



ALLIANCE FOR INNOVATION
ON MATERNAL HEALTH

2025 AIM Sustainability Community of Learning (COL)

**Wednesday
August 20, 2025
1:00PM–2:30PM (EST)**



ALLIANCE FOR INNOVATION
ON MATERNAL HEALTH

The Alliance for Innovation on Maternal Health is a national, cross-sector commitment designed to support best practices that **make birth safer, **improve maternal health outcomes**, and **save lives**.**

**You can find more information at
saferbirth.org.**

This program is supported by a cooperative agreement with the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number UC4MC28042, Alliance for Innovation on Maternal Health. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.



Before We Get Started

- ▶ You are **muted** upon entry to the call.
- ▶ **You will have the ability to unmute** yourself during Q&A times.
- ▶ We encourage participants to **remain muted** to reduce background noise.
- ▶ If you are experiencing technical difficulties, please chat an AIM staff member or email **aimdatasupport@acog.org**

This presentation will be recorded.

Both the slides and recording will be available on the AIM Data Resources Webpage and shared in the follow-up newsletter.



Agenda

01

**Welcome &
Introductions**

02

**Sustainability
COL
Resources**

03

**Speaker
Presentation:
Data-driven
Strategies for
Monitoring
Sustainability**

04

**Group
Discussions**

05

Q/A & Closing



Meet the AIM Data Team



Izzy Taylor
Senior Manager,
AIM Data Program



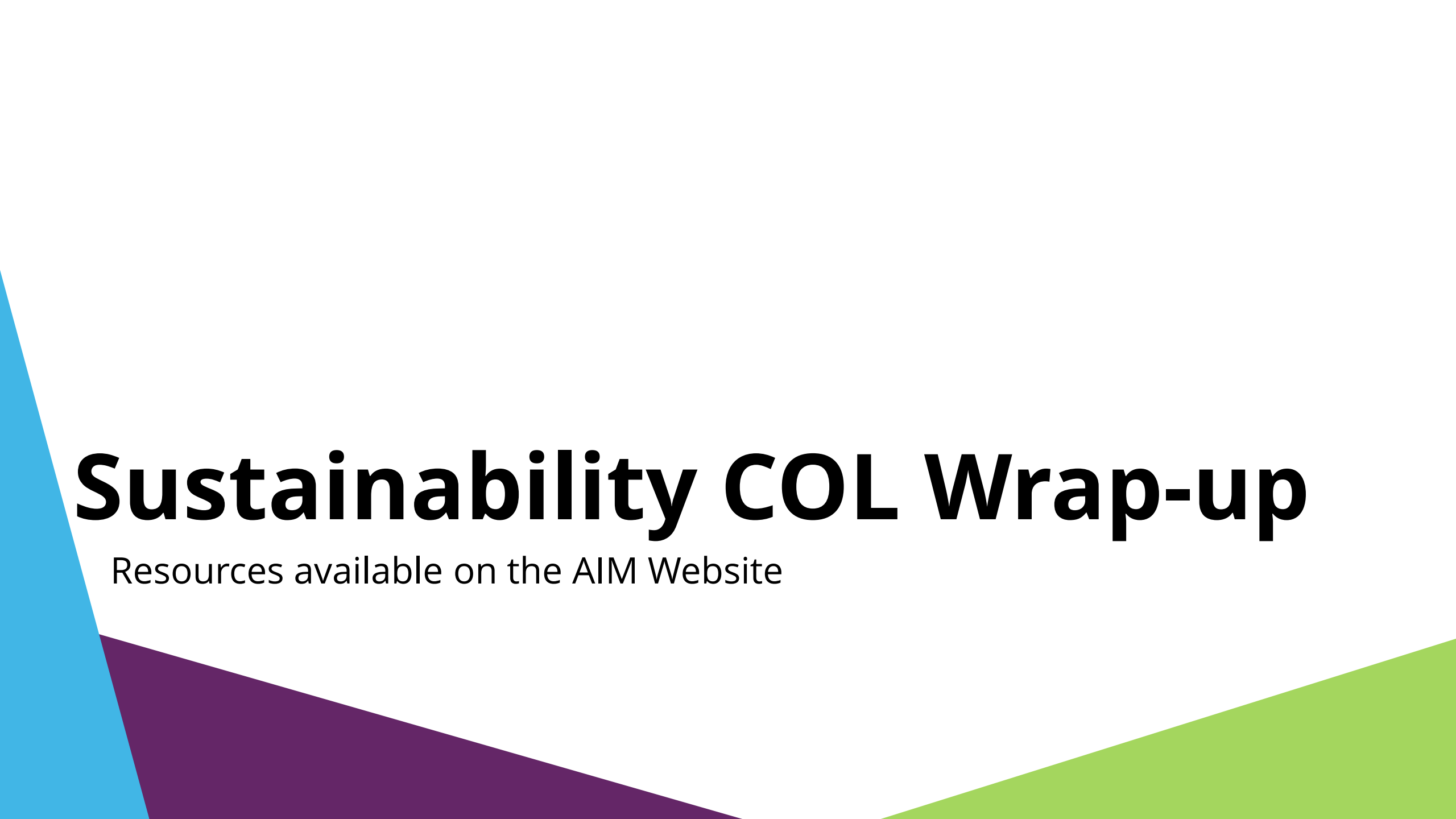
Inderveer Saini
Program Data
Analyst II



Rekha Karki
Program Data
Analyst



**David
Laflamme**
Epidemiology
Contractor

The background features three large, overlapping geometric shapes: a blue triangle on the left, a purple triangle at the bottom left, and a green triangle at the bottom right.

Sustainability COL Wrap-up

Resources available on the AIM Website

Visit: saferbirth.org

Resource Kits ▼

Resources ▼

Events ▼

AIM Data ▼

Contact

Event Calendar

Communities of Learning

Vimeo

AIM TAP Webinar Series

2025 AIM Annual Meeting

AIM COMMUNITIES OF LEARNING

QI Community of
Learning 2022

QI Community of
Learning 2023

Data Support
Community of
Learning

Lived Experience
Integration into QI
Community of
Learning

Obstetric Emergency
Readiness
Community of
Learning

Sustainability
Community of
Learning 2025



Meet the Speakers



Elliott K. Main, MD



Andrew M. Carpenter

**Alliance for Innovation in Maternal Health
Sustainability Community of Learning**

Data-driven Strategies for Monitoring Sustainability

August 20, 2025

Elliott K. Main, MD

Clinical Professor, Department of Obstetrics and
Gynecology, Stanford University School of Medicine
AIM Implementation Consultant

Andrew M. Carpenter

Principal, Critical Juncture LLC
Developer, CMQCC Maternal Data Center, Stanford
University School of Medicine
Developer, AIM Data Center

No other disclosures or conflict noted.

Learning Objectives

1

Explore strategies for using data to track the ongoing sustainment of bundle elements and ensure continuous improvement.

2

Develop processes to address shifts in data trends.

3

Create feedback processes to report data to hospital teams and provide technical assistance

Prior AIM Sustainability COL Presentations (2025)

Session 1: Planning for Quality Improvement with Sustainability in Mind

Session 2: Sustainability Champions: Engaging Stakeholders in Sustainability Success

Session 3: Maintaining Changes in Practice and Processes through Staff Support, Training, and Collaboration

Session 4: Sustaining the Gains Amidst Changes in Policy and the Healthcare Landscape

Session 5: Strategic Resource Management: Ensuring Sustainability in Healthcare Implementation

**To start, we need to recognize that
by far, the biggest enemy
for sustaining any QI project
is starting the NEXT QI project**

Underlying Principles

- ▶ Recognize that Sustainability is a competition for ATTENTION and RESOURCES
 - At both the level of the unit and the hospital
- ▶ Three “Magic Words” to obtain hospital resources:
Safety Issue, Required for Accreditation, Publicly Reported by Major Organization(s)
Note that “Quality Improvement” is not on the list

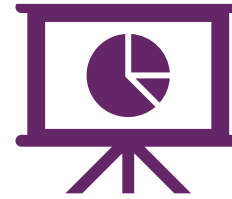
Data-driven Approaches for Sustainability



1. How the PQC or system can “shape the landscape”



2. Selection of key metrics for on-going surveillance



3. Using data systems to lock-in new processes with the goal of sustainability

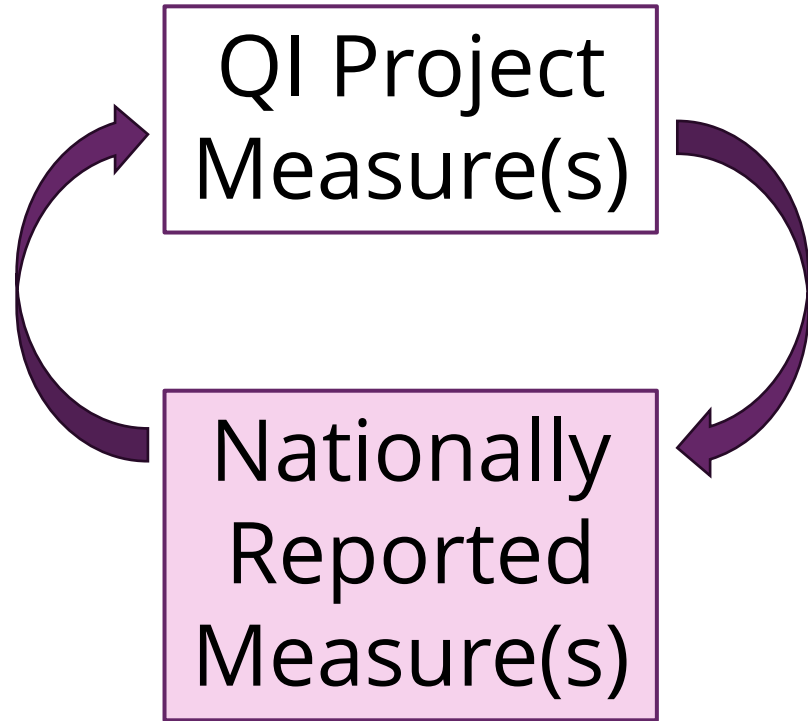


4. Tracking sustainment and responding to shifting trends

How the PQC or System can “shape the landscape”

- ▶ Coordinate/Mirror hospital QI metrics with those used nationally or by Health Plans or publicly reported
- ▶ Coordinate with The Joint Commission and other accreditation organizations
- ▶ Make it easy to report

Sustainability of OB QI Measures: Macro Level (1)



- ▶ Best if national body (e.g., CMS, TJC) requires hospital reporting
- ▶ Also good if used by public reporting groups (e.g., LeapFrog, U.S. News & World Report)
- ▶ Also good if used by health plans (e.g., Medicaid, Blue Distinction)

Examples: NTSV CS and SMM rates

Public Release of Cesarean Metrics (CA)

- ▶ CalHospitalCompare.org
- ▶ CA Secretary of HHS provides Yearly Recognition for Hospitals With NTSV CS Rates <23.9%
- ▶ Yelp: OB data on hospital page



The image is a composite of two screenshots. The top screenshot is from CalHospitalCompare.org, titled "Mother and Baby", showing a table of metrics for El Camino Hospital compared to the State Average. The bottom screenshot is from Yelp.com, showing the El Camino Hospital page with a "Maternity Care Data" section.

Metric	Current	State Average
C-Section Rate (NTSV)	AVERAGE	25.4%
Breastfeeding Rate		
Episiotomy Rate		
VBAC Routinely Available		
VBAC Rate		

Yelp.com - El Camino Hospital

Maternity Care Data (Based on data from Cal Hospital Compare)

Metric	Rate
C-Section Rate	Average Rate
Breastfeeding Rate	Well Above Average Rate
Episiotomy Rate	Average Rate
VBAC Routinely Available	Yes
VBAC Rate	Below Average Rate

Authorize Data Release: Inland Empire Health Plan (IEHP)

Inland Empire Health Plan (IEHP)

Data to Be Released

Hospital-level numerator and denominator statistics for the NTSV Cesarean Birth Rate (PC-02) and Exclusive Breastfeeding (PC-05) for each quarter that your hospital has actively submitted data to the Maternal Data Center, for the time periods selected below. No patient or provider-level data will be shared.

