
# Maternal Health Office Hours

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HQI
HEALTH QUALITY INNOVATORS

Maryland
DEPARTMENT OF HEALTH

# The Maryland PQC

## Mission Statement

The Maryland Perinatal-Neonatal Quality Collaborative (MDPQC) is a collaboration of hospitals, perinatal care providers, neonatal care providers, community organizations, and public health professionals working together with the same goal - to make Maryland a safer and more equitable place to give birth across all levels of care. The MDPQC supports the sharing of best practices, ongoing training and education, sustained data-driven quality improvement, and alignment with other state initiatives to promote a safe birthing experience and improved outcomes for all, laying the groundwork for long-term family well-being.


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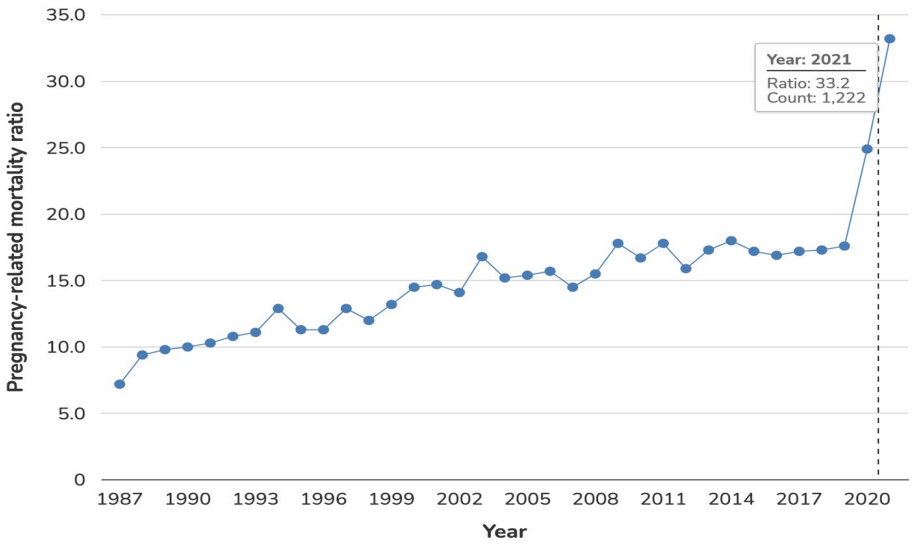
# Trends in US pregnancy-related deaths, 1987-2021

## Pregnancy-related deaths data

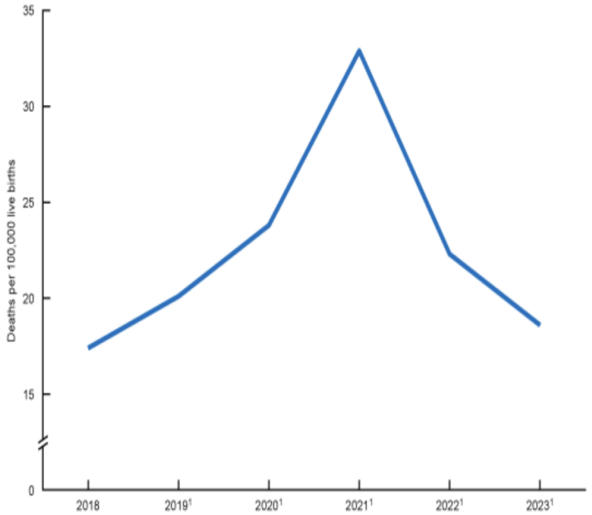
Figure 1. Pregnancy-related mortality ratio in the United States: 1987-2021




CDC, Pregnancy Mortality Surveillance System. November, 14, 2024

# Current Trends - 2022 & 2023

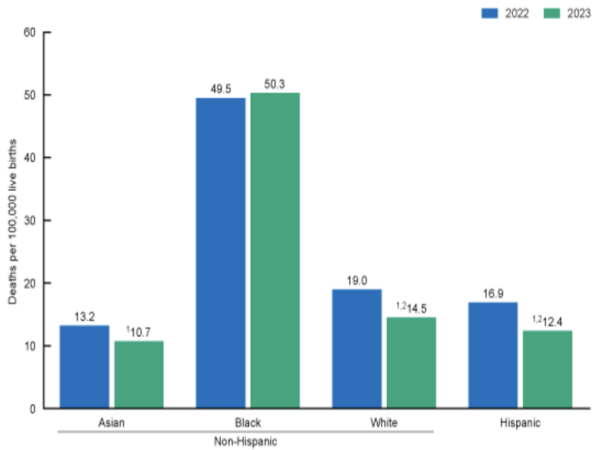
**Figure 1. Maternal mortality rate: United States, 2018–2023**




[1]Statistically significant change from previous year ($p < 0.05$).

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data files.

**Figure 2. Maternal mortality rate, by race and Hispanic origin: United States, 2022 and 2023**




[1]Statistically significant difference from Black non-Hispanic ($p < 0.05$).

[2]Statistically significant decrease in rate from previous year ($p < 0.05$).

NOTE: Race groups are single race. People of Hispanic origin may be of any race.

SOURCE: National Center for Health Statistics, National Vital Statistics System, mortality data file.

Hoyert DL. Maternal mortality rates in the United States, 2023. NCHS Health E-Stats. 2025.

# Why are we still SO focused on hemorrhage?

- Obstetric (OB) hemorrhage is widely recognized as the most preventable cause of pregnancy-related death and severe maternal morbidity (SMM)
- OB hemorrhage accounts for approximately 10% of maternal death in the US annually; up to 70% of these deaths are deemed preventable
- 51% of reported JC sentinel events coded as maternal death or SMM (2010-2019) listed hemorrhage as causal factor
- SMM associated with OB hemorrhage can have significant and life-long consequences
    - Hypovolemic shock
    - Organ damage or failure (heart, liver, brain, kidneys)
    - Coagulopathy (DIC)
    - Infection/Sepsis
    - Preterm delivery and/or neonatal death
    - Infertility

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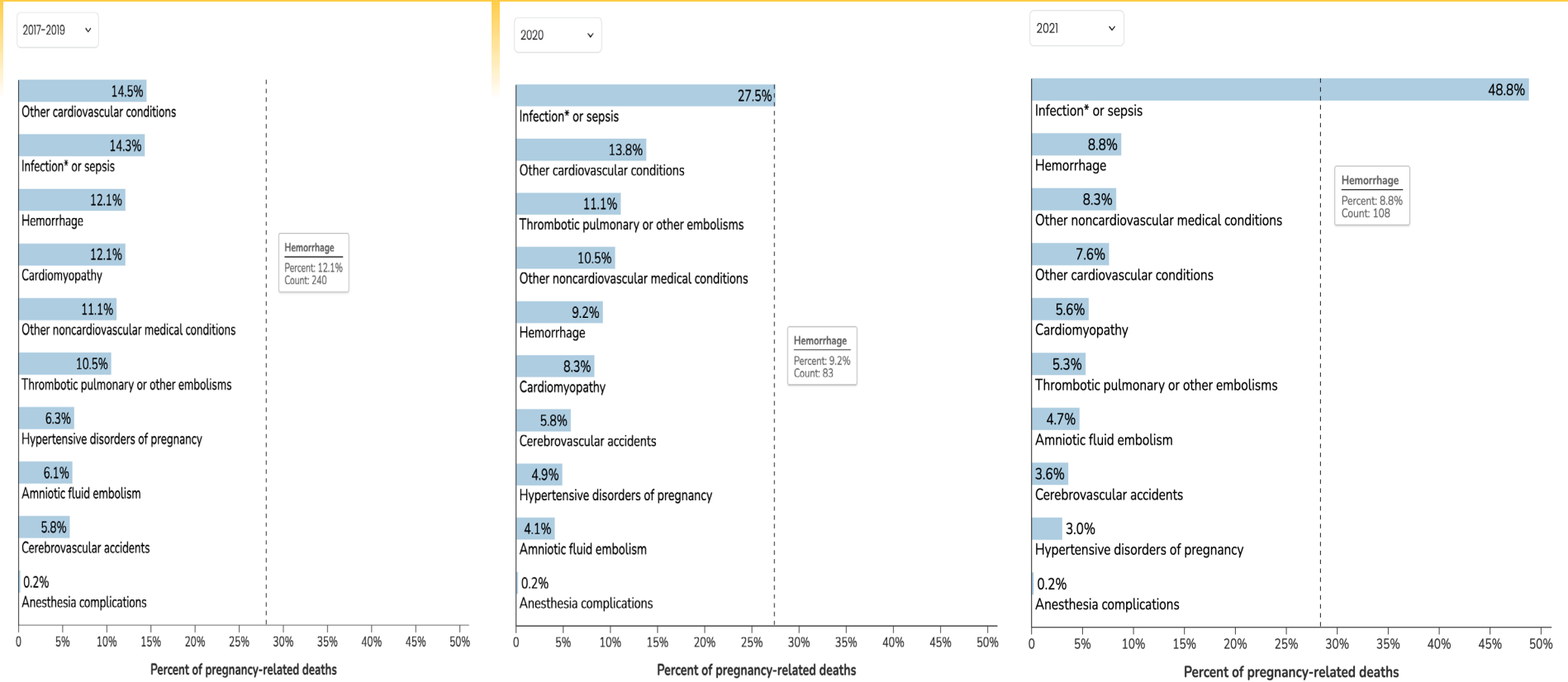
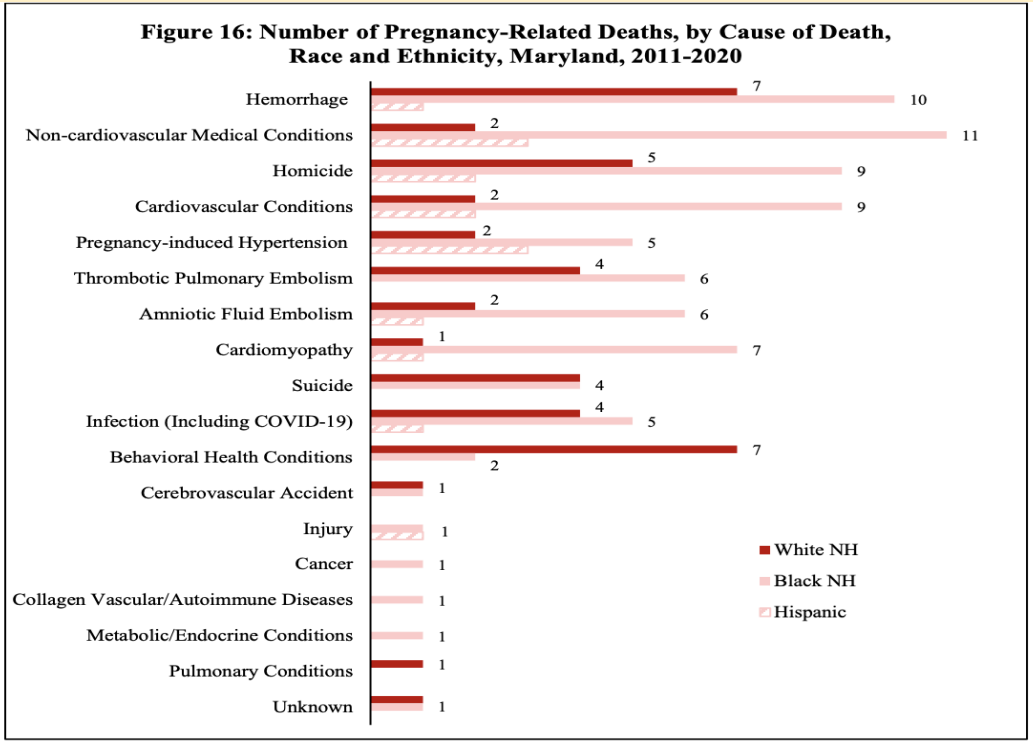
# Causes of pregnancy-related death in the US




CDC, Pregnancy Mortality Surveillance System. November, 14, 2024

# Causes of pregnancy-related death in MD




Data Source: Maryland MMR Program as of 12/2022.
Figure 16 excludes a pregnancy-associated death from 2012 for which the MMR Committee did not assign a cause of death or determine pregnancy-relatedness.

