specifically if the Maternal Medical Director (MMD) is participating with the AIM team and to show those efforts

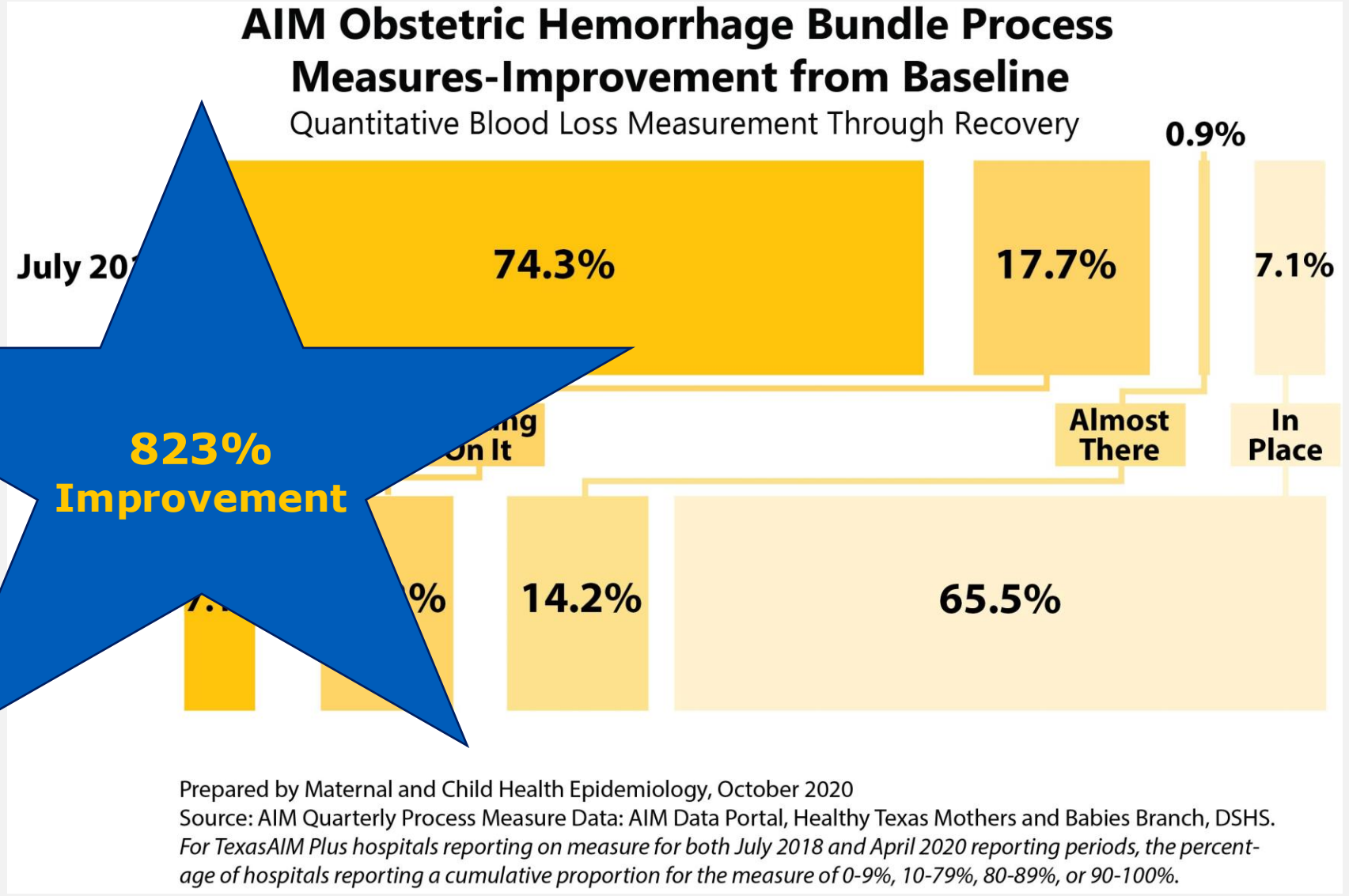
2

Evaluate MMD and Maternal Program Manager (MPM) participation in AIM simulation, especially efforts to send a physician to train the trainer events