My hospital can make corrections to the underlying data at any time and the updated statistics will be provided to Inland Empire Health Plan with the next quarterly report. Please note that these changes may or may not be made to IEHP's pay for performance and shared savings program measures based on timing. For more information regarding impact to changes in performance measures after data has been reported to IEHP for Quality programs please contact IEHP at QualityPrograms@iehp.org

Measure	Beginning From	Send Data Through
☒ Cesarean Birth: NTSV - Nullip Term Singleton Vertex (PC-02: Period-Specific)	Q1 2017 ▾	ongoing until authorization amended ▾
☒ Exclusive Human Milk Feeding (PC-05)	Q1 2017 ▾	ongoing until authorization amended ▾

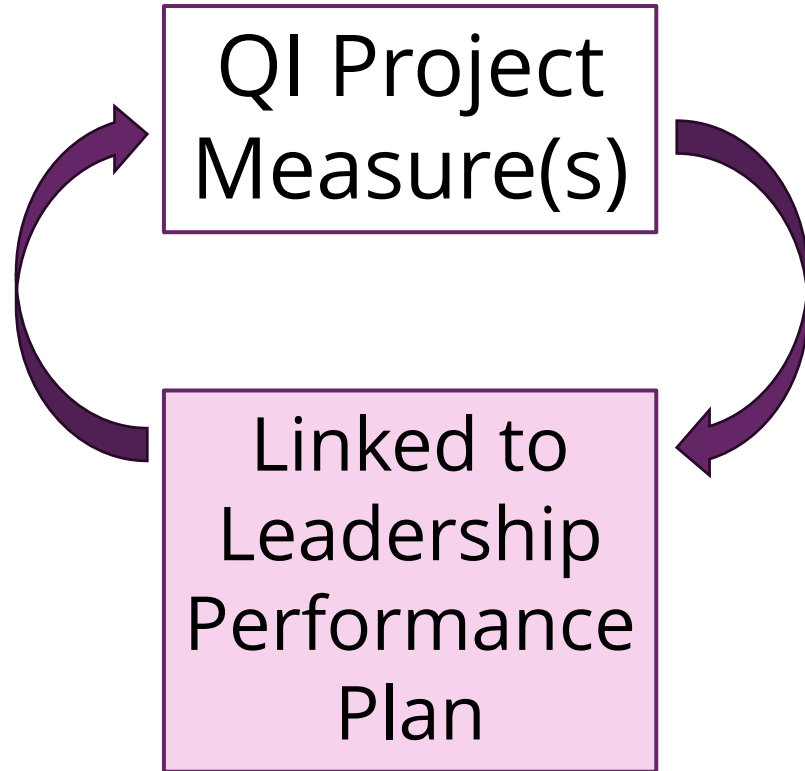
☐ I attest that I have the authority, or have received permission from the appropriate authorities, to bind this hospital to the data releases checked above.

Download CSV

- To review the underlying data for each metric result, click the measure name below.
- For more information, see these [FAQs](#)

	2024	July 2023 - June 2024	2023	July 2022 - June 2023	2022	July 2021 - June 2022
Cesarean Birth: NTSV (PC-02: Period-Specific)	25.0%	24.5%	★ 23.2%	22.8%	★ 23.2%	23.4%
A star indicates your hospital was on the Smart Care Honor Roll for the reporting year. See the third bullet above.						
Episiotomy	3.1%	3.8%	3.4%	3.1%	4.3%	5.0%
VBAC - TSV	15.8%	14.3%	14.3%	18.6%	17.2%	13.9%
For periods before CY2022, VBAC-All rates were reported to Cal Hospital Compare. Starting with the CY2022 period, VBAC-TSV rates will be reported for hospitals where VBACs are routinely available. For more information, see these FAQs.						
VBAC Routinely Available	Yes	Yes	Yes	Yes	Yes	Yes
Based on hospital response to Hospital Quality						

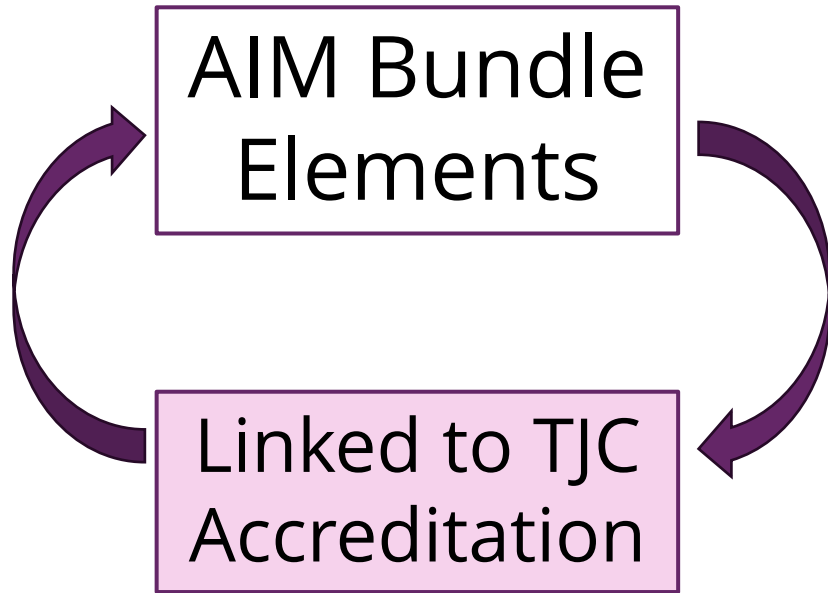
Sustainability of OB QI Measures: Macro Level (2)



- This has been highly effective in several hospital systems where an OB quality metric is part of the overall quality performance goals for unit and senior leadership--up to the CEO!

Generally limited to a single OB metric

Sustainability of OB QI Measures: Macro Level (3)



- ▶ The AIM Bundles for Hypertension and Hemorrhage were rewritten as **Standards** by The Joint Commission and are used in reaccreditation site visits

Currently limited to HEM and HTN



New Standards for Perinatal Safety

• Issued August 21, 2019

PC.06.03.01

Reduce the likelihood of harm related to maternal severe hypertension/preeclampsia.

Element(s) of Performance for PC.06.03.01

1. Develop written evidence-based procedures for measuring and remeasuring blood pressure. These procedures include criteria that identify patients with severely elevated blood pressure.
2. Develop written evidenced-based procedures for managing pregnant and postpartum patients with severe hypertension/preeclampsia that includes the following:
 - The use of an evidence-based set of emergency response medications that are stocked and immediately available on the obstetric unit
 - The use of seizure prophylaxis
 - Guidance on when to consult additional experts and consider transfer to a higher level of care
 - Guidance on when to use continuous fetal monitoring
 - Guidance on when to consider emergent delivery
 - Criteria for when a team debrief is required

Note: The written procedures should be developed by a multidisciplinary team that includes representation from obstetrics, emergency department, anesthesiology, nursing, laboratory, and pharmacy.
3. Provide role-specific education to all staff and providers who treat pregnant/postpartum patients about the hospital's evidence-based severe hypertension/preeclampsia procedure. At a minimum, education occurs at orientation, whenever changes to the procedure occur, or every two years.

Note: The emergency department is often where patients with symptoms or signs of severe hypertension present for care after delivery. For this reason, education should be provided to staff and providers in emergency departments regardless of the hospital's ability to provide labor and delivery services.
4. Conduct drills at least annually to determine system issues as part of ongoing quality improvement efforts. Severe hypertension/preeclampsia drills include a team debrief.

AIM Bundle Elements

Standard procedures for measuring BP, etc.

Standard procedures for care of severe hypertension with multi-disciplinary emphasis

Staff and provider education, including the ED

Drills and Case Debriefs

Elements continue...

2. Selection of key metrics for on-going surveillance

- ▶ Annual review of structure metrics (facilitated by the Data System)
- ▶ Pick the most impactful process measure and have a low impact collection plan (e.g. review a sample every quarter). At the very least, have the Data System identify cases for review.
- ▶ Identify the key outcome measure, ideally collected from administrative data, or directly from the EHR or Data System

Joint Commission Maternal Safety Standards Tool: HTN/Preeclampsia



2 of 6

Hypertension/Preeclampsia

Reaffirmed for
Jan 2025 - Dec 2025
Reporting Period

	Item	Confirmed in Place on (estimated)		
1	Joint Commission Standard: Develop written evidence-based procedures for measuring and remeasuring blood pressure. These procedures include criteria that identify patients with severely elevated blood pressure.	06/15/2021 or Not In Place	☒	
	Show details			
2	Joint Commission Standard: Develop written evidenced-based procedures for managing pregnant and postpartum patients with severe hypertension/preeclampsia that includes the following:	06/15/2021 or Not In Place	☐	
	Show details		<i>Check box to reaffirm</i>	

CMQCC Sustainability Guidance: Facility standard response protocol, including timely treatment for severe hypertension, is used for all severe hypertensive/preeclampsia cases.

Hypertension / Preeclampsia

[+ Document New Hypertension QI Initiative](#)[Edit](#)[Print Annual QI Report](#)[QI Initiatives](#)[Hemorrhage](#)[Hypertension](#)[LDA](#)

Outcome

Measures	Q1 2024	Q2 2024	Q3 2024	Q4 2024	Target
Hypertension Frequency	16.5%	13.6%	12.7%	10.4%	N/A edit
SMM Excluding Transfusion-Only Cases Among Preeclampsia Cases ^A	0.0%	0.0%	0.0%	0.0%	N/A edit
Preeclampsia Among Those at Risk for Preeclampsia	13.2%	16.1%	10.1%	10.1%	N/A edit
Preeclampsia Rate	7.4%	7.7%	4.5%	4.5%	N/A edit

Process ^A

Measures	Q1 2024	Q2 2024	Q3 2024	Q4 2024	Target
 Timely Treatment for Severe Hypertension (AIM)	71.7%	69.1%	76.1%	67.6%	≥70.0% edit
Patient Support After Persistent Severe Hypertension	N/A	N/A	N/A	N/A	N/A edit

Structure

[Edit Responses](#)

Measures

Joint Commission Standard: Develop written evidence-based procedures for measuring and remeasuring blood pressure. These procedures include criteria that identify patients with severely elevated blood pressure.

Pending
Reaffirmation

System Dashboard

 Download CSV (Excel)

Favorite Measures

QI Initiatives

 = Not Started  = In Progress  = Sustainability  = Action Needed

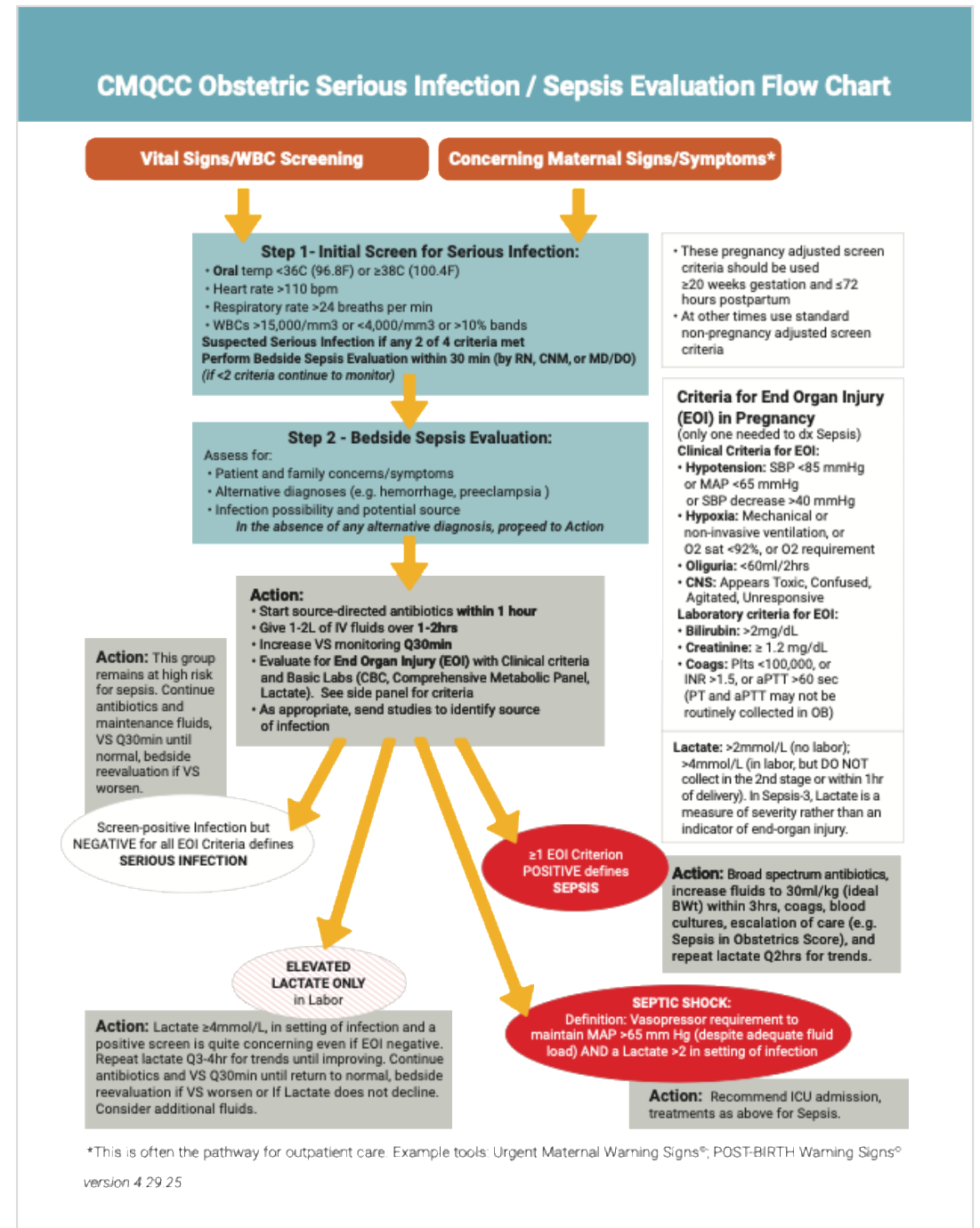
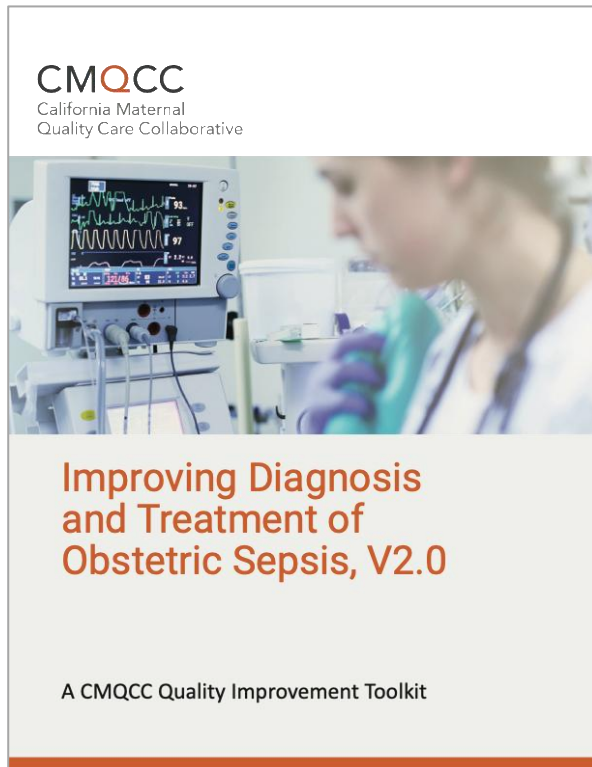
Hospital	Key Drivers of Maternal Morbidity and Mortality		Other Drivers of Maternal Morbidity and Mortality						Other QI Initiatives		
	Hemorrhage	Hypertension	Cardiac	Discharge Transition	Mental Health	Cesarean	Sepsis	Substance Use	Milk Feeding	LDA	Anemia
Alpha Medical Center		 				 			 		
Beta Hospital											
Gamma Health				 	 			 			