AIM

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ON MATERNAL HEALTH

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# Obstetric Hemorrhage Patient Safety Bundle

## Obstetric Hemorrhage Patient Safety Bundle

### Readiness — Every Unit/Team

Develop processes for the management of patients with obstetric hemorrhage, including:

- A designated rapid response team co-led by nursing, obstetrics, and anesthesia with membership appropriate to the facility's Level of Maternal Care;*
- A standardized, facility-wide, stage-based obstetric hemorrhage emergency management plan with checklists and escalation policy;*
- Emergency release and massive transfusion protocols to ensure immediate access to blood products;*
- A protocol, including education and consent practices, to collaborate with patients who decline blood products, but may accept alternative approaches;* and
- Review of policies to identify and address organizational root causes of racial and ethnic disparities in outcomes related to the diagnosis, management, and surveillance of obstetric hemorrhage.

Maintain a hemorrhage cart or equivalent with supplies, checklists, and instruction cards for devices or procedures where antepartum, laboring, and postpartum patients are located.*

Ensure immediate access to first- and second-line hemorrhage medications in a kit or equivalent per the unit's obstetric hemorrhage emergency management plan.*

Conduct interprofessional and interdepartmental team-based drills with timely debriefs that include the use of simulated patients.*

### Recognition & Prevention — Every Patient

Assess and communicate hemorrhage risk to all team members as clinical conditions change or high-risk conditions are identified; at a minimum, on admission to labor and delivery, during the peripartum period, and on transition to postpartum care.*

Measure and communicate cumulative blood loss to all team members, using quantitative approaches.*

Actively manage the third stage of labor per department-wide protocols.

Provide ongoing education to all patients on obstetric hemorrhage risk and causes, early warning signs, and risk for postpartum complications.*

## Obstetric Hemorrhage Patient Safety Bundle

### Response — Every Event

Utilize a standardized, facility-wide, stage-based, obstetric hemorrhage emergency management plan, with checklists and escalation policies for stage-based management of patients with obstetric hemorrhage, including:

- Advance preparations made based on hemorrhage risk (e.g. cell saver, blood bank notification, etc.)
- Evaluating patients for etiology of hemorrhage;
- Use of obstetric rapid response team;
- Evidence-based medication administration or use of nonpharmacological interventions;* and
- Appropriate activation of expanded care team and clinical resources as necessary.

Provide trauma-informed support for patients, identified support network, and staff for all obstetric hemorrhages, including discussions regarding birth events, follow up care, resources, and appointments.*

### Reporting and Systems Learning — Every Unit

Establish a culture of multidisciplinary planning, huddles, and post-event debriefs for every obstetric hemorrhage, which identify successes, opportunities for improvement, and action planning for future events.

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.

Establish processes for data reporting and the sharing of data with the obstetric rapid response team, care providers, and facility stakeholders to inform care and change care systems, as necessary.*

### Respectful, Equitable, and Supportive Care — Every Unit/Provider/Team Member

Include each patient that experienced an obstetric hemorrhage and their identified support network as respected members of and contributors to the multidisciplinary care team and as participants in patient-centered huddles and debriefs.*

Engage in open, transparent, and empathetic communication with pregnant and postpartum people and their identified support network to understand diagnoses, options, and treatment plans, including consent regarding blood products and blood product alternatives.*

# A Quick (hopefully) Review….

# OB Hemorrhage Overview

- Cumulative blood loss of ≥ 1000 mL or blood loss with clinical s/s of hypovolemia within the first 24 hrs following birth, irrespective of mode of delivery (ACOG, 2017)
  - Blood loss of ≥ 500 mL following vaginal birth should be considered abnormal and warrant heightened surveillance
- Primary - onset of 3rd stage of labor through first 24 hrs
  - uterine atony accounts for approx. 70%
- Secondary - after 24 hrs and up to 12 weeks PP
  - Retained placenta or POC, subinvolution of placental site, coagulopathies, infection
- Management requires interdisciplinary approach, teamwork & excellent communication
- Emphasis on unit readiness, timely diagnosis and response, accurate QBL, prompt fluid/blood replacement, source identification (4 T's) and control

# Hemorrhage Pathophysiology

- Normal cardiovascular changes during pregnancy result in increased uterine blood flow
  - 100 mL/min in non-pregnant state to 700 mL/min
- Coagulation changes leads to pregnancy as a hypercoagulable state; disruption of the coagulation cascade such as in DIC impair normal clotting response
- Failure of normal maternal mechanisms to maintain homeostasis such as effective uterine contractions post placenta, lead to excessive blood loss
- Symptoms may not appear until at least a 1500 mL blood loss, often leading to delayed recognition & response, potentially increasing both severity & duration of patient harm
- At 20% blood loss symptoms include tachycardia, tachypnea, hypotension, narrowed pulse pressure & delayed capillary refill which can lead to ischemic injury of the brain, heart, liver & kidneys

# The BIG T…. TONE

- Failure of the uterus to effectively contract following expulsion of placenta results in persistent bleeding from uterine vessels which had been occluded
  - Chorioamnionitis
  - Labor induction or augmentation - prolonged exposure to uterotonic medications
  - Prolonged labor
  - Precipitous labor or birth
  - Magnesium sulfate exposure
  - Uterine overdistention - multiples, macrosomia, polyhydramnios
  - Uterine fibroids
  - > 4 prior births
  - Uterine anomalies
- When there is increased bleeding in the immediate PP period think tone and rule out atony first

# The supporting T’s

- Trauma - lacerations, uterine rupture
  - Cesarean birth, operative vaginal birth, precipitous birth, persistent OP, prolonged active second stage, episiotomy
- Tissue - retained placenta/POC
  - Prior cesarean birth(s) or uterine surgery, abnormal placentation (placenta accreta spectrum, previa), placental abruption, hypertension, uterine abnormalities
- Thrombin - coagulopathy
  - Severe preeclampsia, eclampsia, HELLP, IUFD, placental abruption, AFE, septic shock, inherited/acquired coagulopathies (Von Willebrand, hemophilias, thrombocytopenia, anticoagulation meds, anemia)

# Upon Admission…

- Thorough, timely H&P by care team
- Obtain baseline lab values, advanced coagulation studies & blood cross-matching based on risk**
- Assess patient's willingness to accept blood/blood products and agree on POC in setting of hemorrhage
- Identify comorbidities which place patient at higher risk
  - Conditions which prohibit use of certain hemorrhage mgt medications
  - Conditions which may impede normal clotting
  - Conditions which may be worsened by hemorrhage and lead to escalation of harm severity
  - Review of home meds & allergies for potential interactions/limitations
- And of course, the focus of today's office hours, complete the….

# Obstetric Hemorrhage Risk Assessment

Recognition/Response

# When to assess…. AT LEAST

- Upon admission for ALL patients
  - Assign low, medium or high risk level
  - Two or more medium risk factors = high risk
  - Anticipatory guidance for each risk level
- Prior to start of second stage of labor (pre-birth)
  - Labor events may increase risk level
  - Many patients undergo lengthy IOL
- Prior to transfer and/or upon admission to PP/MB unit (post-birth)
  - Delivery outcomes may increase risk level
- Anytime there is a change in clinical status or new-onset of active bleeding

# AWHONN PPH Risk Assessment - Admission

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## POSTPARTUM HEMORRHAGE (PPH) RISK ASSESSMENT TABLE • 1.3

### CLINICIAN GUIDELINES:

Each box ❑ represents ONE risk factor. Treat patients with 2 or more medium risk factors as high risk. Prenatal risk assessment is beyond the scope of this document, however performing a prenatal hemorrhage risk assessment and planning is highly recommended. Early identification and management preparation for patients with special considerations such as placental previa/accreta, bleeding disorder, or those who decline blood products will assist in better outcomes.
Adjust blood bank orders based on the patient's most recent risk category. When a patient is identified to be at high risk for hemorrhage verify that the blood can be available on the unit within 30 minutes of a medical order.