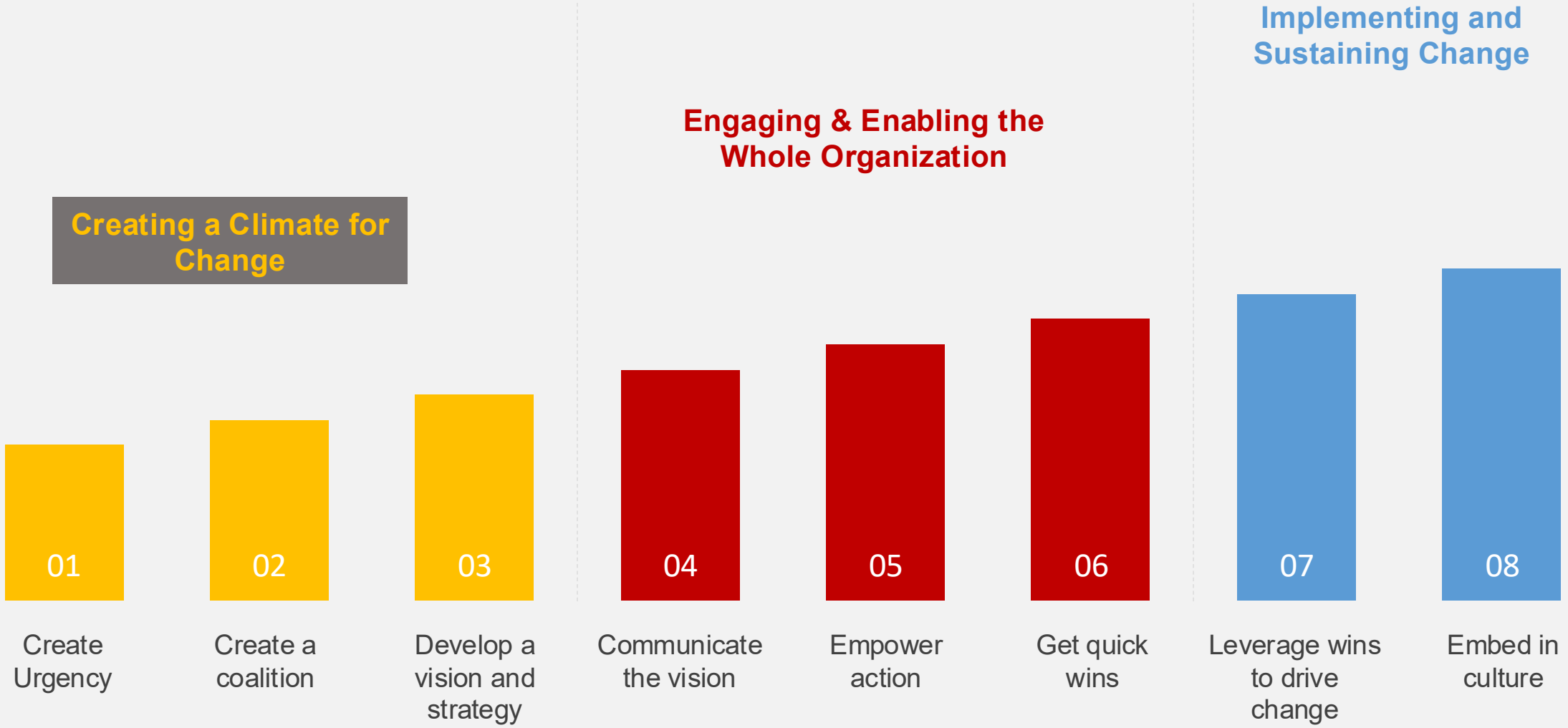
3

Acknowledge MMD/physician champion (and MPM) participation in AIM learning session and sim events