• [Complete all items in the bundle.](#)

3. Using data systems to lock-in new processes with the goal of sustainability

- ▶ An important principle of change management is to build new processes into "Daily Work"
- ▶ Harness the EHR for the new initiative with order sets, nursing documentation, protocols, immediately available education
- ▶ As you build the new processes into the EHR, ensure that the you also design the corresponding outputs for tracking process and outcome metrics

New CMQCC Serious Infection/ Sepsis Evaluation Flow Chart

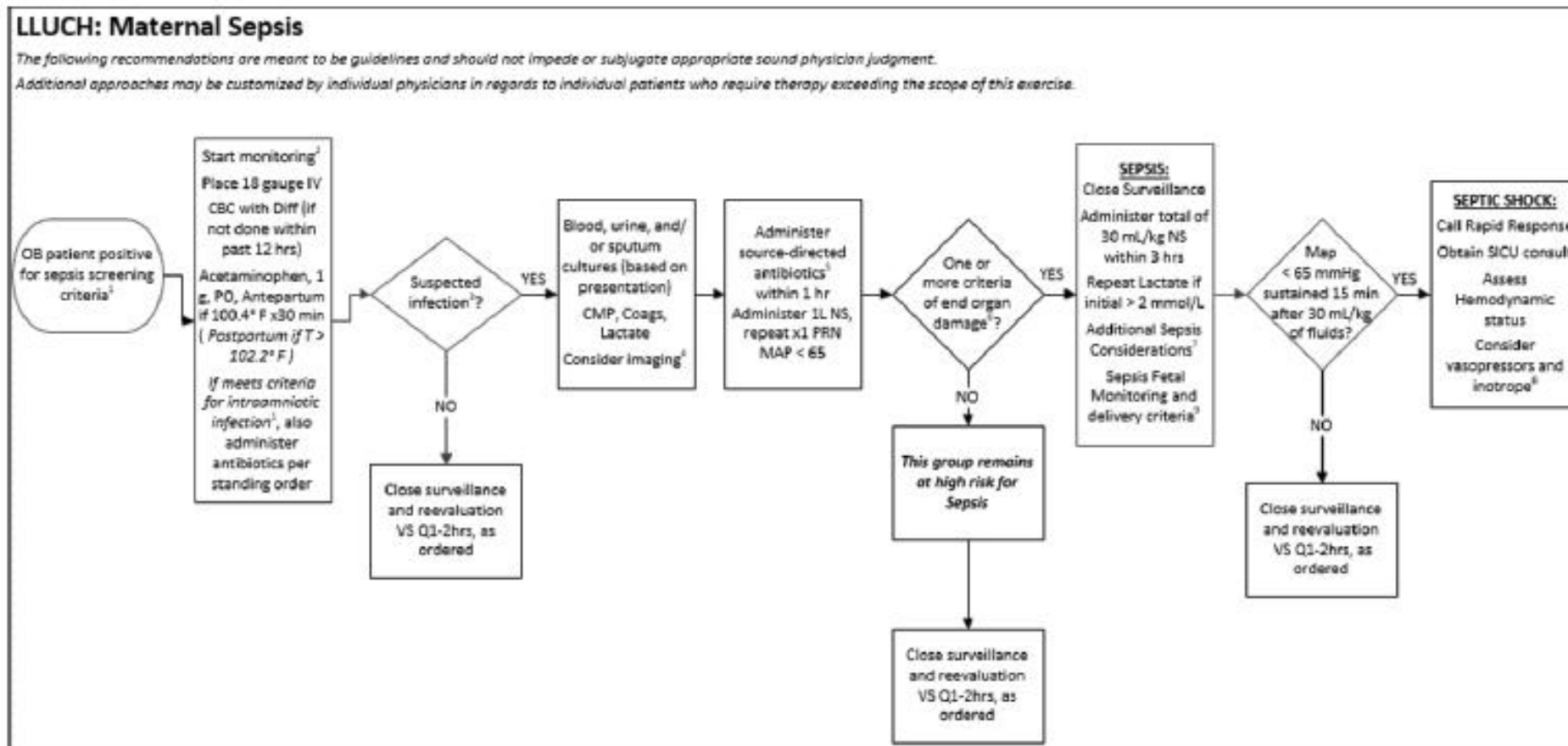


*This is often the pathway for outpatient care. Example tools: Urgent Maternal Warning Signs[®]; POST-BIRTH Warning Signs[®]

version 4.29.25

CMQCC Serious Infection Flow Chart transformed into decision logic in preparation for EHR integration

Note: This is a SAMPLE developed for a particular facility as an example to work from. You may need to adjust based on the individual circumstances of your facility.



EHR Order Sets

MEWT MATERNAL INFECTION (LBM/MCH) [3402]

Maternal Early Warning Trigger (MEWT) URL: http://docs.memnet.org/Xpedio/groups/public/documents/order_sets/093690.pdf

Reference Diagram

SEVERE SEPSIS or END ORGAN INVOLVEMENT

For MAP Less than 65, Respiratory Rate Greater than 24 , or Altered Mental Status [202585]

Check the box to open orders for MAP Less than 65, Respiratory Rate Greater than 24 , or Altered Mental Status

Note: This is a SAMPLE developed for a particular facility as an example to work from. You may need to adjust based on the individual circumstances of your facility.

Severe Sepsis / End Organ Involvement [202586]

- ☐ Lactic Acid [LAB000427] STAT, ONCE, Starting today For 1 Occurrences
- ☐ Comprehensive Metabolic Panel [LAB000213] STAT, ONCE, Starting today For 1 Occurrences
- ☐ XR Chest 1 View Portable [IXR00036] STAT, ONCE, Starting today For 1 Occurrences
- ☐ normal saline (BOLUS) 0.9 % injection Solution [500295] Indication: Is patient pregnant? Discharge pending test results? for 3 Hours, Intravenous, STAT For 1 Doses Consult with MD every hour regarding need for rate adjustment based on current MAP and Lactic Acid results.
- ☐ Nursing to Apply and Monitor Pulse Oximetry [PCS001052] Routine, EFFECTIVE NOW, Starting today For 1 Occurrences
- ☐ I & O, Strict [PCS001656] Routine, EFFECTIVE NOW
- ☐ Foley Catheter: Insert &/or Maintain [PCS001372] Foley Placement Indication: .Urine output monitoring in critically ill patients Remove Foley when indications for monitoring urine output in critically ill patients no longer exist.
- ☐ Consult to: Maternal Fetal Medicine [PCS002241] Referral for 1 visits (expires on 10/18/20) What is the reason for the consult: Consult with specialty: Other (Specify)
- ☐ Notify MD (Specify Reason) [PCS001552] Routine, EFFECTIVE NOW, Starting today For 1 Occurrences, Consult with MD every hour regarding need for Normal Saline Bolus rate adjustment based on current MAP and Lactic Acid Result.

ANTI-INFECTIVES FOR PYELONEPHRITIS

Anti-Infectives for Less Than 20 Weeks Gestational Age for No or Mild Beta-Lactam Allergy [193532]

☐ ceFAZolin (ANCEF, KEFZOL) IV [900690] 2 g, Intravenous, Every 8 Hours

Anti-infectives for Greater Than 20 Weeks Gestational Age for No or Mild Beta-Lactam Allergy [193533]

☐ ceFAZolin/Gentamicin [193543] ☐ ceFAZolin (ANCEF, KEFZOL) IV [900690] 2 g, Intravenous, Every 8 Hours

☐ gentamicin dosing per pharmacy [500048] Indication: Suspected Infection Source of Infection (Select all that apply): Urinary Tract Expected Duration of Therapy:

Anti-Infectives for Severe Beta-Lactam Allergy [193534]

☐ gentamicin dosing per pharmacy [500048] Indication: Suspected Infection Source of Infection (Select all that apply): Urinary Tract Expected Duration of Therapy:

ANTI-INFECTIVES FOR ENDOMETRITIS

Anti Infectives for Endometritis (Single Response) [193535]

BEST PRACTICE ELEMENT

Nursing Standing Orders



LOMA LINDA UNIVERSITY CHILDREN'S HOSPITAL

STANDING ORDERS

Note: This is a SAMPLE developed for a particular facility as an example to work from. You may need to adjust based on the individual circumstances of your facility.

DEPARTMENT: MATERNITY SERVICES

CODE: CH-MAT-9

SUBJECT: MATERNAL SEPSIS

EFFECTIVE: 01/2024

REPLACES: 07/2022

PAGE: 1 of 2

The following shall be initiated by the Maternity Services Registered Nurses (RN) for pregnant patients and patients up to six weeks postpartum that are positive for at least two initial sepsis screening criteria within 6 hours of each other OR patient meets criteria for intraamniotic infection. See definitions below.

- Initial sepsis screening criteria (must meet at least two within 6 hours of each other):
 - Oral Temp < 96.8° F OR ≥ 100.4° F
 - Heart Rate > 110 beats per minute
 - Respiratory Rate > 24 breaths per minute
 - WBC > 15,000/mm³ OR < 4,000/mm³ OR > 10% bands
 - MAP < 65 mmHg sustained for 15 minutes
- Criteria for intraamniotic infection:
 - The patient is in labor with a temperature greater than 102.2° F
 - OR
 - The patient has a temperature between or equal to 98.6° F to 102.2° F with fetal tachycardia (160 bpm or greater) AND leukocytes greater than 15 or less than 4

1. Insert a peripheral IV catheter
2. Draw CBC with differential, if not done in the last 12 hrs
3. Draw lactate Q4hrs until lactate below 2 mmol/L or shock index is less than 0.9
4. Administer Acetaminophen:
 - 4.1. Antepartum: 650 mg, PO, PRN once if temperature sustained ≥ 100.4° F for 30 minutes. If NPO, administer 650 mg, PR.
 - 4.2. Postpartum: 650 mg, PO, PRN once for temperature ≥ 102.2° F. If NPO, administer 650 mg, PR.
5. Monitor:

Chart Review: Exclusive Human Milk Feeding (PC-05)September 2024

⬇️ Automate Data Submission

⬇️ Download Worksheet

Discharges from September 2024

← Aug 2024

Oct 2024 →

Number of Cases to Sample:

0

+ Add to Sample

👤 Sample ALL 113 eligible cases

Sampled 23 of 113

Important Note: The MDC supports several different breastfeeding metrics and allows you to draw a sample (so you don't have to enter data on all newborns if you have a high delivery volume). The MDC also uses the same samples across these different measures to minimize your data burden. Please note that if you draw a sample in either the PC-05 or Expanded Breastfeeding chart review screens, it will also impact the samples in other breastfeeding chart review screens. To learn more about sampling in breastfeeding metrics in the MDC, click [here](#).