Plan appropriately for patient and facility factors that may affect how quickly the blood is delivered to the patient. For example,
Patient issues: Pre-existing red cell antibody
Facility issues: Any problems at your facility related to the blood supply and obtaining blood.

| RISK CATEGORY: ADMISSION | | | |
|---|---|---|---|
| | **Low-Risk** | **Medium-Risk** (2 or More Medium Risk Factors Advance Patient to High-Risk Status) | **High-Risk** |
| | ❑ No previous uterine incision | ❑ gestational age < 37 weeks or > 41 weeks | ❑ Has 2 or More Medium Risk Factors |
| | ❑ Singleton pregnancy | ❑ Multiple gestation | ❑ Suspected abruption or active bleeding more than "bloody show" |
| | ❑ ≤4 Previous births | ❑ >4 Previous births | ❑ Suspected placenta accreta or percreta |
| | ❑ No known bleeding disorder | ❑ Prior cesarean birth or prior uterine incision | ❑ Placenta previa, low lying placenta |
| | | ❑ Large uterine fibroids | ❑ Known coagulopathy |
| | ❑ No history of PPH | ❑ History of one previous PPH | ❑ History of more than one previous PPH or a severe PPH (>1,500 mL or blood transfusion) |
| | | ❑ Hematocrit <30% or hemoglobin <10 | ❑ Hematocrit ≤21% or 12-point drop to ≤ 25% or hemoglobin <8 |
| | | ❑ Intraamniotic infection | ❑ Platelets <50,000/mm³ |
| | | ❑ Platelets 50,000/mm³ - 100,000/mm³ | ❑ Intrauterine fetal demise |
| | | ❑ Polyhydramnios | ❑ HELLP syndrome |
| | | ❑ Pre-eclampsia | |
| **Anticipatory Interventions:** Monitor patient for any change in risk factors at admission and implement anticipatory interventions as indicated. | | | |
| Blood Bank Order: Change blood bank orders as needed if risk category changes. | ❑ **Clot Only (Type and Hold)** | ❑ **Obtain Type and Screen**<br>❑ Notify appropriate personnel such as the provider (obstetrician, physician, midwife), anesthesia, blood bank, charge nurse, clinical nurse specialist | ❑ **Obtain Type and Cross**<br>❑ Notify appropriate personnel such as the provider (obstetrician, physician, midwife), anesthesia, blood bank, charge nurse, clinical nurse specialist.<br>❑ Consider birth at a facility with the appropriate level of care capable of managing a high-risk pregnancy. |

# AWHONN PPH Risk Assessment - Pre & Post Birth

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## POSTPARTUM HEMORRHAGE (PPH) RISK ASSESSMENT TABLE • 1.3

### RISK CATEGORY: PRE-BIRTH

(Approximately 30 to 60 minutes prior to giving birth at the start of the second stage of labor)

| | Low-Risk | Medium-Risk (2 or More Medium Risk Factors Advance Patient to High-Risk Status) | High-Risk |
|---|---|---|---|
| | INCLUDE **ADMISSION** LOW RISK FACTORS | INCLUDE **ADMISSION** MEDIUM RISK FACTORS | INCLUDE **ADMISSION** HIGH RISK FACTORS |
| | | ❑ Prolonged labor or oxytocin for labor induction (>24 hours) | ❑ Has 2 or more medium risk factors |
| | | ❑ Intraamniotic infection | ❑ Active bleeding more than "bloody show" |
| | | | ❑ Suspected abruption |

**Anticipatory Interventions:**

Monitor patient for any change in risk factors during labor and implement anticipatory interventions as indicated.

For every birth:
- ❑ Ensure the availability of calibrated drapes, scales to weigh and measure blood loss
- ❑ Ensure uterotonics (carboprost, methylergonovine, misoprostol, oxytocin, tranexamic acid) and supplies for administration (syringes, needles, alcohol swabs) are immediately available
- ❑ Review lab work, e.g., platelets (PLTs), hemoglobin (Hgb)
- ❑ Maintain familiarity with your hemorrhage protocol
- ❑ Notify provider and charge nurse of any patient with a medium or high risk hemorrhage score or change in the patient's risk category

| | | | |
|---|---|---|---|
| **Blood Bank Order:** Change blood bank orders as needed if risk category changes | ❑ Clot Only (Type and Hold) | ❑ Confirm Type and Screen (if not already collected) | ❑ Verify blood products on hold (per provider order) |
| | | ❑ Initiate and/or maintain IV access | ❑ Bring the hemorrhage supplies to the bedside |
| | | ❑ Ensure that the hemorrhage supplies are near the patient's room | ❑ Obtain additional nursing personnel for active bleeding |
| | | ❑ Confirm availability of anesthesia provider | ❑ Call anesthesia provider to unit for active bleeding |
| | | ❑ Transfer to an intrapartum unit (if not already done) | ❑ Ensure operating room (OR) and staff available |
| | | | ❑ Consider insertion of a second large bore IV |
| | | | ❑ Consider activating emergency response team, if available in facility |

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POSTPARTUM HEMORRHAGE (PPH) RISK ASSESSMENT TABLE • 1.3

### RISK CATEGORY: UPON ADMISSION TO POSTPARTUM

| | Low-Risk | Medium-Risk (2 or More Medium Risk Factors Advance Patient to High Risk Status) | High-Risk |
|---|---|---|---|
| | INCLUDE **ADMISSION** LOW RISK FACTORS | INCLUDE **ADMISSION** AND PRE-BIRTH MEDIUM RISK FACTORS | INCLUDE **ADMISSION** AND PRE-BIRTH HIGH RISK FACTORS |
| | ❑ No known bleeding disorder | ❑ Large uterine fibroids | ❑ Has 2 or more medium risk factors |
| | ❑ No previous uterine incision | ❑ Operative vaginal birth | ❑ Active bleeding soaking > 1 pad per hour or passing large clot (≥6 cm) |
| | ❑ No history of PPH | ❑ Genital tract trauma including 3rd or 4th degree perineal laceration | ❑ Difficult placental extraction or retained placenta |
| | | ❑ Cesarean birth (especially if emergent) | ❑ Uterine rupture |
| | | ❑ QBL 500-999mL regardless of mode of birth | ❑ QBL ≥1,000mL |

**Anticipatory Interventions**

Continue to monitor patient for any change in risk factors after birth and implement anticipatory interventions as indicated.

For every birth:
- ❑ Ensure ongoing QBL during the first two hours post birth
- ❑ Ensure uterotonics (carboprost, methylergonovine, misoprostol, oxytocin, tranexamic acid) and supplies for administration (syringes, needles, alcohol swabs) are immediately available
- ❑ Review lab work, e.g., platelets (PLTs), hemoglobin (Hgb)
- ❑ Maintain familiarity with your hemorrhage protocol
- ❑ Notify provider and charge nurse of any patient with a medium or high risk hemorrhage score or change in the patient's risk category

| | | | |
|---|---|---|---|
| **Blood Bank Order:** Change blood bank orders as needed if risk category changes | ❑ Clot Only (Type and Hold) | ❑ Confirm Type and Screen (if not already collected) | ❑ Verify blood products on hold (per provider order)<br>❑ Notify the blood bank |
| | | ❑ Heightened postpartum assessment surveillance | ❑ Heightened postpartum assessment surveillance |
| | | ❑ Maintain IV access | ❑ Bring hemorrhage cart with supplies to the bedside |
| | | ❑ Ensure the hemorrhage cart with supplies is near the patient's room | ❑ Obtain additional nursing personnel for active bleeding |
| | | ❑ Confirm availability of anesthesia provider | ❑ Call anesthesia provider to unit for active bleeding |
| | | ❑ Ensure OR and staff available | ❑ Consider notifying team to prepare the OR |
| | | | ❑ Consider insertion of a second large bore IV |
| | | | ❑ Consider activating emergency response team and/or notifying Interventional Radiology, if available in facility |

# Intrapartum Cesarean Birth or OVD

- Compared to SVD has significantly higher rate of PPH
- Pay close attention to patients requiring cesarean in second stage labor - following prolonged pushing or failed OVD
- Refractory uterine atony with thin lower uterine segment - often unresponsive to first or second-line uterotonics
- Extension of hysterotomy into broad ligament, cervix or vagina
- Injury to other organs
- Major cervical or vaginal lacerations
- Assess for hematomas
- May have more than one etiology

# Key Concepts

- Assessment of risk for OB hemorrhage should begin in the prenatal period and discussed with the patient and family
  - Antepartum anemia should be managed and monitored as patients may have lower threshold for blood loss; early iron supplementation and/or infusion prior to birth (third trimester) when applicable
  - Consideration of appropriate birthing location
- Risk assessment should be conducted & communicated upon admission, at the start of the second stage of labor, at transfer to PP care and at ANY time there is new onset of bleeding for ALL patients
- Risk assessments facilitate preparedness & early mobilization of resources during high-risk situations
- Close monitoring and vigilance for all patients is critical - up to 40% of patients who hemorrhage have NO identifiable risk factors

# Make a Plan

- Admission risk assessment guides plan and interventions
  - Research shows medium & high risk assoc. with significantly higher QBL
- Acceptance of blood/blood products - document what is acceptable
- Link risk factors to 4 T's for anticipatory guidance
- Low Risk
  - Routine care, monitor for hemorrhage
  - Type & Hold or Type & Screen
- Medium Risk
  - Notify care team (OB, nursing, anesthesia, PEDS/neo) of risk status, availability and devise POC
  - Type & Screen
  - Hemorrhage cart & meds ready
  - Heightened surveillance
- High Risk
  - Type & Cross x 2 units, notification of blood bank **
  - Consider other specialties - anesthesia, MFM, surgery
  - Ensure OR and team ready
- When risk level changes, add appropriate interventions
- Consider timing, mode & location of birth

# Communication

- Communication of hemorrhage risk level to members of the team is essential - OB provider, nursing (charge), anesthesia
  - Consider blood bank, neo/peds, RT, Intensivist/Medicine, OR/surgical staff as indicated
- Communicate most current hemorrhage risk level during
  - Admission - SBARR
  - Beginning of second stage labor and during second stage huddles
  - Time-out prior to all cesarean births, vaginal birth time-out?
  - Team member handoff - nursing & provider
  - Transfer of care
- Consider your institution's level of maternity care for most high risk patients - is it safe to deliver or should transfer be initiated
- Treat hemorrhage like a code - assign roles, delegate clearly, effective communication, TeamSTEPPS (closed-loop, call out, check back, CUS)
- Maximize EMR to display/alert hemorrhage risk & QBL to all team members

# Utilizing the EMR to Improve Recognition & Response

File | Add Rows | LDA Avatar | Add Col | Insert Col | Device Data | Last Filed | Reg Doc | Graph | Go to Date | Responsible | Flowsheet History