AIM Obstetric Hemorrhage Bundle Process and Structure Measures


AIM Obstetric Hemorrhage Bundle Process Measures-Improvement from Baseline
Quantitative Blood Loss Measurement Through Recovery
0.9%
74.3%
17.7%
7.1%
Almost There
In Place
14.2%
65.5%
823% Improvement
Prepared by Maternal and Child Health Epidemiology, October 2020
Source: AIM Quarterly Process Measure Data: AIM Data Portal, Healthy Texas Mothers and Babies Branch, DSHS.
For TexasAIM Plus hospitals reporting on measure for both July 2018 and April 2020 reporting periods, the percentage of hospitals reporting a cumulative proportion for the measure of 0-9%, 10-79%, 80-89%, or 90-100%.

Quantitative Blood Loss

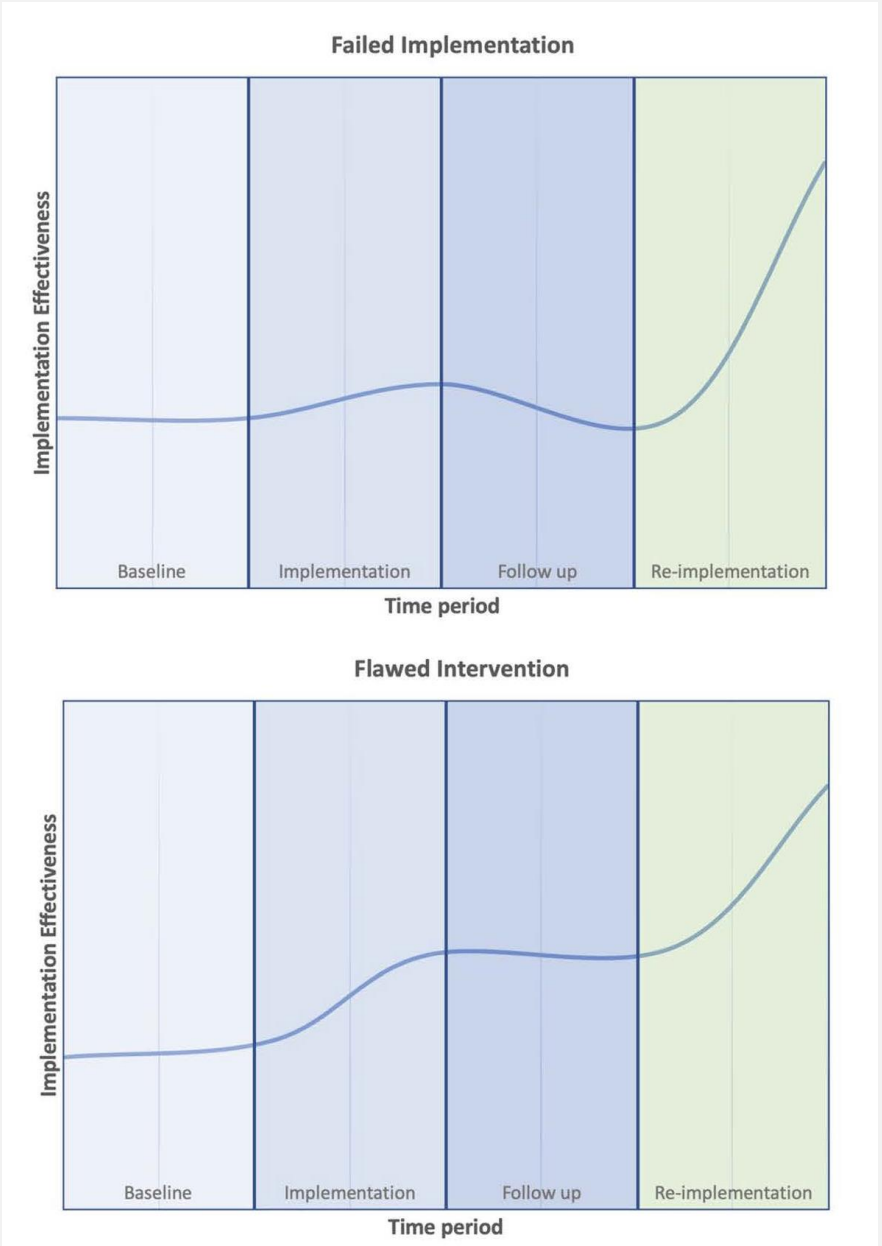


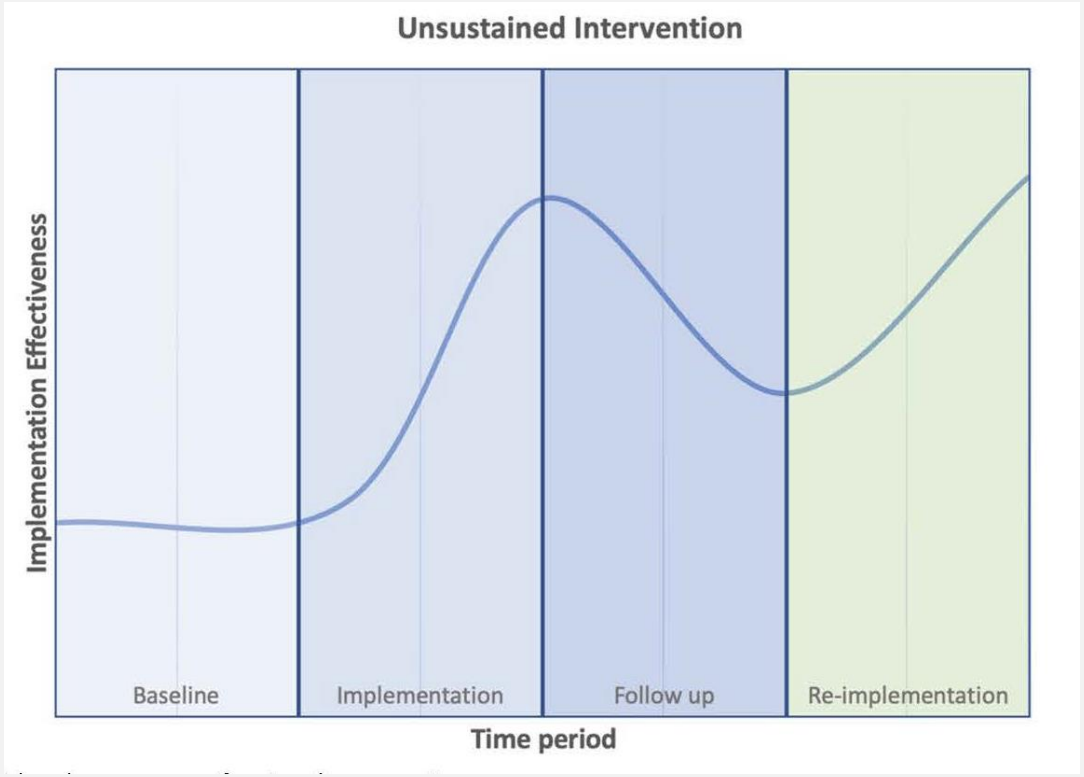
Reimplementation

Moyal-Smith et al. Defining Reimplementation. Implementation Science Communications (2023) 4:60
https://doi.org/10.1186/s43058-023-00440-4

"Systematic process of reintroducing an intervention in the same environment, often with some degree of modification, offers another chance at implementation with the opportunity to address failures, modify, and ultimately achieve the desired outcomes"