	Medical Record Number	Delivery Date	Discharge Date		NICU Admission? ②		Exclusive Human Milk Feeding ②		Review Complete? (3/23)
					Yes	No	Yes	No	
🗨️	N/A	08/31/2024	09/02/2024	✎	✓	☐	Excluded from Measure		✓
💬	N/A	09/03/2024	09/04/2024	✎	☐	☐	☐	☐	⚠️
💬	N/A	09/04/2024	09/05/2024	✎	Gestational age is UTD; edit and assign term newborn status				⚠️

4. Tracking sustainment and responding to shifting trends



Establish a Unit QI Dashboard for following progress

control and intervention charts; benchmarks (CAH, Safety Net, OB and NICU Levels of care, volume)



PQC activities

Annual awards, annual touchpoint between PQC and hospital leads, identifying new hospital leaders for training in PQC and Data center



Tools to make data accessible

Training on data analysis, easy translation into PowerPoint or Hospital dashboards (e.g. PowerBI integration)

[Home](#) > [Alpha Medical Center](#) > [Cesarean Birth: NTSV \(PC-02: Period-Specific\)](#) > [Control Chart](#) > [Control Chart](#)★ **Control Chart: Cesarean Birth: NTSV - Nullip Term Singleton Vertex (PC-02)**[Graph & Data Downloads](#) ▾[Add to Graph Collection](#) ▾

Current JC Specs

Period-Specific JC Specs

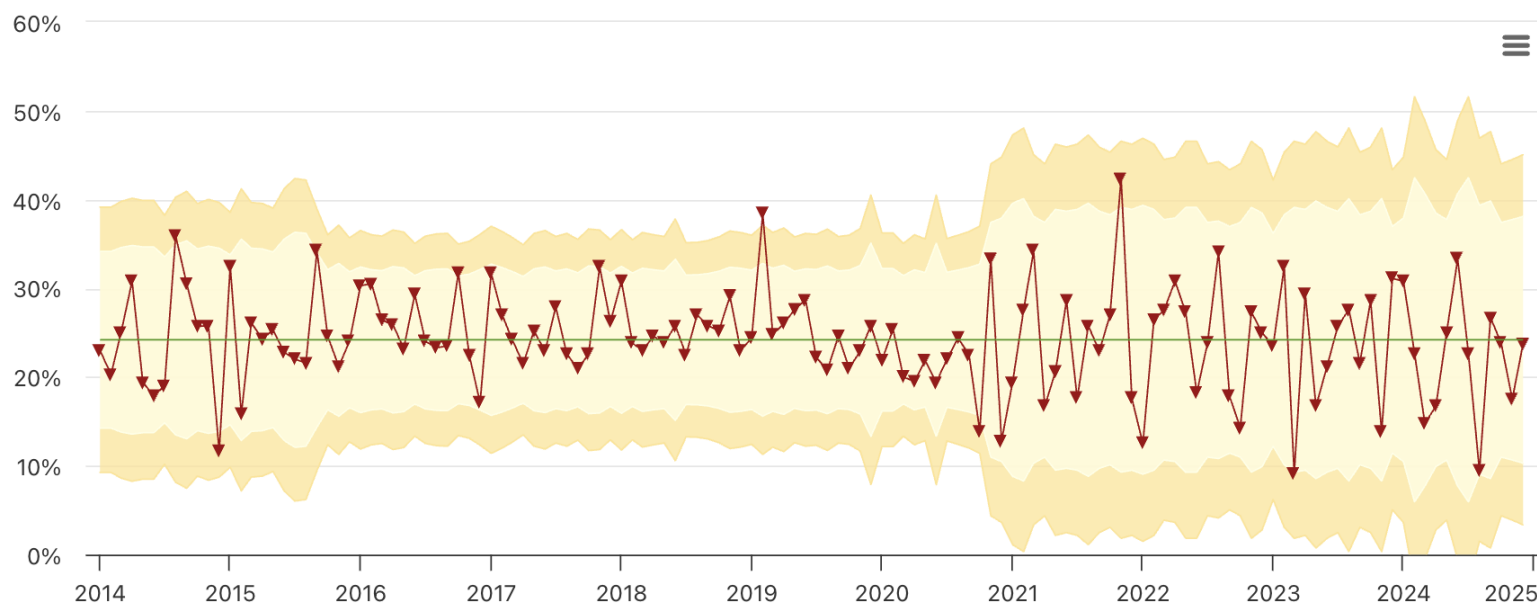
MEASURE

[Hospital Trend](#)[Definition/Algorithm](#)[Intervention Chart](#)**[Control Chart](#)**[Measure Analysis](#)

COMPARISONS

[Peer](#)[System](#)[NICU Level](#)[All Hospitals](#)[Map by Patient Residence](#)[By Provider](#)[By Practice Group](#)[By Prenatal Care Group](#)

Cesarean deliveries among all Nulliparous, Term, Singleton, Vertex (NTSV) deliveries (percent). The PC-02-Period Specific version uses The Joint Commission (TJC) PC-02 measure specifications in place at each time period (as TJC made frequent specification updates after converting to ICD-10). As such, this version is not ideal for trend analysis. [See more details](#)



[Home](#) > [Alpha Medical Center](#) > [Cesarean Birth: NTSV \(PC-02: Period-Specific\)](#) > [Intervention Chart](#) > [Intervention Chart](#)

★ Intervention Chart: Cesarean Birth: NTSV - Nullip Term Singleton Vertex (PC-02: Period-Specific)

[Download Graph & Data](#)

Start Date: 01/01/2022 ▾

[Add to Graph Collection](#)

Current JC Specs

Period-Specific JC Specs

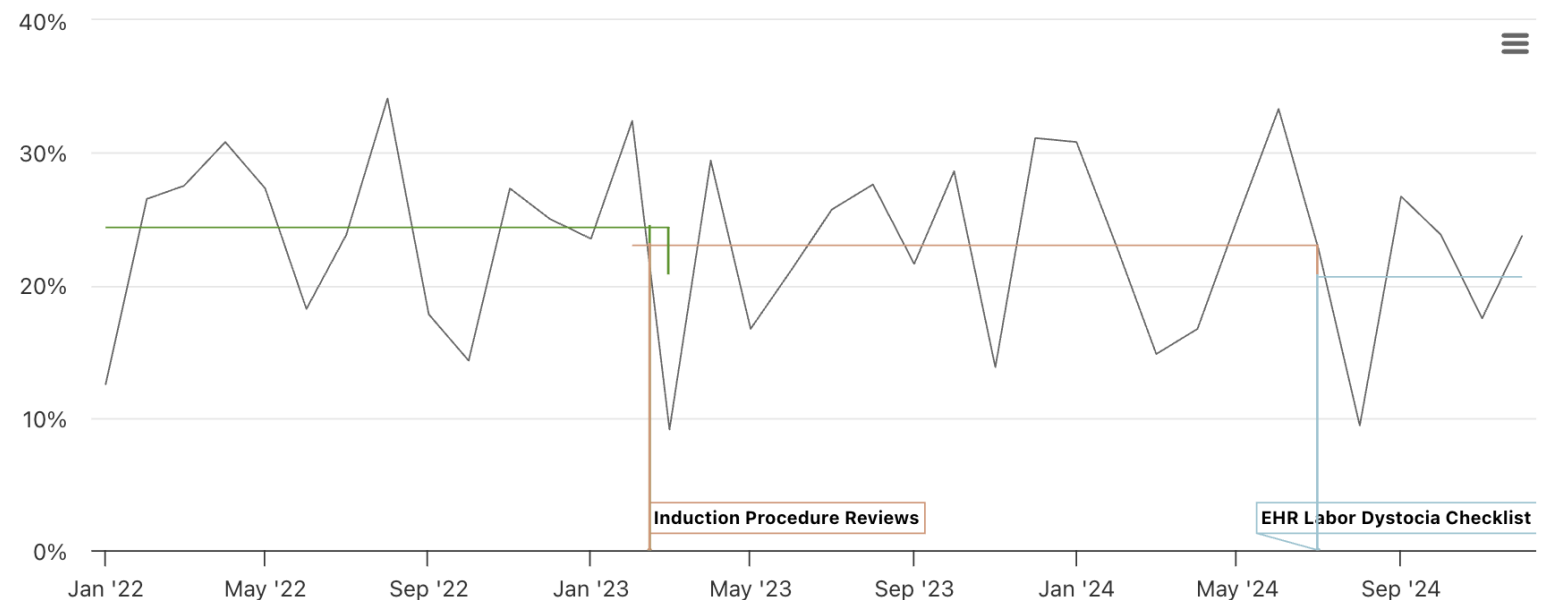
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★ **Peer: Cesarean Birth: NTSV - Nullip Term Singleton Vertex (PC-02: Period-Specific)**

Graph & Data Downloads

Start Date: 07/01/2024

Duration: 6 Months

Data Source: MDC

Add to Graph Collection

Scope: MDC

Benchmark: Demo System Target (23.6%)

Confidence Intervals: Enabled

Current JC Specs **Period-Specific JC Specs**

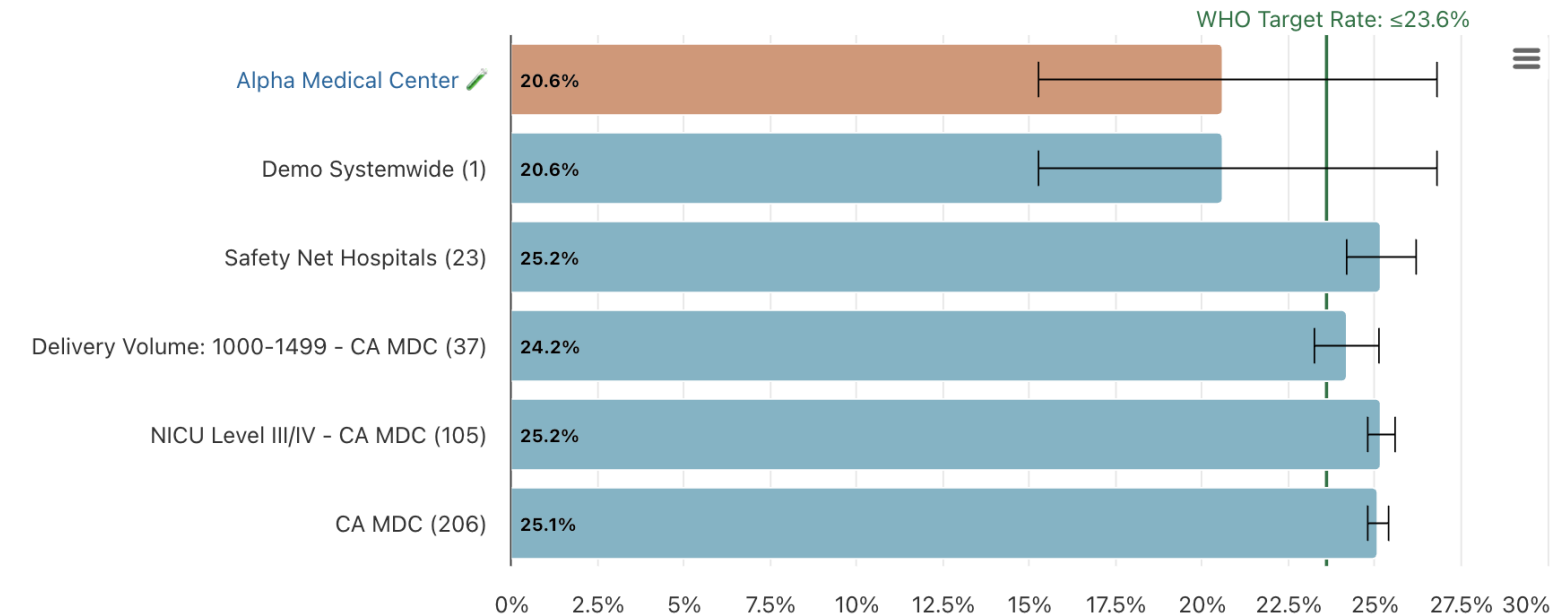
MEASURE

- Hospital Trend
- Definition/Algorithm
- Intervention Chart
- Control Chart
- Measure Analysis
- Result History

COMPARISONS

- Peer**
- System
- NICU Level
- All Hospitals
- Map by Patient Residence
- By Provider

Cesarean deliveries among all Nulliparous, Term, Singleton, Vertex (NTSV) deliveries (percent). The PC-02-Period Specific version uses The Joint Commission (TJC) PC-02 measure specifications in place at each time period (as TJC made frequent specification updates after converting to ICD-10). As such, this version is not ideal for trend analysis. [See more details](#)



Contacts and Users at Alpha Medical Center

Director of MCH/ Women's services/ Birth unit*
[Add Another](#)

Carpenter, Andrew

MDC Contacts
[Add Contact](#)

Nurse Manager: L&D/Women's services/OB*
[Add Another](#)

Boyadjian , Tamar

Quality/ PI Department Lead* 

Physician Lead for OB Quality*
[Add Another](#)

Kent, Melinda

Midwife Lead

Master Instructor

The CMQCC & CPQCC Regional Perinatal Programs of California (RPPC) Profile Report

California Pacific Medical Center - Van Ness Campus

3700 California Street, San Francisco, 94118
NICU Level III/IV
MCH Director: Jane 
MCH Director Email: 

North Coast East Bay RPPC
Perinatal Outreach Program, Stanford University
cmoldini@stanford.edu

CMQCC Data Center Metrics*

	Your Hospital			RPPC Region (n=22)	Peer Acuity ⁵ (n=105)	CA MDC (n=201)
	2022	2023	2024	2024	2024	2024
Maternal Race & Ethnicity (%) ¹						
Asian	22.5%	22.8%	22.1%	21.1%	12.8%	11.1%

CMQCC

CMQCC Accounts

categories

tags

Latest

Unread (1)

Hot

Categories

New Topic

Topic

Replies

Views

Activity

Learning Initiative Round 3 Monthly Recordings and Slides

Birth Equity

learning-initiative

0

119

4d

Looking for hospitals with low PPH rates to chat with

Show me your dot phrases!