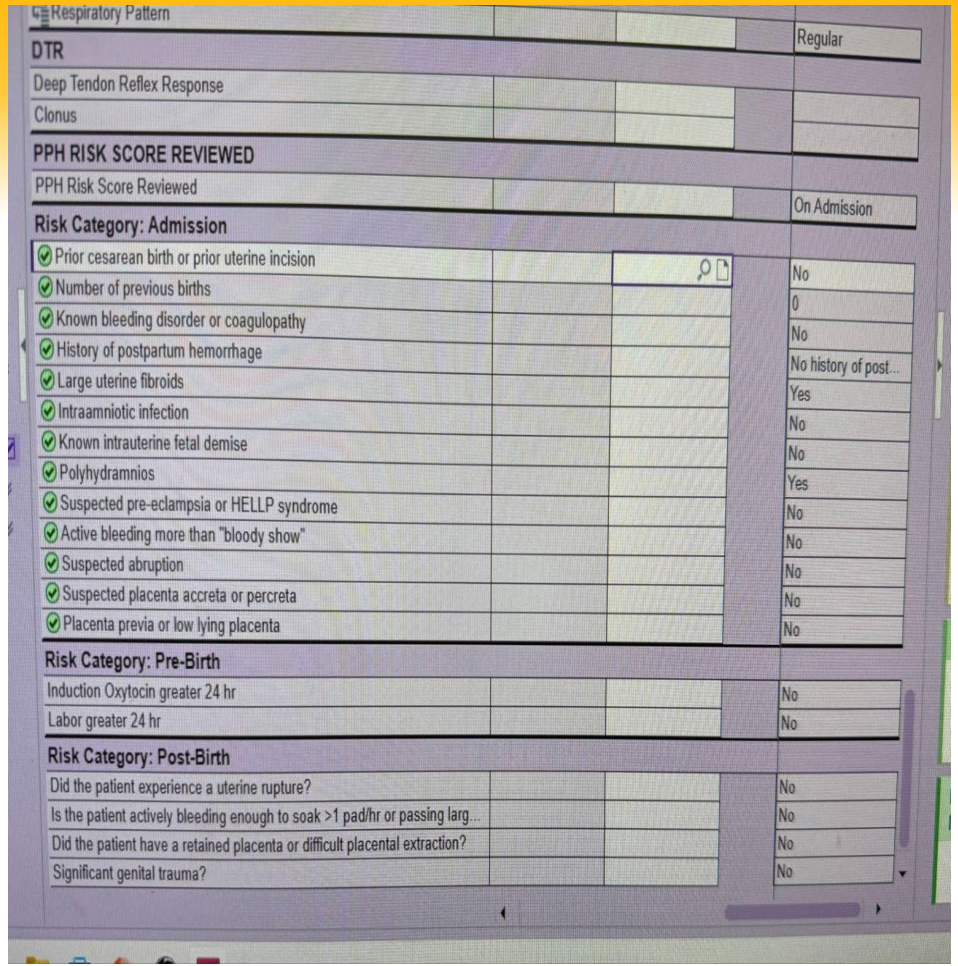
Triage/Assess | Maternal/Fetal Asmt | HTN / PTL / Mag Asmt | Daily Care | Antepartum Shift | **Postpartum** | Intake and Output | Line Assessment | Wounds-Drains-Airways

Accordion | Expanded | View All

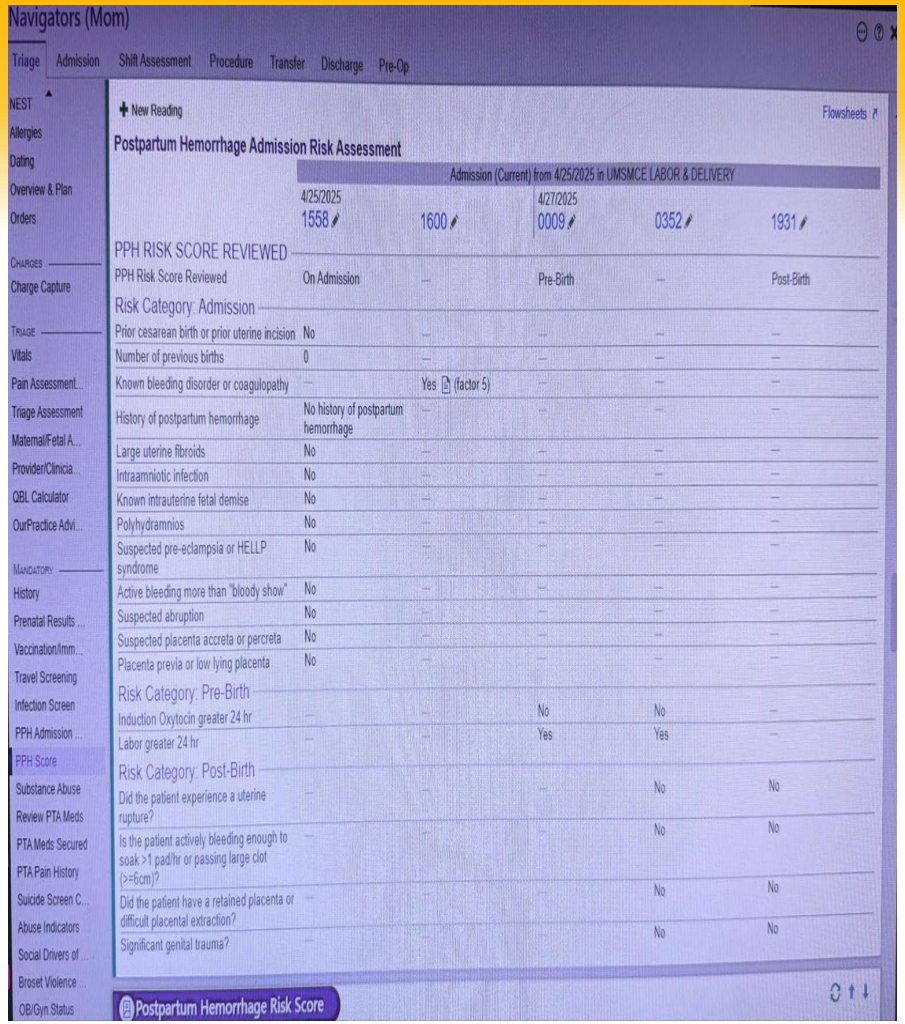
1m | 5m | 10m | 15m | 30m | 1h | 2h | 4h | 8h | 24h | Interval Start: 0700 | Reset | Now

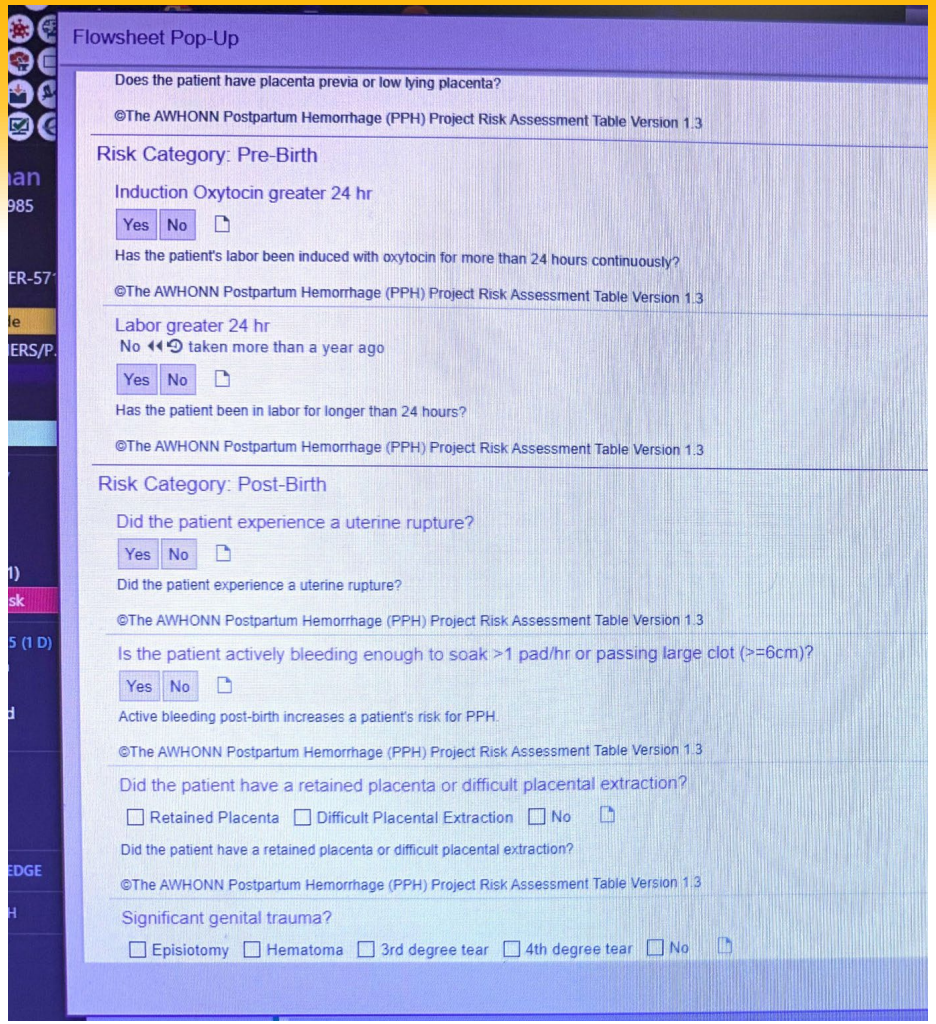
Admission (Current) from 4/28/2025 in UMSMCE LABOR & DELIVERY

| Search (Alt+Comma) | 4/28/2025 1500 | 1539 | 1600 | Last Filed |
|---|---|---|---|---|
| **Pain 1 Impact to Function** | | | | |
| Pain Management Interventions | | | | |
| Pain Intervention Effectiveness* | | | | |
| Multiple Pain Sites | | | | |
| **PPH RISK SCORE REVIEWED** | | | | |
| PPH Risk Score Reviewed | | | | On Admission |
| **Risk Category: Admission** | | | | |
| Prior cesarean birth or prior uterine incision | | | | No |
| Number of previous births | | | | 5 |
| Multiple Birth? | | | | |
| Known bleeding disorder or coagulopathy | | | | No |
| History of postpartum hemorrhage | | | | No history of post... |
| Large uterine fibroids | | | | No |
| Intraamniotic infection | | | | No |
| Known intrauterine fetal demise | | | | No |
| Polyhydramnios | | | | No |
| Suspected pre-eclampsia or HELLP syndrome | | | | No |
| Active bleeding more than "bloody show" | | | | No |
| Suspected abruption | | | | No |
| Suspected placenta accreta or percreta | | | | No |
| Placenta previa or low lying placenta | | | | No |
| **Risk Category: Pre-Birth** | | | | |
| Induction Oxytocin greater 24 hr | | | | No |
| Labor greater 24 hr | | | | No |
| **Risk Category: Post-Birth** | | | | |
| Did the patient experience a uterine rupture? | | | | No |
| Is the patient actively bleeding enough to soak >1 pad/hr or passing larg... | | | | No |
| Did the patient have a retained placenta or difficult placental extraction? | | | | No |
| Significant genital trauma? | | | | No |
| **Breasts/Nipples** | | | | |
| Breastfeeding Status | | | | Unknown |
| Left Breast | | | | |



| | | | |
|---|---|---|---|
| Respiratory Pattern | | | Regular |
| **DTR** | | | |
| Deep Tendon Reflex Response | | | |
| Clonus | | | |
| **PPH RISK SCORE REVIEWED** | | | |
| PPH Risk Score Reviewed | | | On Admission |
| **Risk Category: Admission** | | | |
| Prior cesarean birth or prior uterine incision | | | No |
| Number of previous births | | | 0 |
| Known bleeding disorder or coagulopathy | | | No |
| History of postpartum hemorrhage | | | No history of post... |
| Large uterine fibroids | | | Yes |
| Intraamniotic infection | | | No |
| Known intrauterine fetal demise | | | No |
| Polyhydramnios | | | Yes |
| Suspected pre-eclampsia or HELLP syndrome | | | No |
| Active bleeding more than "bloody show" | | | No |
| Suspected abruption | | | No |
| Suspected placenta accreta or percreta | | | No |
| Placenta previa or low lying placenta | | | No |
| **Risk Category: Pre-Birth** | | | |
| Induction Oxytocin greater 24 hr | | | No |
| Labor greater 24 hr | | | No |
| **Risk Category: Post-Birth** | | | |
| Did the patient experience a uterine rupture? | | | No |
| Is the patient actively bleeding enough to soak >1 pad/hr or passing larg... | | | No |
| Did the patient have a retained placenta or difficult placental extraction? | | | No |
| Significant genital trauma? | | | No |