Failed, Unstained, Flawed Intervention

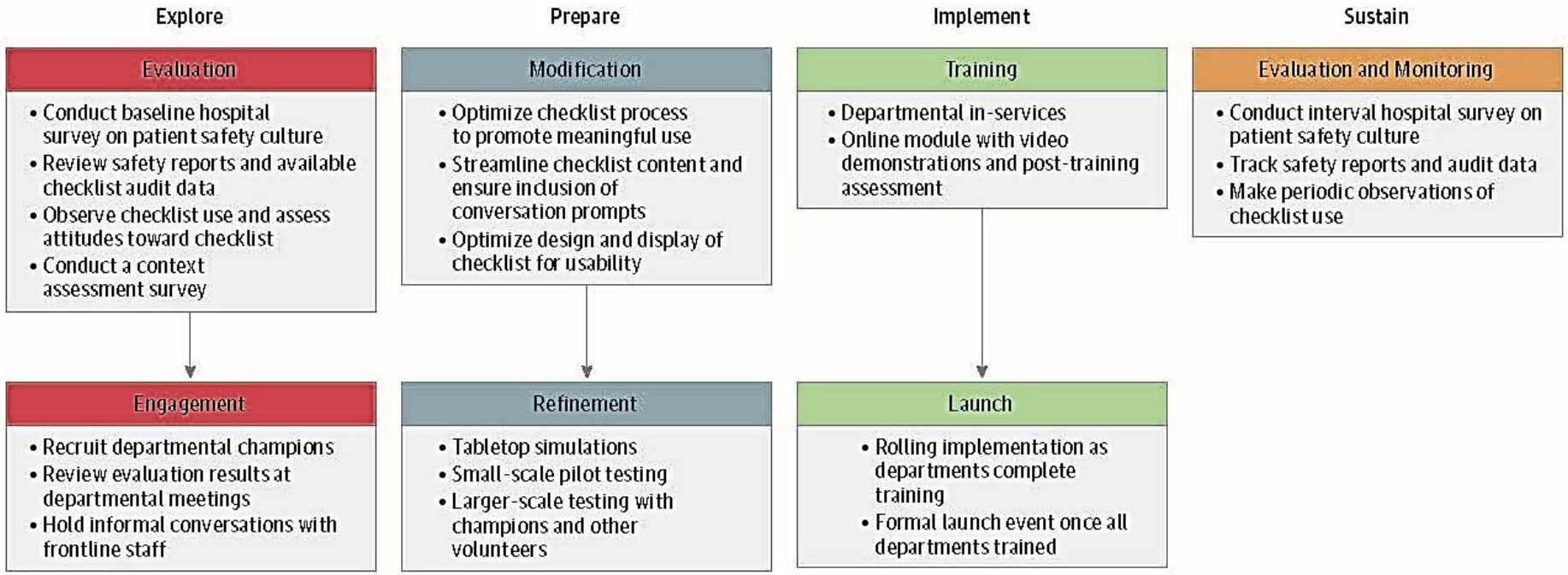




Moyal-Smith et al. Defining Reimplementation. Implementation Science Communications (2023) 4:60 https://doi.org/10.1186/s43058-023-00440-4

Approaches to Reimplementation

Figure 1. Approach to Surgical Safety Checklist Reimplementation



In the Explore phase, a combination of surveys, direct observations, and administrative data were used to assess checklist use and the Atlas Foundations Survey provided data on implementation readiness. Engagement with frontline staff began in this phase and continued longitudinally. The Prepare phase used a structured approach to modify the checklist and refine the revised version. During the Implementation phase, multiple approaches were combined to build support and familiarity with the new safety process. Sustainment will rely on periodic reevaluation, as well as ongoing monitoring of checklist use.

Etheridge et al. Transforming Team Performance Through Re-implementation of the Surgical Safety Checklist. *JAMA Surg. 2024;159(1):78-86.*