Anemia Initiative Monthly Meeting Recordings and Slides

Anemia

Epic Report : Bilirubin- In High-Risk Level Zone

ABG Completion Rate Among NTSV CS for Fetal Concern

cesarean

CMQCC

CMQCC Accounts

Looking for hospitals with low PPH rates to chat with

M

Mara_Fox_13417

QI Academy

5d

Hi! I'm the patient safety coordinator and also a midwife. Our PPH rates and transfusion rates have been WAY high for a long time despite doing all the things the toolkit recommends. I'm looking for hospitals - especially safety net hospitals like ours with more similar populations - to informally chat/compare/generate ideas. If there are enough of us interested in comparing practices I can set up a group meeting too. if you are interested. Thanks!

Mara

4 views

Christa_Sakowski_11329

5d

Hi Mara -

A few things.

1. Audit to be sure that hemorrhages are not being coded that do not meet the 1000 mL

Aug 13

1 / 2

Aug 13

5d

Quality and Sustainability Award

Maternal Safety Standards Implementation



■ Description

- Awarded to hospitals that documented implementation of *Maternal Safety Standards* and key practices for Hypertension or OB Hemorrhage—per the guidance available in the MDC *Patient Safety Watch* section: *Maternal Safety Standards* checklists.

■ Specifications

□ Hypertension

- Documented 2022 completion (or reaffirmation) of the *Maternal Safety Standards for HTN/Preeclampsia*;
- Completed 12 months of 2022 chart review for *Timely Treatment for Severe Hypertension*; and
- Achieved a *Timely Treatment for Severe Hypertension* rate of **at least 80%** (a CMQCC sustainability recommendation) for the year

OR

□ Hemorrhage

- Documented 2022 completion (or reaffirmation) of the *Maternal Safety Standards for OB Hemorrhage*;
- Completed 12 months of 2022 chart review for either *Hemorrhage Risk Assessment* OR *Hemorrhage Risk Assessment and QBL*; and
- Achieved a **100%** “Yes” rate for the chart review question, “OB hemorrhage risk assessed and recorded in the medical record?” for the year

Coming Soon: Tools for hospital analysts to build customized dashboards, integrating real-time MDC data with their own internal sources

Through a set of Application Programming Interfaces (APIs), analysts can connect specific auto-updating MDC data directly into their hospital dashboards. All data accessed through the APIs will be aggregated and de-identified, ensuring compliance with privacy regulations and protecting patient confidentiality

Key features:

Real-time API access to non-patient-level MDC data

Power BI & Tableau support with guides and examples

Auto-updating PowerPoint Slides (via Power BI)

Interactive API docs with custom URL generator

API key management for usage tracking and replacement

Case Studies From Other Institutions

- ▶ Tennessee Initiative for Perinatal Quality Improvement (TIPQC): **Alicia Mastronardi**, TIPQC Data Manager
- ▶ Duke Department of OB/GYN: **Heather Talley**, MSN, RNC-OB, Administrative Director, Quality & Safety, Women's Services
- ▶ Texas Children's Hospital; **Christina Davidson**, MD, Vice Chair of Quality & Patient Safety Dept OB/GYN, Baylor College of Medicine and Chief Quality Officer, Texas Children's Hospital



Alicia Mastronardi

**Tennessee Initiative for Perinatal Quality Improvement (TIPQC)
Data Manager**

Hardwiring Sustainment

- ▶ Hospital Plan
- ▶ Collaborative Plan

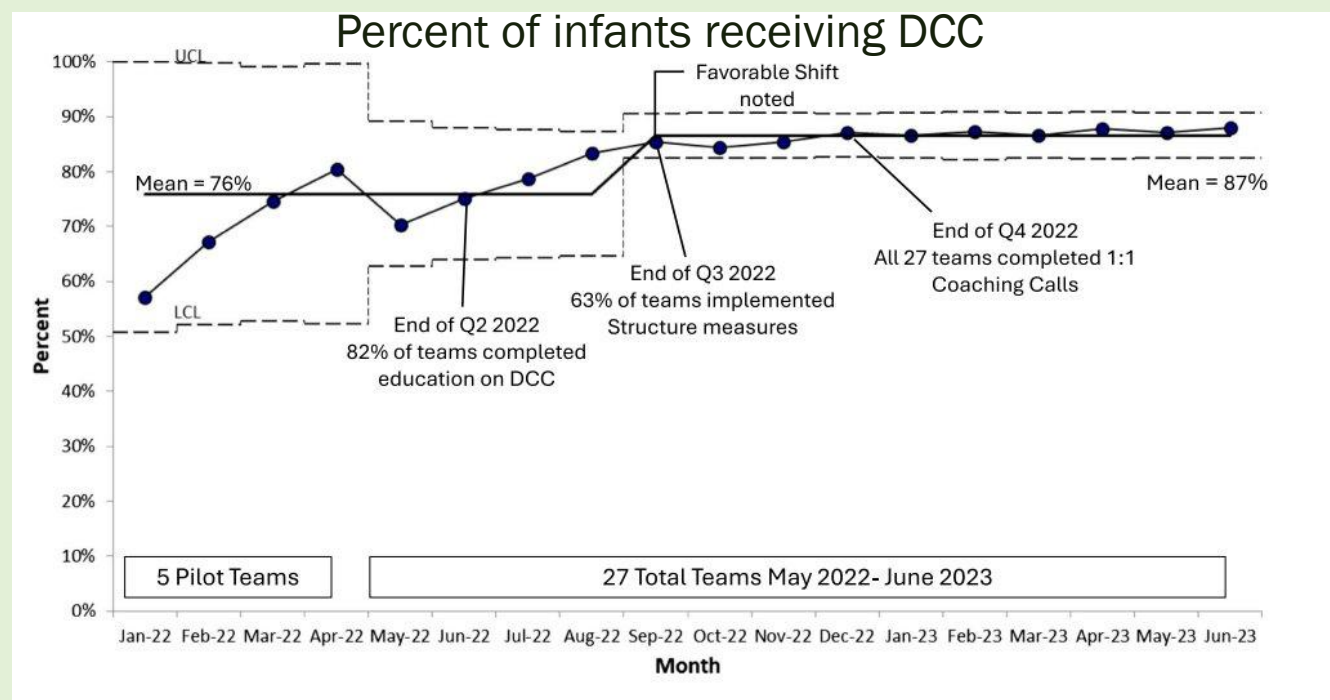
Data Collection

- ▶ Built-in, scheduled, and intermittent
- ▶ Integration in future projects
- ▶ Existing data sources

OLD Project Sustainment Huddle, 2/13/24		Hospital Name	
Do you have any "next steps" planned for this project?		What is your sustainment plan?	
• Reached goals-outcome? • Processes/structure measures still working on?		• Owner • Data review/audits • Tools • Patient/Family Partner • Education (new) • Reminders • Celebration	
Outcome data			Race/Ethnicity Data
Paste extended run charts here			Paste extended run charts here
			Balancing Measures

Analyzing Data

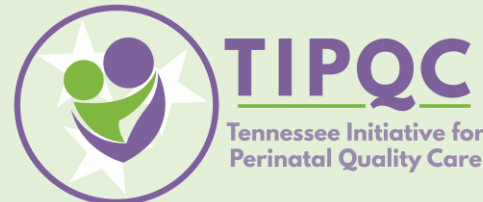
- ▶ Aggregate
- ▶ Team level
- For display:
 - ▶ QI Macros
 - ▶ Tableau dashboards



Guthrie SO, Herrell HE, Scott PA, et al. Improving Delayed Cord Clamping Across Tennessee Through a Statewide Quality Collaborative. Pediatrics. 2025;155(5):e2024066158

Other Resources & Opportunities

- ▶ SimpleQI
- ▶ REDCap
- ▶ Coaching calls, hospital site visits, reminders, data checks, and ongoing education
- ▶ Holding the Gains – TIPQC



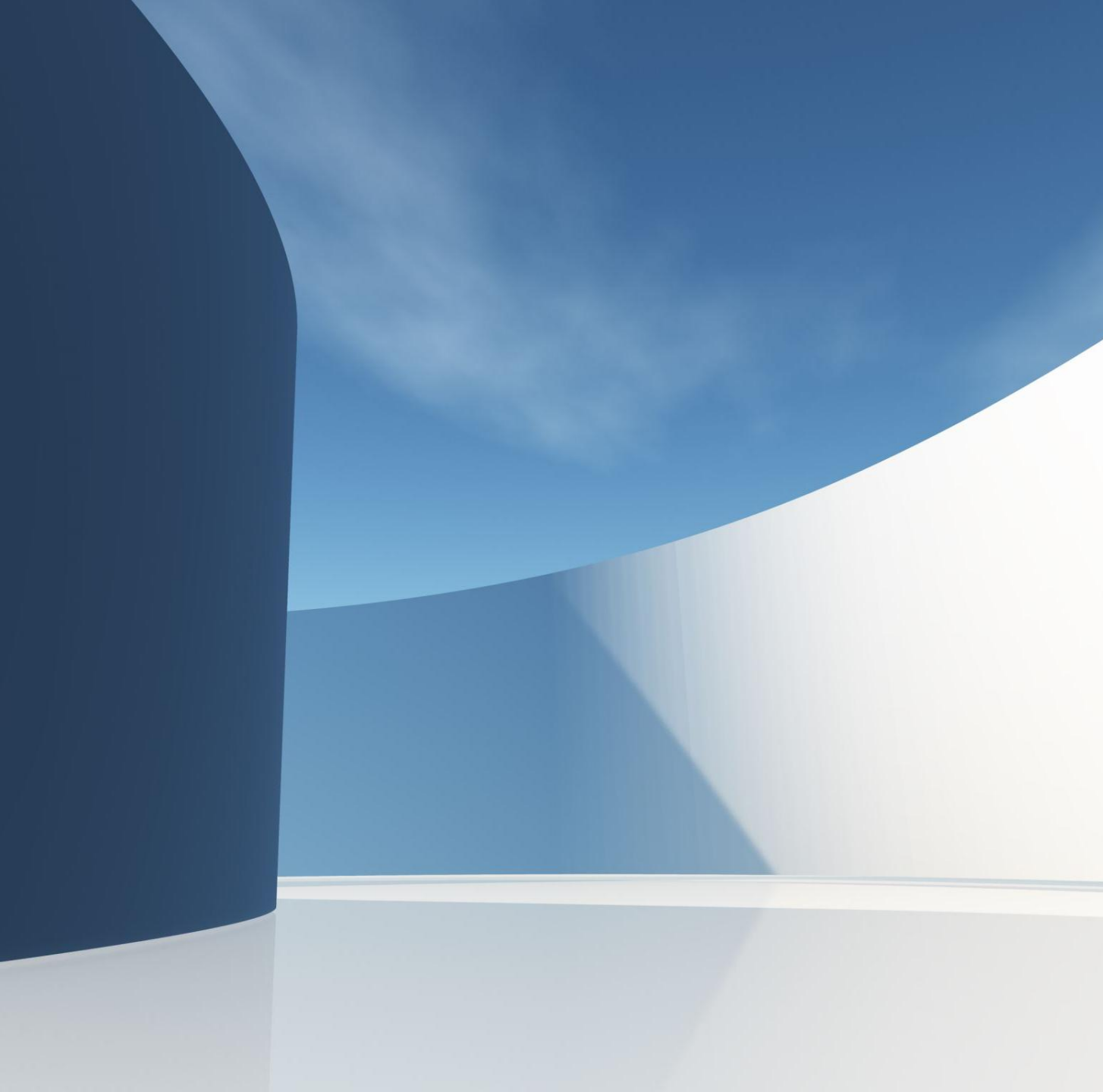
Contact Information

- ▶ www.tipqc.org
- ▶ Alicia Mastronardi, MPH
 - ▶ Alicia.Mastronardi@vumc.org



Heather Talley, MSN, RNC-OB

**Administrative Director, Quality & Safety, Women's Services
Duke Department of OB/GYN**



Duke OBGYN



DATA SUSTAINABILITY

Collecting Data During Sustainability



Longitudinal data collection: Establishing robust systems for consistently collecting relevant data over extended periods, not just for the duration of a specific QI project.