Navigators (Mom)
Triage
Admission
Shift Assessment
Procedure
Transfer
Discharge
Pre-Op
New Reading
Flowsheets
Postpartum Hemorrhage Admission Risk Assessment
Admission (Current) from 4/25/2025 in UMSMC LABOR & DELIVERY
4/25/2025 1558
1600
4/27/2025 0009
0352
1931
PPH RISK SCORE REVIEWED
PPH Risk Score Reviewed
On Admission
Pre-Birth
Post-Birth
Risk Category: Admission
Prior cesarean birth or prior uterine incision
Number of previous births
Known bleeding disorder or coagulopathy
Yes (factor 5)
History of postpartum hemorrhage
No history of postpartum hemorrhage
Large uterine fibroids
Intraamniotic infection
Known intrauterine fetal demise
Polyhydramnios
Suspected pre-eclampsia or HELLP syndrome
Active bleeding more than "bloody show"
Suspected abruption
Suspected placenta accreta or percreta
Placenta previa or low lying placenta
Risk Category: Pre-Birth
Induction Oxytocin greater 24 hr
Labor greater 24 hr
Risk Category: Post-Birth
Did the patient experience a uterine rupture?
Is the patient actively bleeding enough to soak >1 pad/hr or passing large clot (>=6cm)?
Did the patient have a retained placenta or difficult placental extraction?
Significant genital trauma?
Postpartum Hemorrhage Risk Score


Flowsheet Pop-Up
Does the patient have placenta previa or low lying placenta?
©The AWHONN Postpartum Hemorrhage (PPH) Project Risk Assessment Table Version 1.3
Risk Category: Pre-Birth
Induction Oxytocin greater 24 hr
Yes
No
Has the patient's labor been induced with oxytocin for more than 24 hours continuously?
©The AWHONN Postpartum Hemorrhage (PPH) Project Risk Assessment Table Version 1.3
Labor greater 24 hr
No taken more than a year ago
Yes
No
Has the patient been in labor for longer than 24 hours?
©The AWHONN Postpartum Hemorrhage (PPH) Project Risk Assessment Table Version 1.3
Risk Category: Post-Birth
Did the patient experience a uterine rupture?
Yes
No
Did the patient experience a uterine rupture?
©The AWHONN Postpartum Hemorrhage (PPH) Project Risk Assessment Table Version 1.3
Is the patient actively bleeding enough to soak >1 pad/hr or passing large clot (>=6cm)?
Yes
No
Active bleeding post-birth increases a patient's risk for PPH.
©The AWHONN Postpartum Hemorrhage (PPH) Project Risk Assessment Table Version 1.3
Did the patient have a retained placenta or difficult placental extraction?
Retained Placenta
Difficult Placental Extraction
No
Did the patient have a retained placenta or difficult placental extraction?
©The AWHONN Postpartum Hemorrhage (PPH) Project Risk Assessment Table Version 1.3
Significant genital trauma?
Episiotomy
Hematoma
3rd degree tear
4th degree tear
No

***Pre-birth - Low Risk***

*Monitor patient for any change in risk factors during labor and implement anticipatory interventions as indicated.*

*Document a delivery date/time in the Delivery Summary to view the post-birth interventions.*

*Approximately 30-60 minutes prior to giving birth:*

- **Clot Only (Type & Hold)**
- Ensure the availability of calibrated drapes, scales to weigh and measure blood loss with every birth

©The AWHONN Postpartum Hemorrhage (PPH) Project Risk Assessment Table Version 1.3

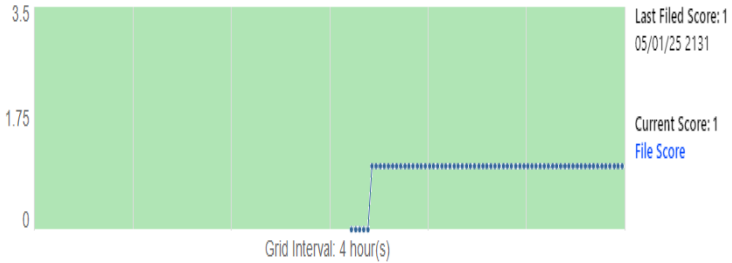
**Documentation Complete!** - The PPH Risk Assessment has been completed, and we have added one point to the patient's score to indicate such. This point will not increase the patient's acuity and is only done to distinguish completed assessments.

PPH Risk

File score (Last filed: May 01, 2025 2131)

1 PPH Doc Complete

Score Trending: Low <=3 | Mod 4-5 | High >=6 (Last 24 hours)




***Post-birth - Low Risk***

*Continue to monitor patient for any change in risk factors after birth and implement anticipatory interventions as indicated.*

*Within 60 minutes after birth:*

- **Clot Only (Type and Hold)**
- Utilize scales and calibrated equipment to weigh and measure maternal blood loss for every birth

©The AWHONN Postpartum Hemorrhage (PPH) Project Risk Assessment Table Version 1.3

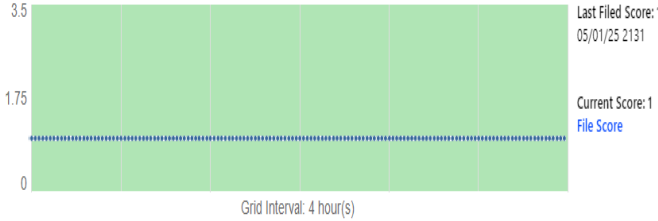
**Documentation Complete!** - The PPH Risk Assessment has been completed, and we have added one point to the patient's score to indicate such. This point will not increase the patient's acuity and is only done to distinguish completed assessments.

PPH Risk

File score (Last filed: May 01, 2025 2131)

1 PPH Doc Complete

Score Trending: Low <=3 | Mod 4-5 | High >=6 (Last 24 hours)




Delivery Blood Loss

Intrapartum & Postpartum: 04/30/25 1556 - 05/01/25 2140
Delivery Admission: 04/30/25 1556 - 05/01/25 2140

Mom's I/O Activity

| | | Intrapartum & Postpartum | Delivery Admission |
|---|---|---|---|
| Non-Surgical QBL Interim Total - Delivery (mL) | Hospital Encounter | 250 mL | 250 mL |
| Total | | 250 mL | 250 mL |

***Pre-birth - Medium Risk***

*Monitor patient for any change in risk factors during labor and implement anticipatory interventions as indicated.*

*Document a delivery date/time in the Delivery Summary to view the post-birth interventions.*

*Approximately 30-60 minutes prior to giving birth:*

- **Confirm Type & Screen**
- Review the hemorrhage protocol
- Review lab work, e.g., PLTs, Hgb
- Notify the Provider and the Charge Nurse
- Initiate and/or maintain IV access
- Confirm availability of Anesthesia Provider
- Check and ensure uterotonics (oxytocin, Methergine, Hemabate, misoprostol) and supplies for administration (such as syringes, needles, alcohol swabs) are immediately available
- Ensure that the hemorrhage supplies are near the patient's room
- Transfer from a birthing center to an intrapartum unit
- Ensure the availability of calibrated drapes, scales to weigh and measure blood loss with every birth



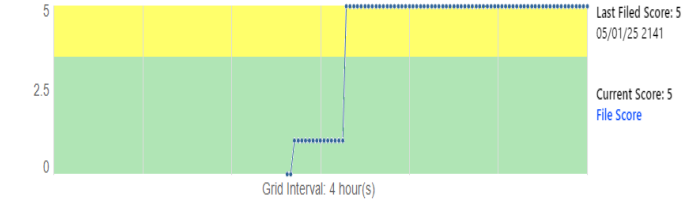
**Documentation Complete!** - The PPH Risk Assessment has been completed, and we have added one point to the patient's score to indicate such. This point will not increase the patient's acuity and is only done to distinguish completed assessments.

PPH Risk

File score (Last filed: May 01, 2025 2141)

| | |
|---|---|
| 4 | Adm - Hematocrit <30%, Hemoglobin <10 |
| 1 | PPH Doc Complete |

Score Trending: Low <=3 | Mod 4-5 | High >=6 (Last 24 hours)




***Post-birth - Medium Risk***

*Continue to monitor patient for any change in risk factors after birth and implement anticipatory interventions as indicated.*

*Within 60 minutes after birth:*

- **Confirm Type & Screen**
- Review the hemorrhage protocol
- Notify the Provider and the Charge Nurse
- Heightened postpartum assessment surveillance
- Utilize scales and calibrated equipment to quantify cumulative maternal blood loss for every birth
- Maintain IV access
- Confirm availability of Anesthesia Provider
- Ensure immediate availability or uterotonics (oxytocin, Methergine, Hemabate, misoprostol)
- Ensure the hemorrhage cart with supplies is near the patient's room
- Ensure OR and staff available



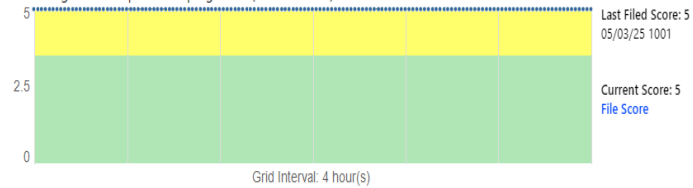
**Documentation Complete!** - The PPH Risk Assessment has been completed, and we have added one point to the patient's score to indicate such. This point will not increase the patient's acuity and is only done to distinguish completed assessments.