Obstetric Hemorrhage Call Goals

Introduction and Education

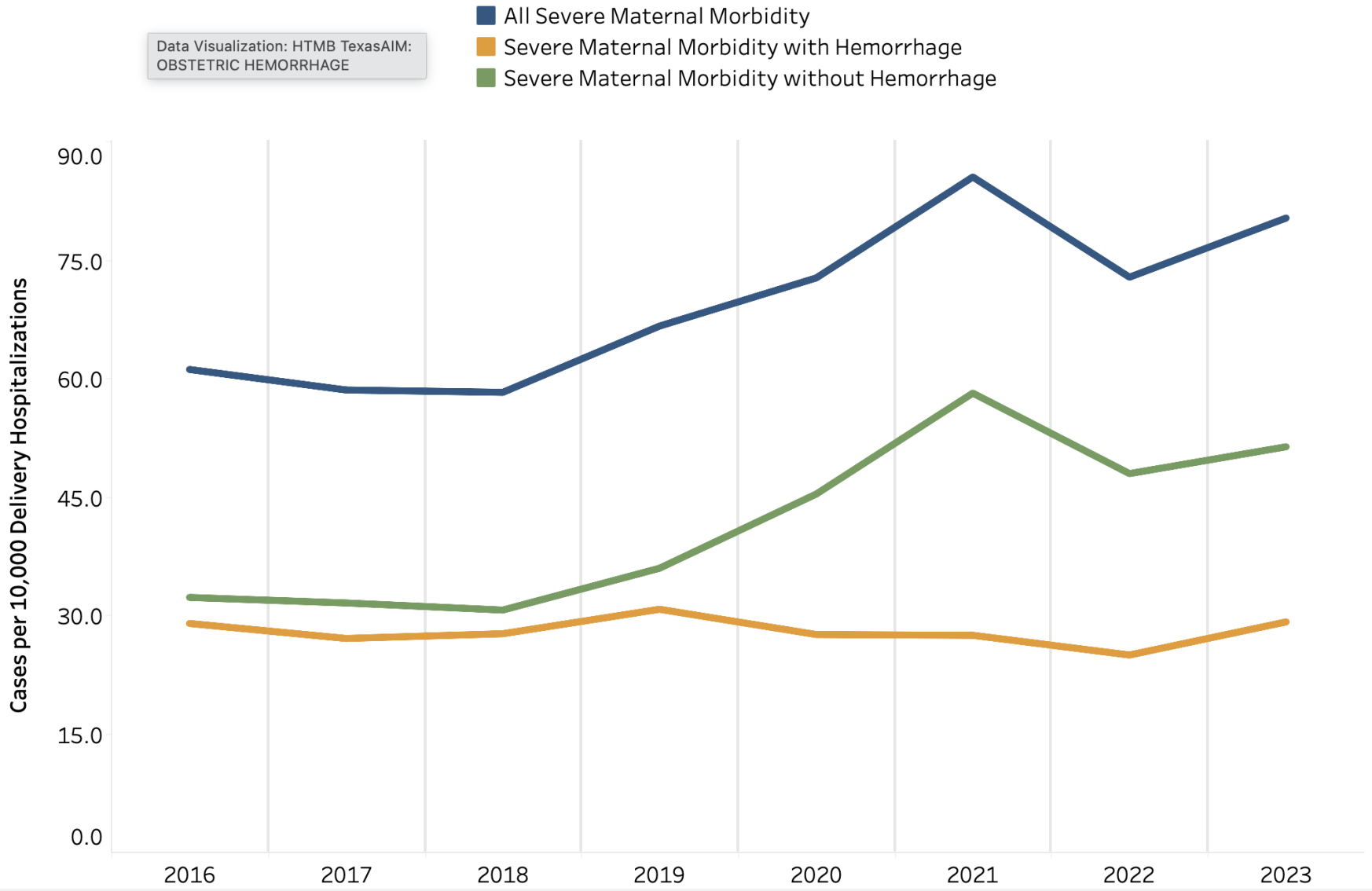
- Hospital teams who are implementing for the first time
- New team members joining an existing team and trying to understand your facility existing elements