Tableau dashboards have been created to monitor quality indicators by leveraging the robust information that is available in the patient medical record.



Integration with workflow: Embedding data collection and analysis into existing workflows and systems to minimize disruption and maximize efficiency,

Reporting built into Epic.



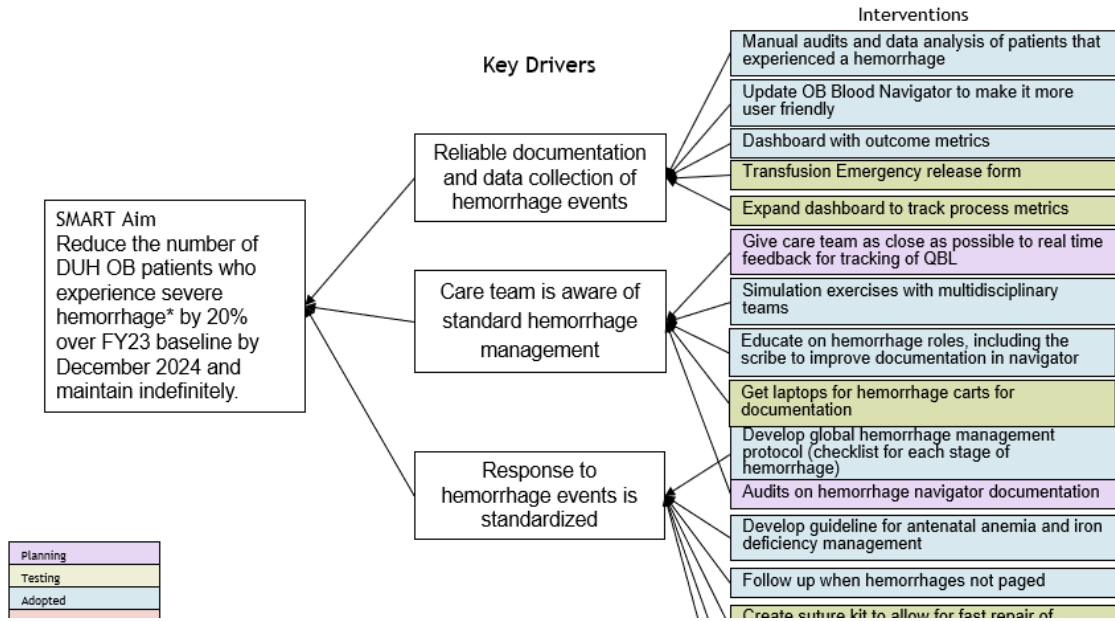
Data quality and integrity: Implementing measures to ensure the accuracy, completeness, and reliability of collected data, including standardized definitions, training for data collectors, and robust data management processes.

Business Intelligence Developer assigned to service line to develop long term data collection & test accuracy

Reviewed by OB Quality leadership

Office hours with Duke Health & Technology specialists available to support report building in Slicer Dicer in Epic

OB Hemorrhage Task Force: Key Driver Diagram



Our outcomes

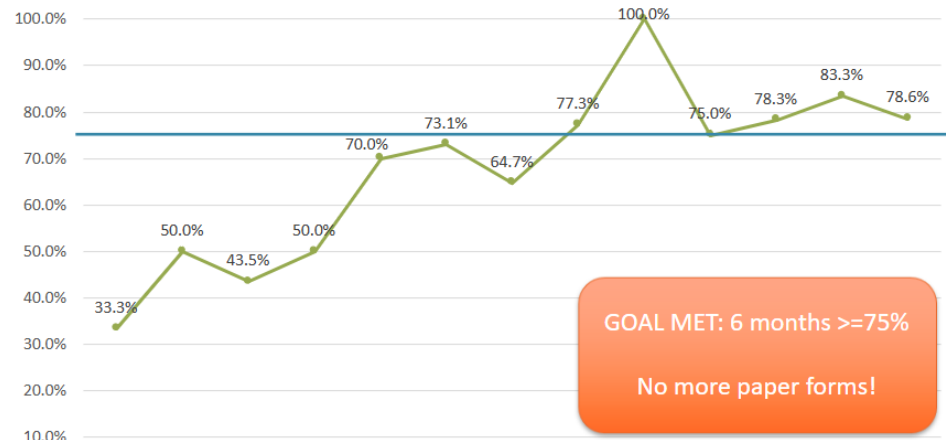
Pregnancy Heart Team Census



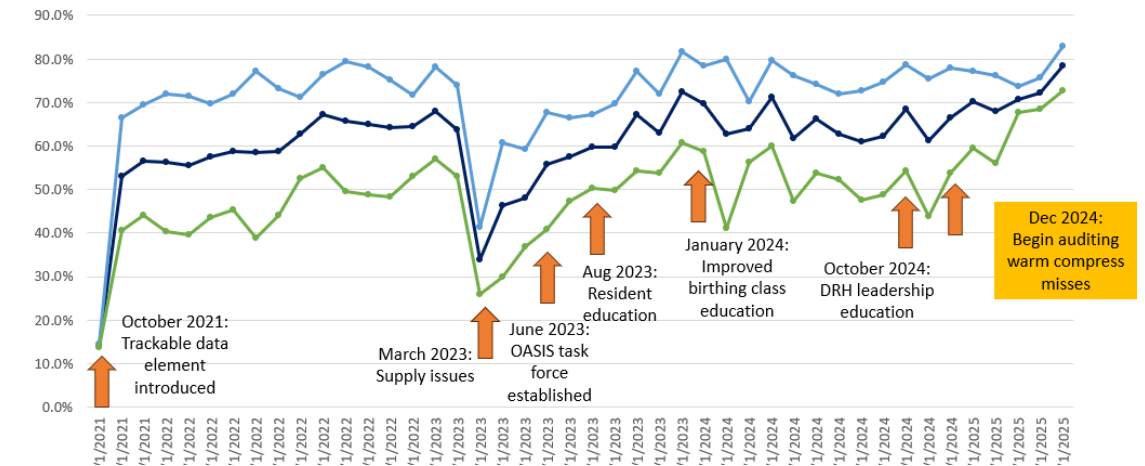
Screening Data

Jan 1 – Jul 25, 2025	Number of Clinical Note SDEs	All
Negative screening	3,124	
Cardiologist patient	149	
SOB flat or on side	37	
SOB when resting	18	
Syncope without warn...	21	
Stroke	9	
Chemotherapy	9	
Heart surgery	9	

OB MTP Order Set Use



Warm Compress Rates



Analyzing Data During Sustainability

Accessible and actionable data: Making data readily available and understandable to relevant stakeholders (clinicians, administrators, patients) in formats that facilitate interpretation and inform decision-making,

Targeted initiative data reviewed by leaders daily on huddle boards

Data reviewed and explained by quality team members at taskforce meetings and on a standard rotating basis at core safety team meetings.

Wins are celebrated with the teams encouraging engagement



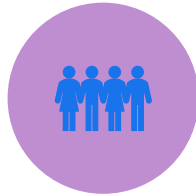
Continuous evaluation and adaptation: Regularly reviewing and analyzing data to track progress, identify new areas for improvement, and adapt strategies as needed, fostering a culture of continuous learning and improvement.

Utilizing the management system to engage everyone, every day in sustaining and continuously improving processes.

Resources to Support Data-Driven Sustainability Efforts



Service line-based Quality and Safety Administrative Director Role added in 2022



Women's Health Quality and Safety Fellowship added in 2022



Management Engineer- Quality & Safety, OBGYN



CNM trained and with dedicated time to assist with Epic enhancements/ builds- supports capturing quality data in a nimble way.



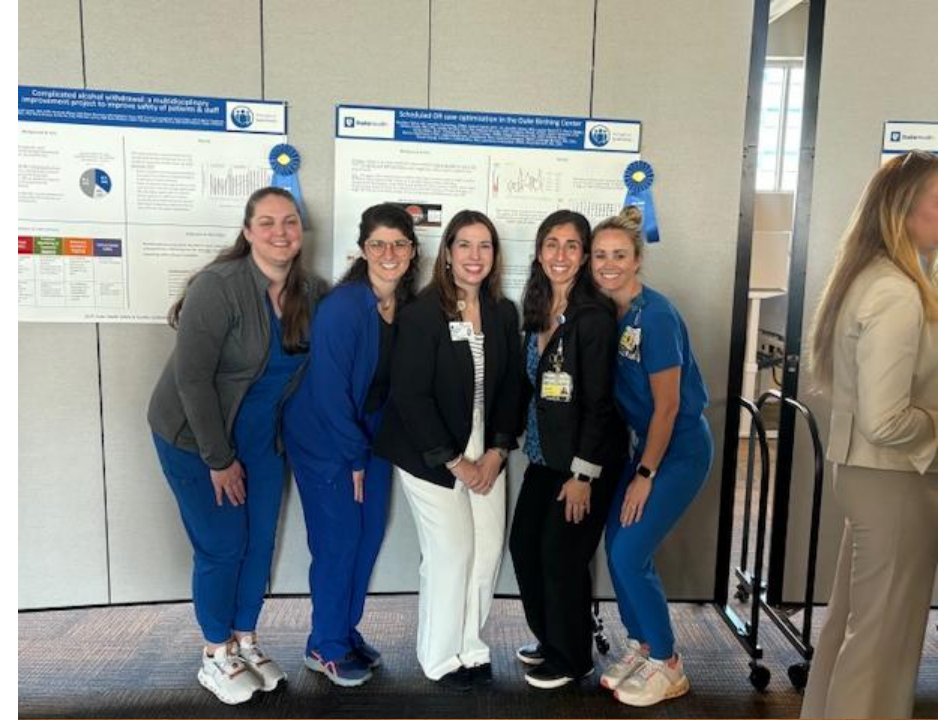
Duke Quality System (DQS)- supported by performance excellence with coaches to support continuously improving processes. Teams utilize the management system to engage everyone every day in sustaining and continuously improving processes. Data is displayed and collected on huddle boards.



Partnership with healthsystem quality Director and CMO: share work, gain support as needed and

Contact Information

- Heather Talley, MSN, CPPS, CNML
 - heather.talley@duke.edu



Christina Davidson, MD

Vice Chair of Quality & Patient Safety Dept OB/GYN, Baylor College of Medicine and Chief Quality Officer, Texas Children's Hospital

Baylor
College of
Medicine®



**Texas Children's
Hospital®**

Data Driven Strategies for Monitoring Sustainability – Obstetric Hemorrhage

Christina Davidson, MD

Associate Professor | Division of Maternal Fetal Medicine

Vice Chair of Quality & Patient Safety | Department of Obstetrics
& Gynecology | Baylor College of Medicine

Chief Quality Officer for Obstetrics & Gynecology | Texas
Children's Hospital

TexasAIM

- Texas Department of State Health Services (DSHS) launched statewide initiative in 2018 to implement AIM Obstetric Hemorrhage patient safety bundle
- Goal: reduce SMM from hemorrhage by 25% by January 1, 2020



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

PATIENT SAFETY BUNDLE

Obstetric Hemorrhage

READINESS

Every unit

- Hemorrhage cart with supplies, checklist, and instruction cards for intrauterine balloons and compressions stitches
- Immediate access to hemorrhage medications (kit or equivalent)
- Establish a response team - who to call when help is needed (blood bank, advanced gynecologic surgery, other support and tertiary services)
- Establish massive and emergency release transfusion protocols (type-O negative/uncrossmatched)
- Unit education on protocols, unit-based drills (with post-drill debriefs)

RECOGNITION & PREVENTION

Every patient

- Assessment of hemorrhage risk (prenatal, on admission, and at other appropriate times)
- Measurement of cumulative blood loss (formal, as quantitative as possible)
- Active management of the 3rd stage of labor (department-wide protocol)

RESPONSE

Every hemorrhage

- Unit-standard, stage-based, obstetric hemorrhage emergency management plan with checklists
- Support program for patients, families, and staff for all significant hemorrhages

REPORTING/SYSTEMS LEARNING

Every unit

- Establish a culture of huddles for high risk patients and post-event debriefs to identify successes and opportunities
- Multidisciplinary review of serious hemorrhages for systems issues
- Monitor outcomes and process metrics in perinatal quality improvement (QI) committee

Rate of Severe Maternal Morbidity from Hemorrhage by Race and Ethnicity October 2015 - June 2020



Severe Maternal Morbidity from Hemorrhage Rate (%)