PPH Risk

File score (Last filed: May 03, 2025 1001)

| | |
|---|---|
| 4 | Adm - Hematocrit <30%, Hemoglobin <10 |
| 1 | PPH Doc Complete |

Score Trending: Low <=3 | Mod 4-5 | High >=6 (Last 24 hours)




Delivery Blood Loss

Intrapartum & Postpartum: 05/02/25 1812 - 05/03/25 100
Delivery Admission: 05/01/25 0803 - 05/03/25 100

Mom's I/O Activity

| | | Intrapartum & Postpartum | Delivery Admission |
|---|---|---|---|
| Estimated Blood Loss | Hospital Encounter | 250 mL | 250 mL |
| Total | | 250 mL | 250 mL |

***Pre-birth - High Risk***

*Monitor patient for any change in risk factors during labor and implement anticipatory interventions as indicated.*

*Document a delivery date/time in the Delivery Summary to view the post-birth interventions.*

*Approximately 30-60 minutes prior to giving birth:*

- **Confirm Type & Cross**
- Review the hemorrhage protocol
- Review lab work, e.g., PLTs, Hgb
- Notify the Provider and the Charge Nurse
- Insertion of a second large bore IV is optional
- Notify Anesthesia Provider to come to the unit
- Check and ensure uterotonics (oxytocin, Methergine, Hemabate, misoprostol) and supplies for administration (such as syringes, needles, alcohol swabs) are immediately available
- Bring the hemorrhage supplies to the bedside
- Ensure operating room (OR) and staff available
- Ensure the availability of calibrated drapes, scales to weigh and measure blood loss with every birth



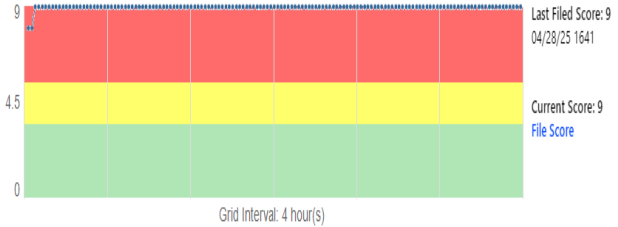
**Documentation Complete!** - The PPH Risk Assessment has been completed, and we have added one point to the patient's score to indicate such. This point will not increase the patient's acuity and is only done to distinguish completed assessments.

PPH Risk

File score (Last filed: Apr 28, 2025 1641)

| | |
|---|---|
| 4 | Adm - Pre-Eclampsia |
| 4 | Adm - GA <37w or >41w |
| 1 | PPH Doc Complete |

Score Trending: Low <=3 | Mod 4-5 | High >=6 (Last 24 hours)




***Post-birth - High Risk***

*Continue to monitor patient for any change in risk factors after birth and implement anticipatory interventions as indicated.*

*Within 60 minutes after birth:*

- **Confirm Type & Cross**
- Notify the blood bank
- Review the hemorrhage protocol
- Notify the Provider, Charge Nurse and obtain additional nursing personnel
- Heightened postpartum assessment surveillance
- Utilize scales and calibrated equipment to quantify cumulative maternal blood loss for every birth
- Insertion of a second large bore IV is optional
- Notify Anesthesia Provider to come to the unit
- Check and ensure immediate availability or uterotonics (oxytocin, Methergine, Hemabate, misoprostol) and supplies for administration (such as syringes, needles, alcohol swabs)
- Bring the hemorrhage cart with supplies to the bedside
- Consider notifying team to prepare the OR
- Consider notifying Interventional Radiology if available in the facility



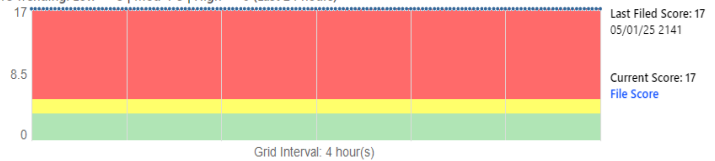
**Documentation Complete!** - The PPH Risk Assessment has been completed, and we have added one point to the patient's score to indicate such. This point will not increase the patient's acuity and is only done to distinguish completed assessments.

PPH Risk

File score (Last filed: May 01, 2025 2141)

| | |
|---|---|
| 4 | Adm - Pre-Eclampsia |
| 4 | Adm - GA <37w or >41w |
| 4 | Post - Cesarean birth |
| 4 | Post- QBL >= 500 - 999 mL |
| 1 | PPH Doc Complete |

Score Trending: Low <=3 | Mod 4-5 | High >=6 (Last 24 hours)