Reimplementation

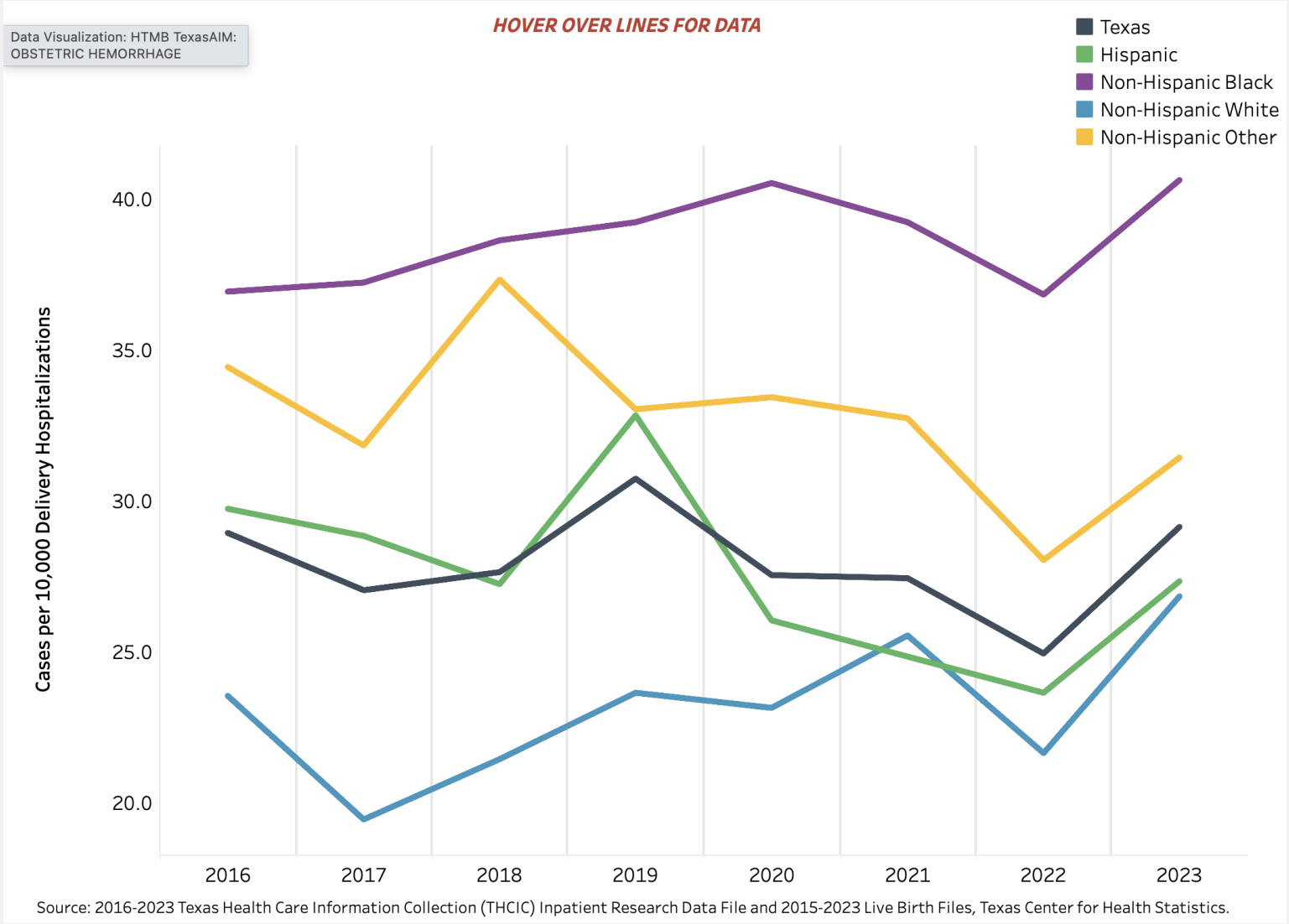
- Hospital teams with previous implementation and transition to sustainability, who are finding the element isn't as successful or is no longer used

SEVERE MATERNAL MORBIDITY AMONG IN-HOSPITAL DELIVERIES WITH OR WITHOUT OBSTETRIC HEMORRHAGE PER 10,000 DELIVERY HOSPITALIZATIONS, TEXAS, 2016-2023

HOVER OVER LINES FOR DATA



Respectful Care
Severe Maternal Morbidity Hemorrhage



Thank you

TexasAIM@dshs.Texas.gov