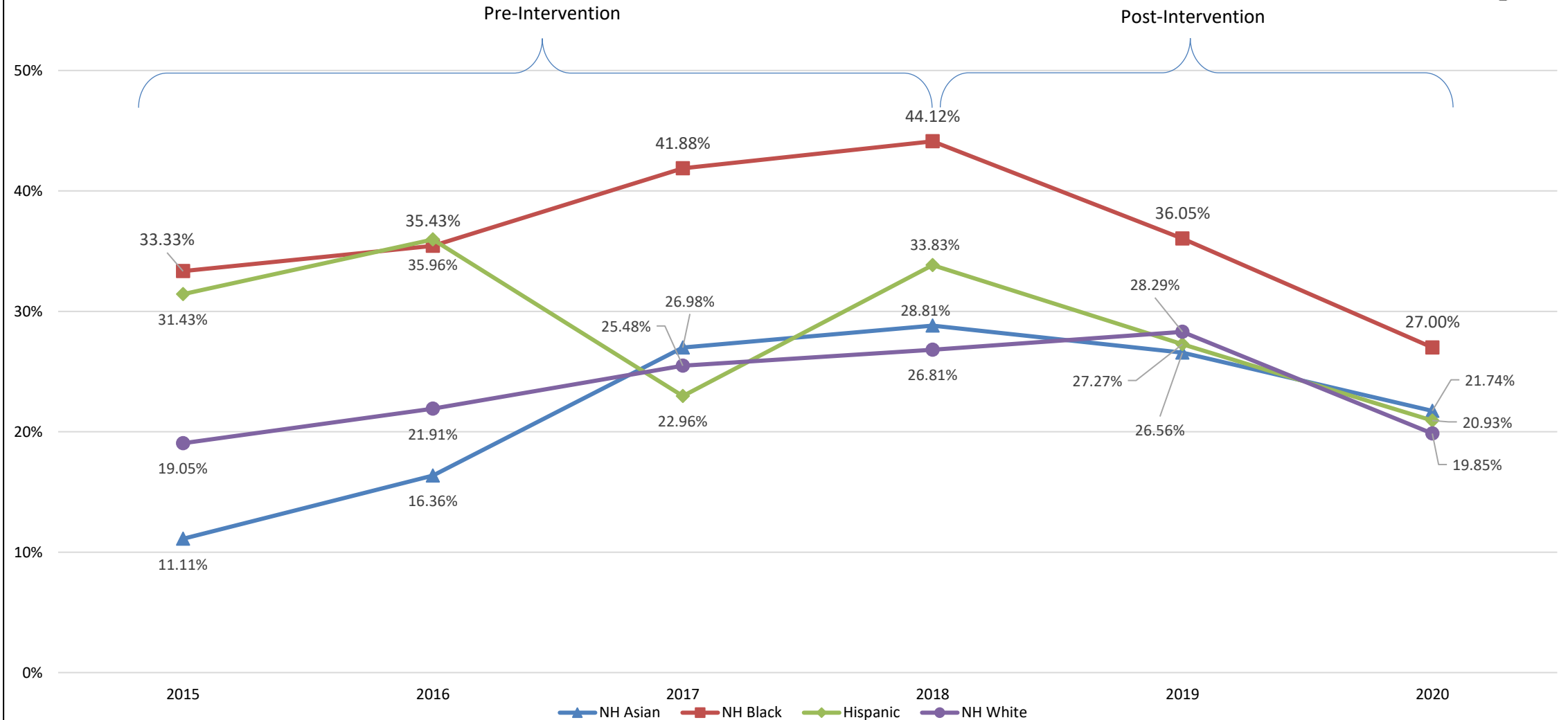


Table 2 Rates of SMM overall and from haemorrhage

SMM rate measurement	Pre-intervention (n=4912)	Post-intervention (n=8747)	Rate reduction	P value
Total SMM rate	4.76%	4.13%	13.4%	0.08
SMM rate excluding transfusion codes	1.71%	1.75%	−2.3%	0.87
Transfusion code SMM rate	3.97%	3.22%	18.8%	0.02
SMM rate from haemorrhage	34.10%	26.67%	21.8%	<0.01
SMM rate from haemorrhage excluding transfusion codes	9.51%	9.06%	4.7%	0.39
Rate of transfusion code from haemorrhage	31.80%	23.54%	26.0%	<0.01
Transfusion of ≥4 units PRBCs rate	0.66%	0.65%	1.7%	0.99

Created by the authors.

PRBCs, packed red blood cells; SMM, severe maternal morbidity.

Ob Hemorrhage Sustainability Workgroup



Developed at conclusion of bundle implementation (2019)



Stopped meeting consistently due to COVID and implementation of severe hypertension bundle



Ob hemorrhage process and outcome measures tracked and regularly presented at quality and patient safety committee meetings



Sustainability workgroup re-instituted to address increasing SMM-H rates and updated AIM bundle - charter with defined goals, membership, standing agenda items, corrective action plans from simulations and case reviews

Process Measures: Hemorrhage Risk Assessment and QBL Flowsheets

PPH Risk Assessment		
Multiple gestation?		0
> 4 prior vaginal births?		0
> 1 Cesarean delivery?		1
Uterine incision, other than Cesarean?		0
Is BMI > or = 40 kg/m2?		0
Hx of postpartum hemorrhage?		0
Fetal Weight (EFW) > 4000g?		0
Race black or African American?		0
Refusal of blood products?		0
Has uterine fibroids > 5 cm?		0
Dx of chorioamnionitis?		0
Intrapartum Magnesium sulfate administration?		0
Hgb < 9.0 g/dL?		0
Hct < 30%		0
Platelets < 100,000?		0
Hx of bleeding disorders?		0
Has Placental Abruptio?		0
Has placenta previa or low-lying placenta?		0
Suspected placenta accreta spectrum disease?		0
Active bleeding on admission?		0
Risk Score		1



	1453	1658
Large Maternity Panties		
# Items Weighed		
Ice Pack (no ice)		
# Items Weighed		
Additional items		
Additional Items		
Add on Item #1		
Dry Weight		
# Items Weighed		
Add on Item #2		
Dry Weight		
# Items Weighed		
Add on Item #3		
Dry Weight		
# Items Weighed		
Total QBL (Click File to calculate)		
Total weight of blood saturated items (g...)	264	174
Total dry weight (gm)	-108	-120
Total weighed blood	156	54
Weight of clots (gm)		
QBL at Time of Delivery	356	
Calculated QBL (mL)	356	54
Cumulative Blood Loss (Last 24 hrs)	356	410

SMM



Pavilion for Women

Last Updated:

8/4/2025 9:19:00 AM

Admit Date Range From:

11/10/2019

Admit Date Range To:

8/2/2025

DC Date Range From:

1/1/2020

DC Date Range To:

8/3/2025

Delivery Date Range From:

12/29/2019

Delivery Date Range To:

8/2/2025

Campus Filters

DischargeCampusNM

FirstWomensSvcsCampus

DeliveryCampusDSC

MEDICAL CENTER

WOMENS SERVICES MED ...

North Austin Campus

WEST CAMPUS

MEDICAL CENTER

WEST CAMPUS

WOMENS SERVICES MED C...

North Austin Campus

WOODLANDS CAMPUS

Date Filters

Discharge Year

Delivery Year

Discharge Month

Delivery Month

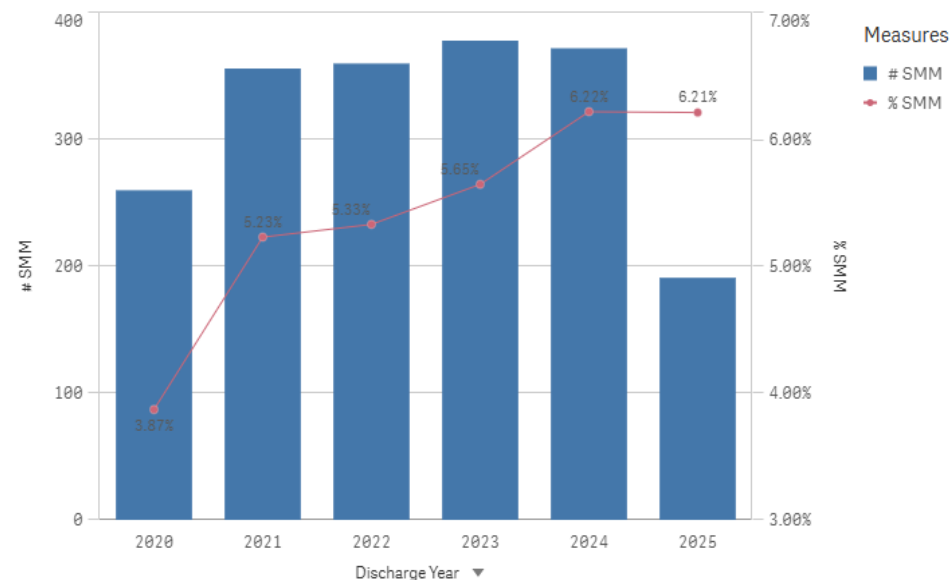
Deliveries

36,519

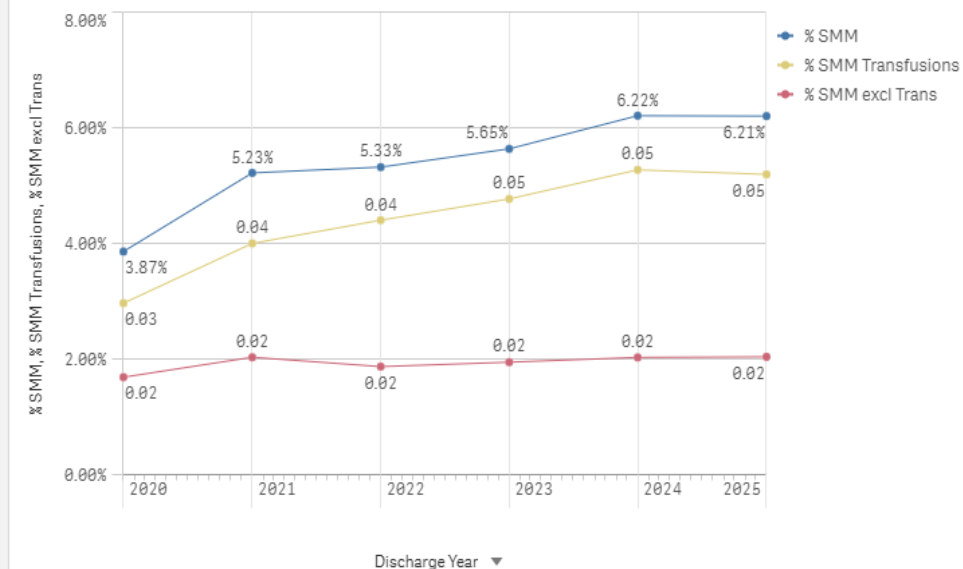
Encounters

36,519

Severe Maternal Morbidity Rate



Severe Maternal Morbidity Rate



Severe Maternal Morbidity ... Severe Maternal Morbidity ...