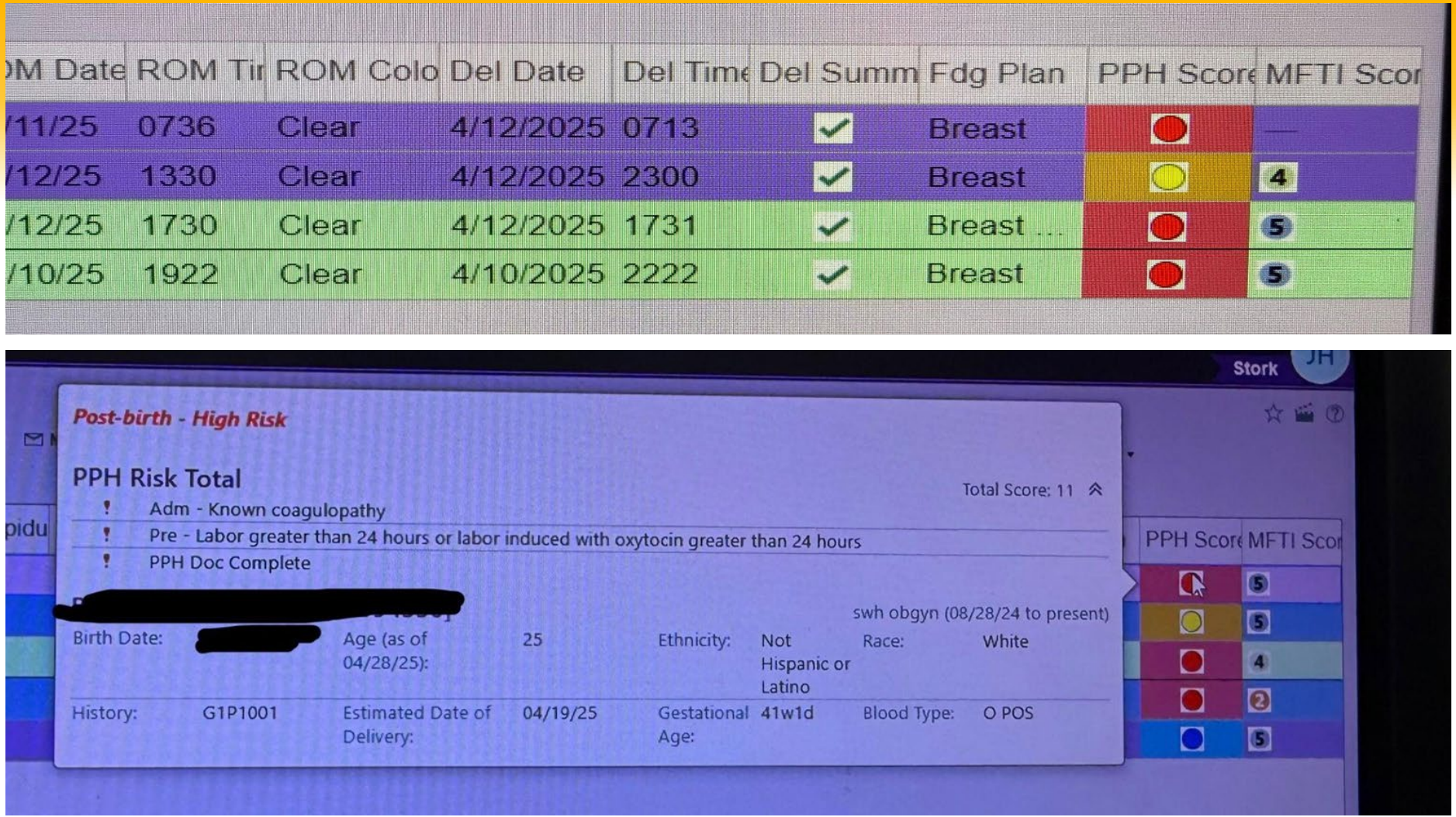


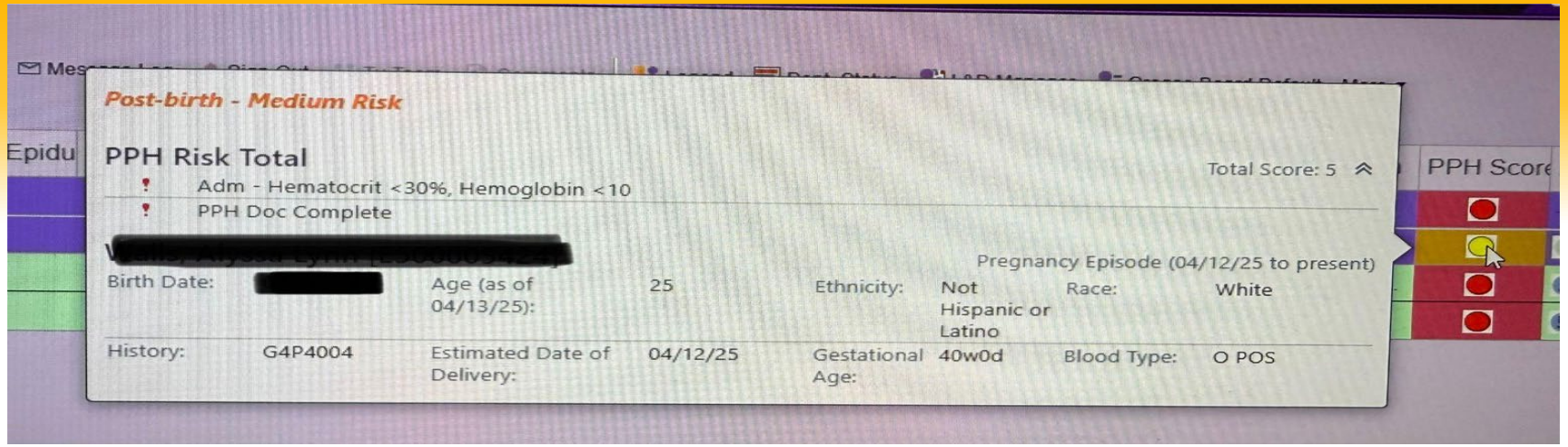

Delivery Blood Loss

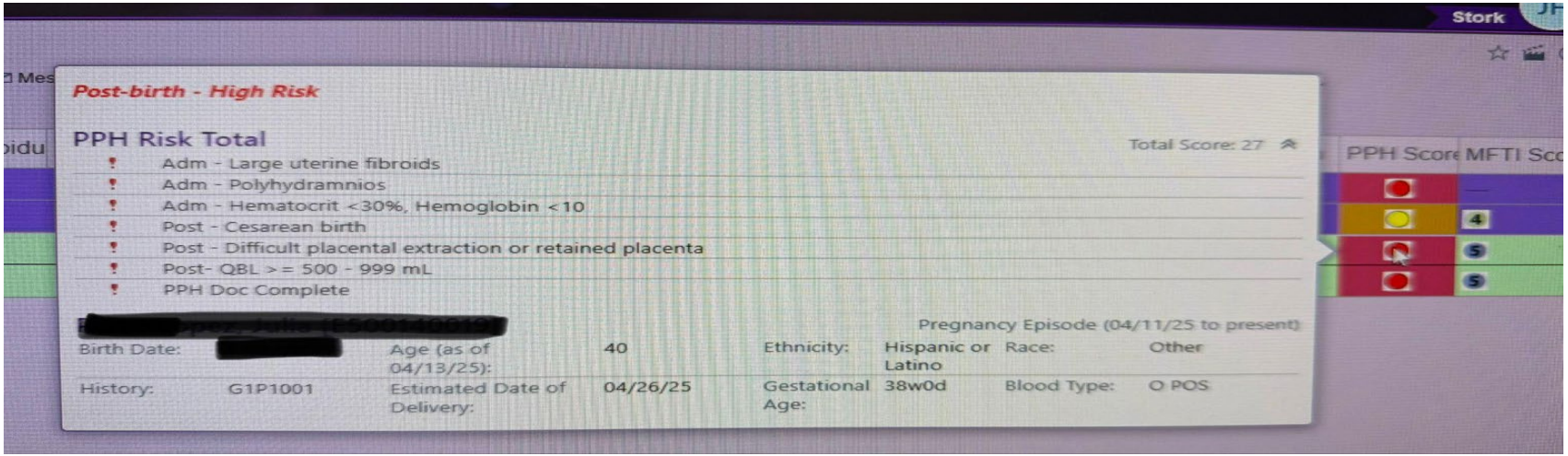
Intrapartum & Postpartum: 04/30/25 1709 - 05/01/25 1720
Delivery Admission: 04/29/25 2139 - 05/01/25 2142

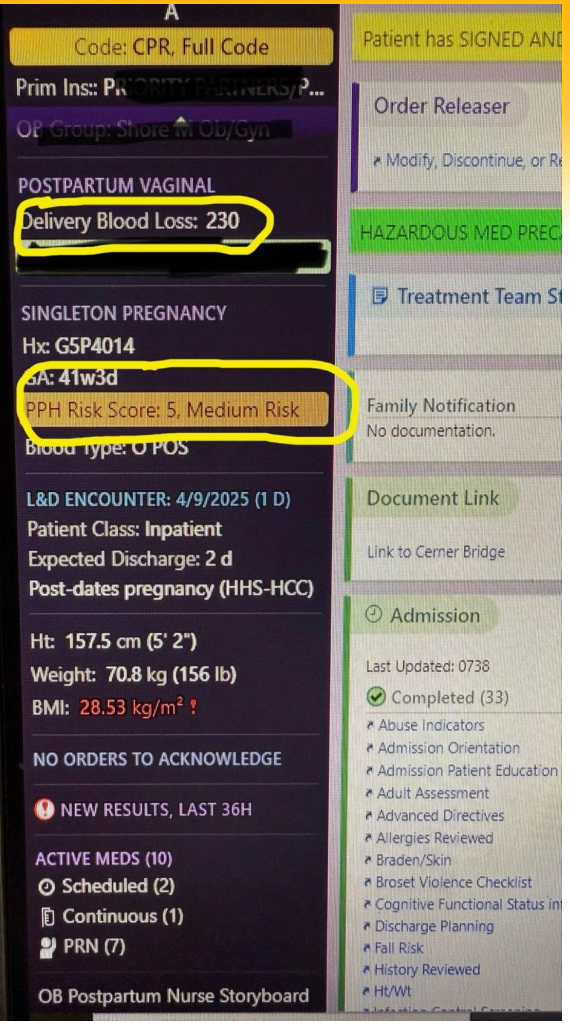
Mom's I/O Activity

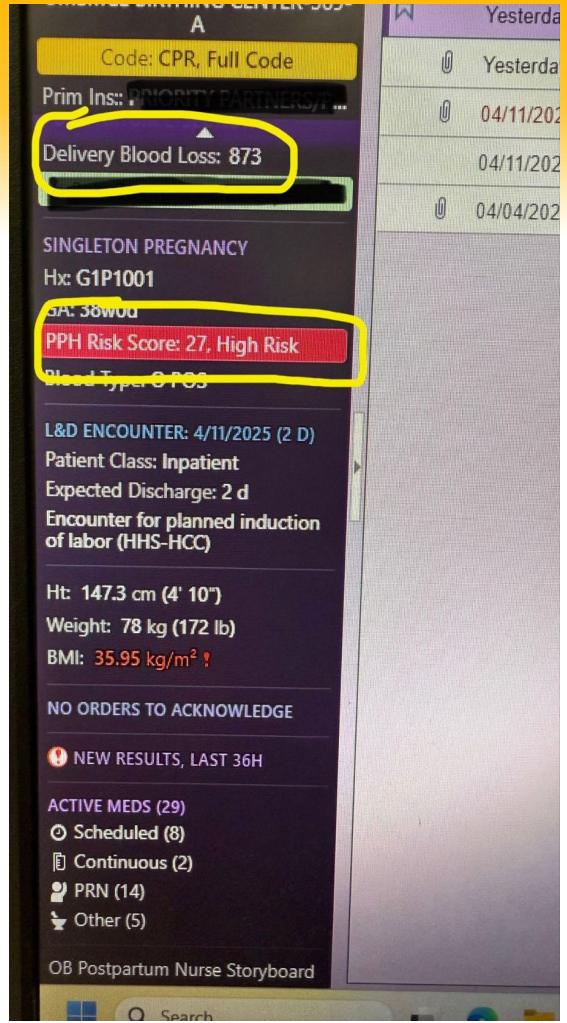
| | | Intrapartum & Postpartum | Delivery Admission |
|---|---|---|---|
| Surgical Delivery Blood Loss (computated) | Anesthesia | 704 mL | 704 mL |
| Total | | 704 mL | 704 mL |

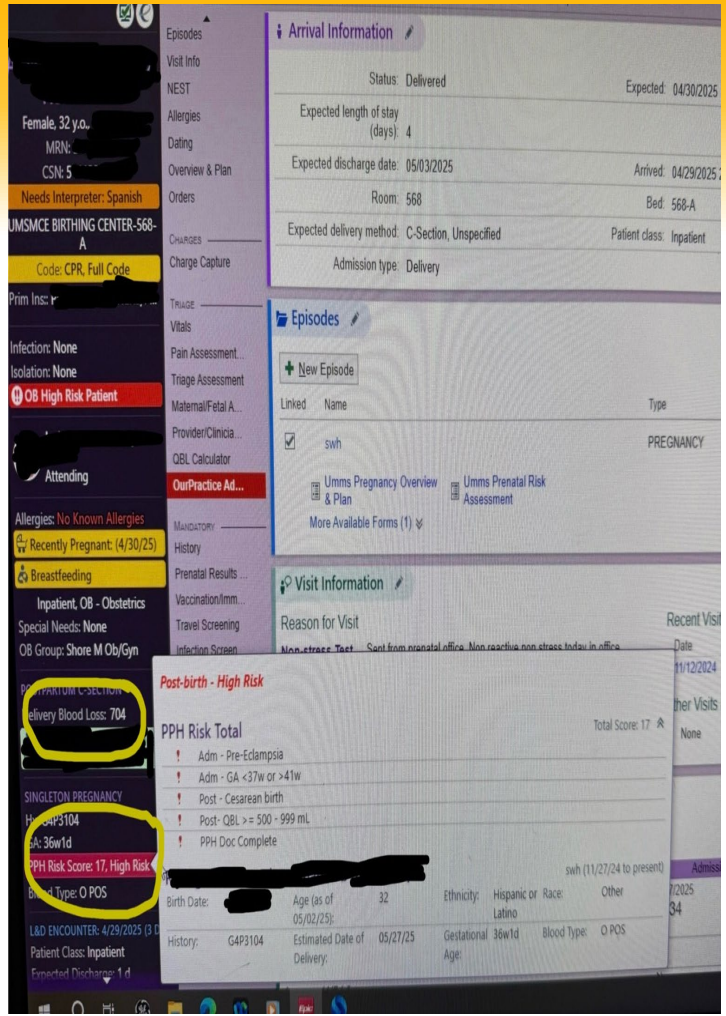

ROM Date
ROM Tir
ROM Colo
Del Date
Del Time
Del Summ
Fdg Plan
PPH Score
MFTI Scor
/11/25 0736 Clear 4/12/2025 0713 Breast
/12/25 1330 Clear 4/12/2025 2300 Breast 4
/12/25 1730 Clear 4/12/2025 1731 Breast 5
/10/25 1922 Clear 4/10/2025 2222 Breast 5
Stork
Post-birth - High Risk
PPH Risk Total
Total Score: 11
Adm - Known coagulopathy
Pre - Labor greater than 24 hours or labor induced with oxytocin greater than 24 hours
PPH Doc Complete
swh obgyn (08/28/24 to present)
Birth Date:
Age (as of 04/28/25): 25
Ethnicity: Not Hispanic or Latino
Race: White
History: G1P1001
Estimated Date of Delivery: 04/19/25
Gestational Age: 41w1d
Blood Type: O POS


Post-birth - Medium Risk
PPH Risk Total
Total Score: 5
Adm - Hematocrit <30%, Hemoglobin <10
PPH Doc Complete
[redacted]
Pregnancy Episode (04/12/25 to present)
Birth Date: [redacted]
Age (as of 04/13/25): 25
Ethnicity: Not Hispanic or Latino
Race: White
History: G4P4004
Estimated Date of Delivery: 04/12/25
Gestational Age: 40w0d
Blood Type: O POS
PPH Score