Severe Maternal Morbidity Rates

Discharge Year

Values

RaceEthnicity

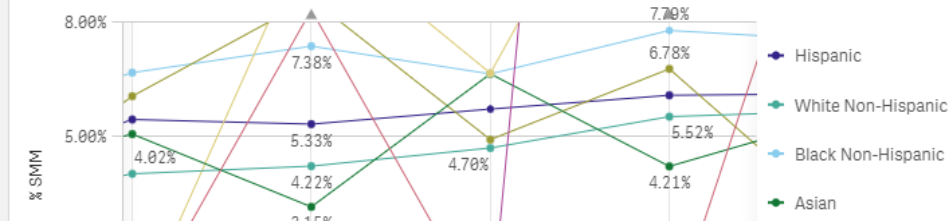
Discharge Month

% SMM

American Indian and Alaska

Black Non-

Severe Maternal Morbidity Rate by Race & Ethnicity



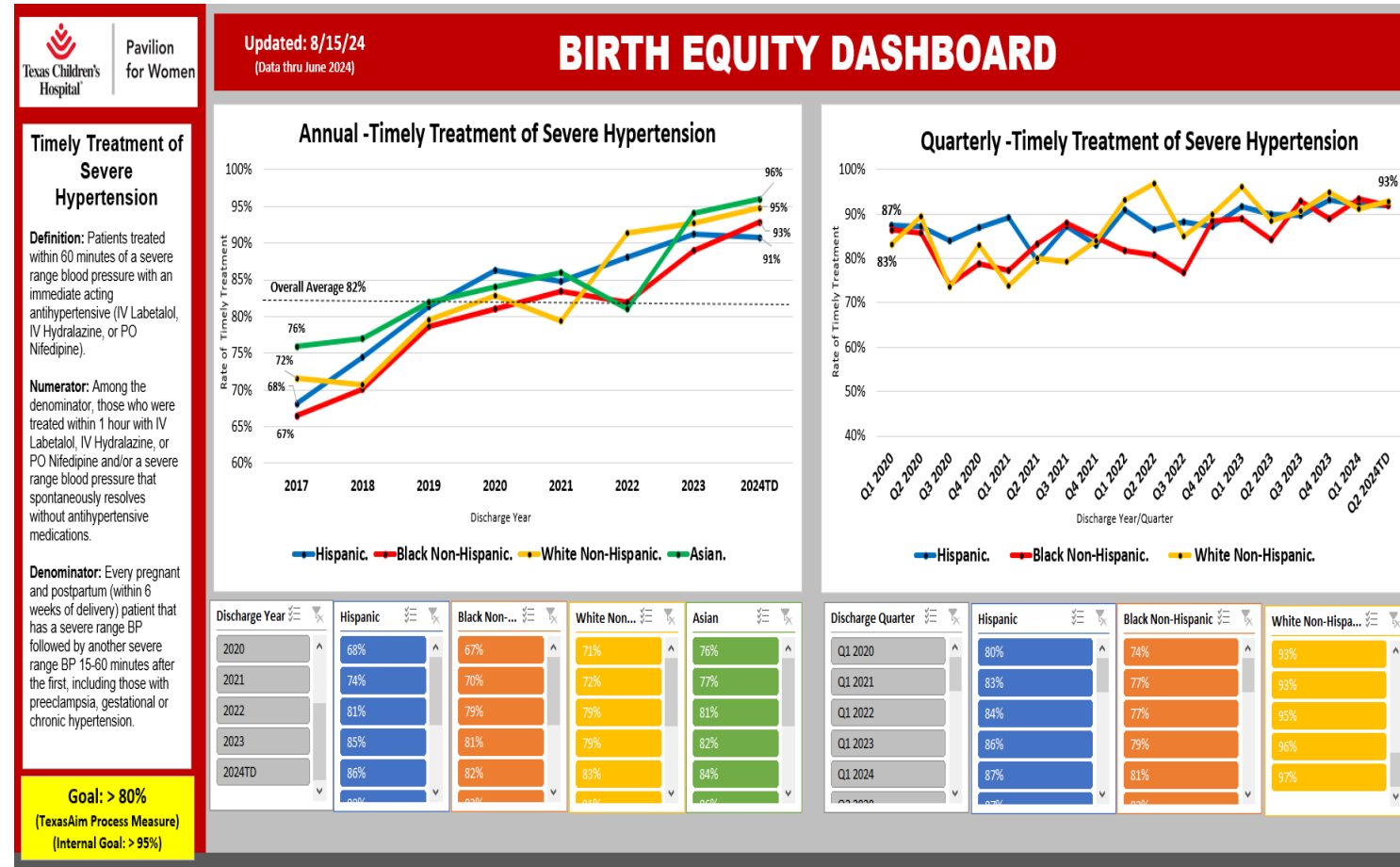
BIRTH EQUITY DASHBOARD

Purpose

- To provide a comprehensive and interactive format to view quality metrics
- To increase awareness of racial and ethnic disparities
- To monitor progress towards equitable patient care

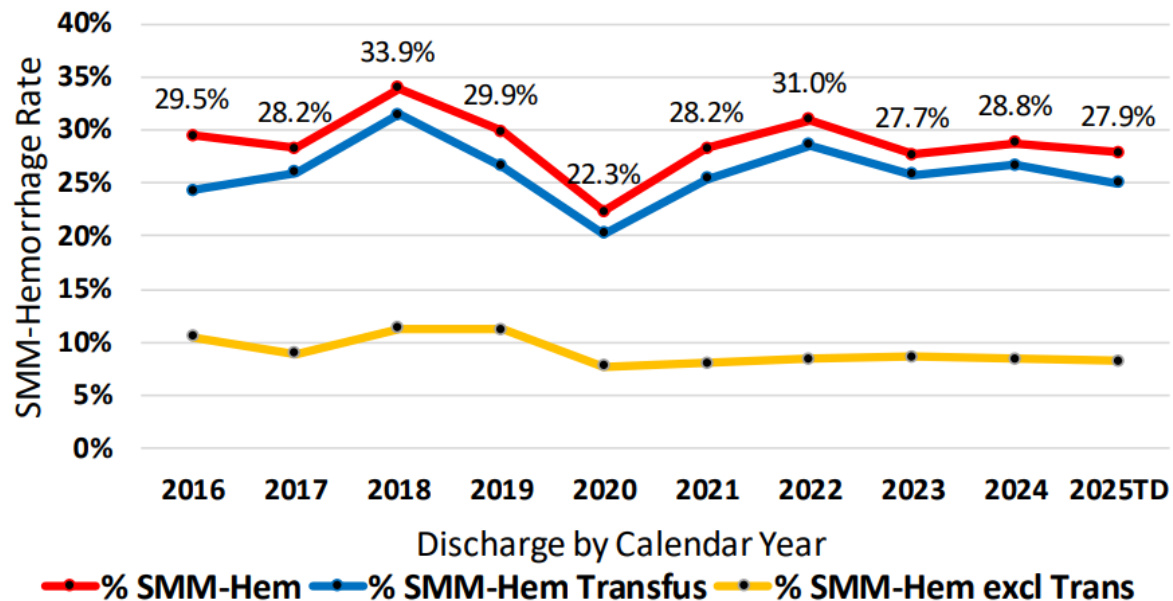
Birth Equity Dashboard Quality Metrics

- Timely Treatment of Severe Hypertension
- NTSV Cesarean Delivery Rate
- Exclusive Breast Milk Feeding
- Uncomplicated VBAC Rate
- Severe Maternal Morbidity (SMM) - Overall
- SMM-Hemorrhage Rate Overall
- SMM-Hemorrhage Excluding Transfusions
- Postpartum Hemorrhage Rate
- SMM-Preeclampsia Excluding Transfusions
- Respectful Care Survey

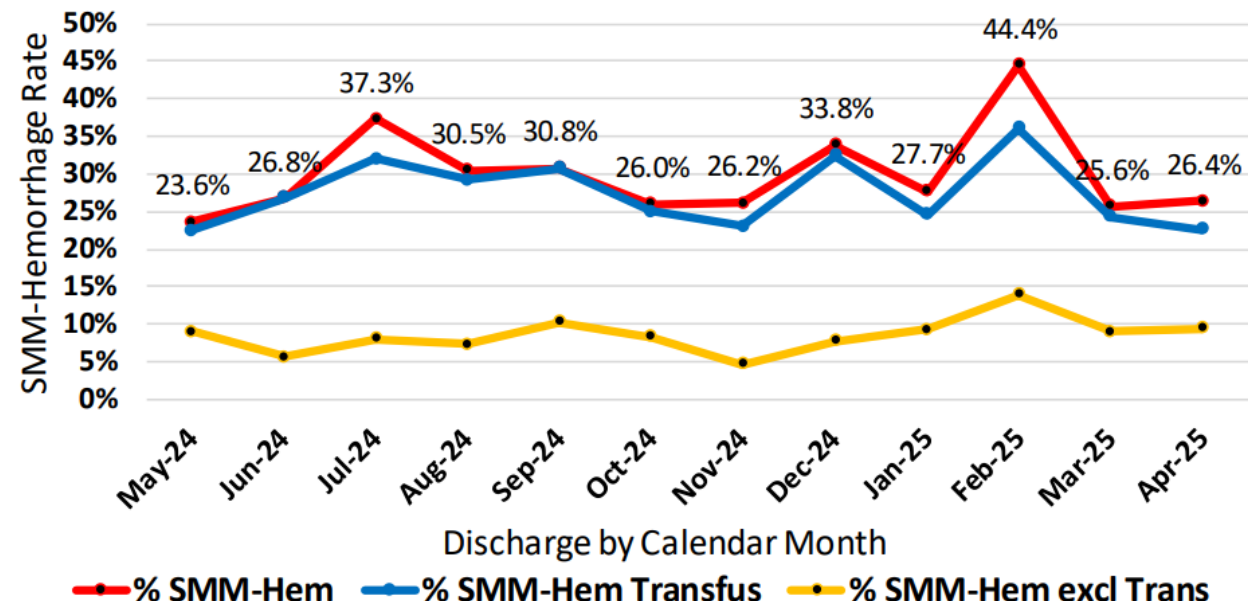


Data as of 6/10/25

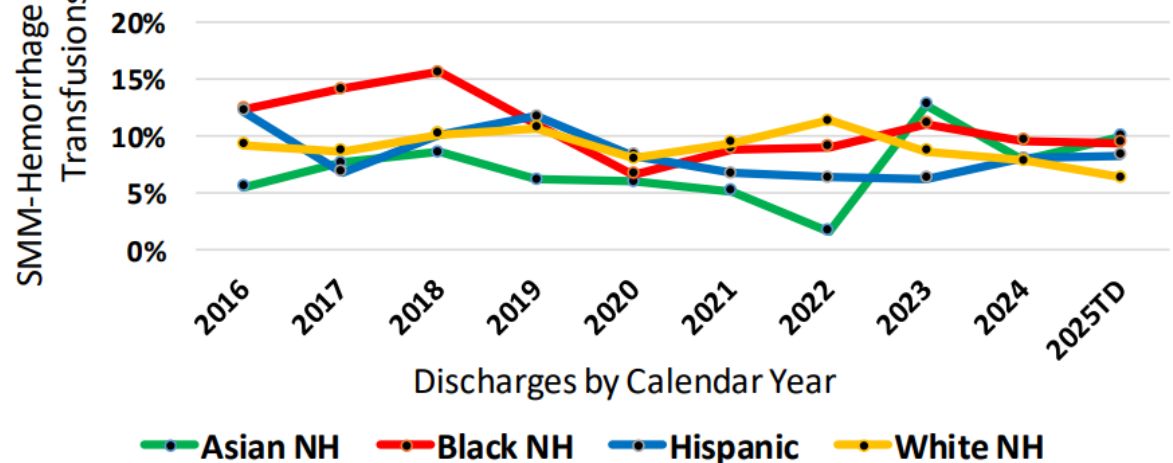
Annual SMM-Hemorrhage Rate



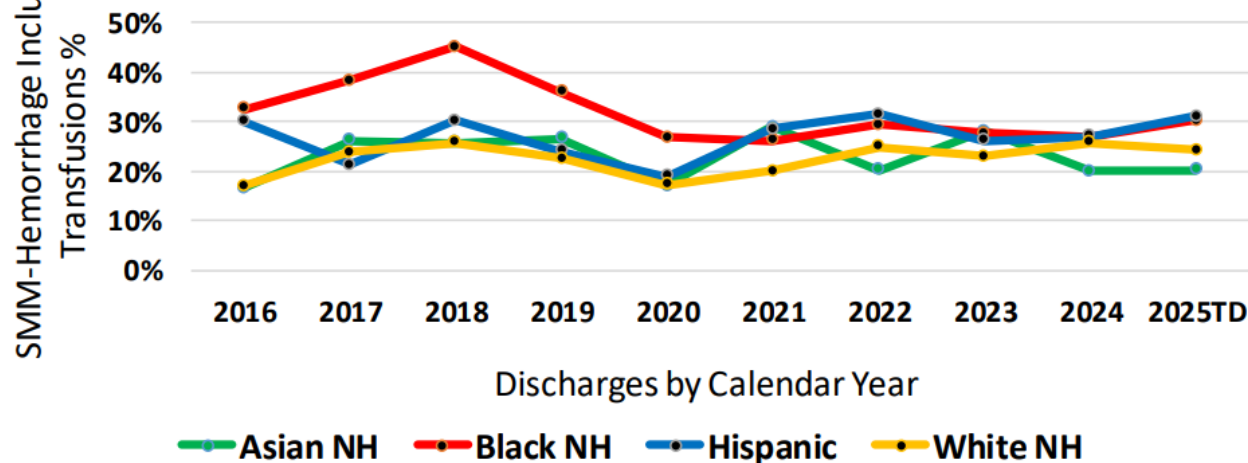
Previous 12 Month SMM-Hemorrhage Rate



Annual SMM-Hemorrhage Excluding Transfusions Rate by Race & Ethnicity



Annual SMM-Hemorrhage Including Transfusions Rate by Race & Ethnicity



Conclusions

- ▶ Data-driven approaches are critical for sustainability
- ▶ Data-driven sustainability should be integrated into the planning for each QI project from the outset
- ▶ Key strategies include:
 - ▶ Integration of new care processes into daily work (EHR, protocols, order sets)
 - ▶ Automated collection of a limited set of key metrics, with facilitated display and sharing capabilities



Group Discussions

Please Share:

- ▶ What lessons have you learned from your work on sustainability that could help others?
- ▶ What approaches or strategies have you used to support sustainability that you'd like to share?

As a reminder, in our previous sessions we discussed:

1. Planning for Quality Improvement (QI) with Sustainability in Mind
2. Sustainability Champions: Engaging Stakeholders in Sustainability Success
3. Maintaining Changes in Practice and Processes through Staff Support, Training, and Collaboration
4. Sustaining the Gains Amidst Changes in Policy and the Healthcare Landscape
5. Strategic Resource Management: Ensuring Sustainability in Healthcare Implementation
6. Data-driven Strategies for Monitoring Sustainability



Questions



Thank you!

The slides and
recording will be
shared to all
the attendees

Any questions about
this session can be
sent to
[aimdatasupport
@acog.org](mailto:aimdatasupport@acog.org)

Be sure to
complete the
evaluation survey!
It will pop up in
your browser as
you exit the
session