Stork
Post-birth - High Risk
PPH Risk Total
Total Score: 27
Adm - Large uterine fibroids
Adm - Polyhydramnios
Adm - Hematocrit <30%, Hemoglobin <10
Post - Cesarean birth
Post - Difficult placental extraction or retained placenta
Post- QBL >= 500 - 999 mL
PPH Doc Complete
[redacted]
Pregnancy Episode (04/11/25 to present)
Birth Date: [redacted]
Age (as of 04/13/25): 40
Ethnicity: Hispanic or Latino
Race: Other
History: G1P1001
Estimated Date of Delivery: 04/26/25
Gestational Age: 38w0d
Blood Type: O POS
PPH Score
MFTI Sco


A
Code: CPR, Full Code
Prim Ins:: P
OP Group: Shore M Ob/Gyn
POSTPARTUM VAGINAL
Delivery Blood Loss: 230
SINGLETON PREGNANCY
Hx: G5P4014
GA: 41w3d
PPH Risk Score: 5, Medium Risk
Blood Type: O POS
L&D ENCOUNTER: 4/9/2025 (1 D)
Patient Class: Inpatient
Expected Discharge: 2 d
Post-dates pregnancy (HHS-HCC)
Ht: 157.5 cm (5' 2")
Weight: 70.8 kg (156 lb)
BMI: 28.53 kg/m² !
NO ORDERS TO ACKNOWLEDGE
NEW RESULTS, LAST 36H
ACTIVE MEDS (10)
Scheduled (2)
Continuous (1)
PRN (7)
OB Postpartum Nurse Storyboard
Patient has SIGNED AND
Order Releaser
Modify, Discontinue, or Re
HAZARDOUS MED PREC
Treatment Team St
Family Notification
No documentation.
Document Link
Link to Cerner Bridge
Admission
Last Updated: 0738
Completed (33)
Abuse Indicators
Admission Orientation
Admission Patient Education
Adult Assessment
Advanced Directives
Allergies Reviewed
Braden/Skin
Broset Violence Checklist
Cognitive Functional Status in
Discharge Planning
Fall Risk
History Reviewed
Ht/Wt


A
Code: CPR, Full Code
Prim Ins::
Delivery Blood Loss: 873
SINGLETON PREGNANCY
Hx: G1P1001
GA: 38w0d
PPH Risk Score: 27, High Risk
L&D ENCOUNTER: 4/11/2025 (2 D)
Patient Class: Inpatient
Expected Discharge: 2 d
Encounter for planned induction of labor (HHS-HCC)
Ht: 147.3 cm (4' 10")
Weight: 78 kg (172 lb)
BMI: 35.95 kg/m² !
NO ORDERS TO ACKNOWLEDGE
NEW RESULTS, LAST 36H
ACTIVE MEDS (29)
Scheduled (8)
Continuous (2)
PRN (14)
Other (5)
OB Postpartum Nurse Storyboard
Yesterda
Yesterda
04/11/202
04/11/202
04/04/202
Search


Episodes
Visit Info
NEST
Allergies
Dating
Overview & Plan
Orders
Charge Capture
Vitals
Pain Assessment
Triage Assessment
Maternal/Fetal A...
Provider/Clinicia...
QBL Calculator
OurPractice Ad...
History
Prenatal Results
Vaccination/Imm...
Travel Screening
Female, 32 y.o.
MRN:
CSN: 5
Needs Interpreter: Spanish
UMSMCE BIRTHING CENTER-568-A
Code: CPR, Full Code
Infection: None
Isolation: None
OB High Risk Patient
Attending
Allergies: No Known Allergies
Recently Pregnant: (4/30/25)
Breastfeeding
Inpatient, OB - Obstetrics
Special Needs: None
OB Group: Shore M Ob/Gyn
Delivery Blood Loss: 704
SINGLETON PREGNANCY
GA: 36w1d
PPH Risk Score: 17, High Risk
Blood Type: O POS
L&D ENCOUNTER: 4/29/2025 (3 D)
Patient Class: Inpatient
Arrival Information
Status: Delivered
Expected: 04/30/2025
Expected length of stay (days): 4
Expected discharge date: 05/03/2025
Arrived: 04/29/2025
Room: 568
Bed: 568-A
Expected delivery method: C-Section, Unspecified
Patient class: Inpatient
Admission type: Delivery
Episodes
New Episode
Linked
Name
Type
swh
PREGNANCY
Umms Pregnancy Overview & Plan
Umms Prenatal Risk Assessment
More Available Forms (1)
Visit Information
Reason for Visit
Recent Visit
Post-birth - High Risk
PPH Risk Total
Total Score: 17
Adm - Pre-Eclampsia
Adm - GA <37w or >41w
Post - Cesarean birth
Post- QBL >= 500 - 999 mL
PPH Doc Complete
Birth Date:
Age (as of 05/02/25):
32
Ethnicity:
Hispanic or Latino
Race:
Other
History:
G4P3104
Estimated Date of Delivery:
05/27/25
Gestational Age:
36w1d
Blood Type:
O POS
swh (11/27/24 to present)

# Takeaways

- Early recognition and prompt intervention is key
- Perform risk assessment on admission, pre and post-birth
- Communicate risk to team, notify when there is a change
- QBL is standard
  - Visual inspection of underbuttocks drapes and canisters, weigh all blood soaked soft goods
  - Continue cumulative QBL in setting of PPH
  - May not always be exact but it is much more accurate than EBL
- Frequent assessment of vital signs, uterus, bleeding, perineum
- Pay attention to subtle changes in clinical status - call for evaluation/help early
- Identify source and contain; rule out atony first
- Mobilize resources early - notify in advance when possible
- Careful inspection to r/o hematoma, including epidural site, with s/s hypovolemia, pain and no obvious bleeding or atony
- Maximize technology - visual display of QBL & risk level, standard orders for PPH meds, labs, blood, QBL calculator; PPH med kits, early warning triggers

# Risk Assessment Data

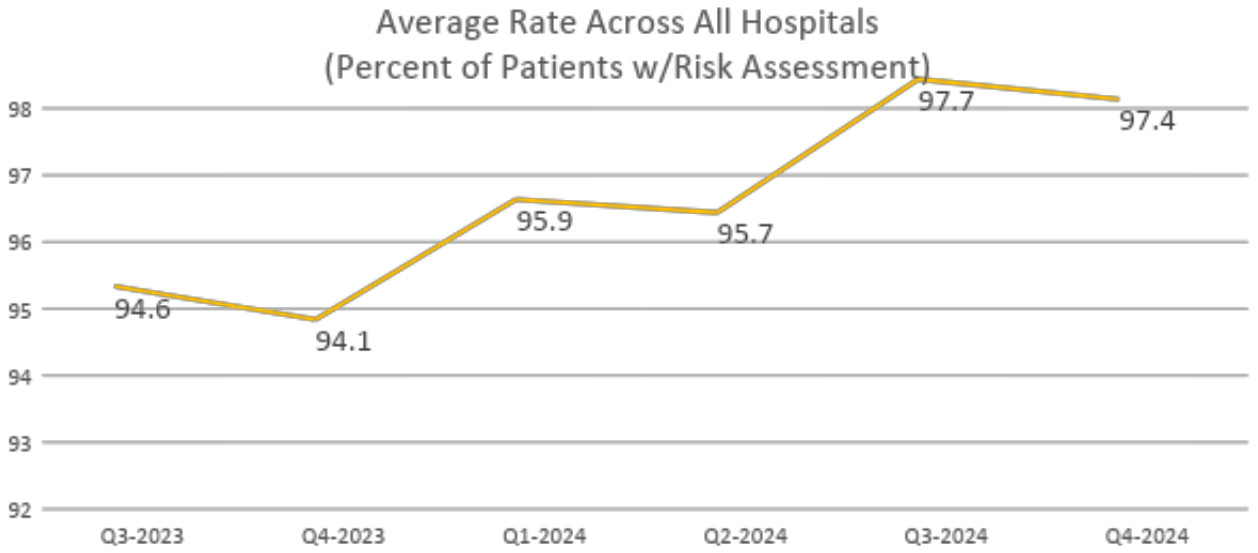
| Race/Ethnicity | Hospital Average Rate (Overall) | 2023 Average Rate | 2024 Average Rate |
|---|---|---|---|
| Non-Hispanic Black | 96.93% | 94.5% | 97.3% |
| Non-Hispanic Other | 96.99% | 94.6% | 97.1% |
| Non-Hispanic Asian | 97.06% | 91.5% | 98.0% |
| Non-Hispanic White | 97.83% | 96.0% | 98.1% |
| Non-Hispanic American Indian and Alaska Native | 98.98% | 100.0% | 100.0% |
| Hispanic | 98.12% | 96.9% | 98.2% |

HQI
HEALTH QUALITY INNOVATORS

MDPQC

# Risk Assessment Data

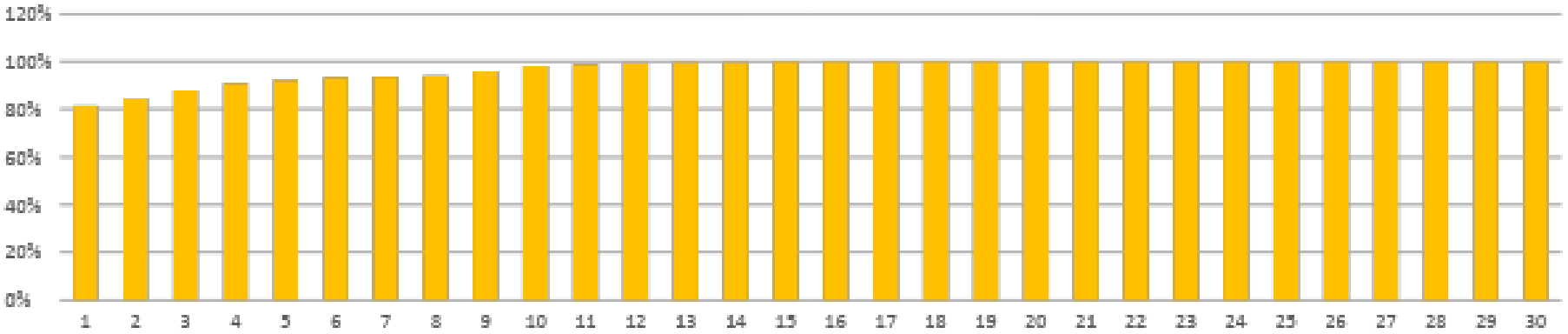
| Process Measure | Q3-23 | Q4-23 | Q1-24 | Q2-24 | Q3-24 | Q4-24 |
|---|---|---|---|---|---|---|
| Hemorrhage Risk Assessment | 94.6% | 94.1% | 95.9% | 95.7% | 97.7% | 97.4% |




HQI
HEALTH QUALITY INNOVATORS

MDPQC

# Risk Assessments




Q4-2024 Data
30/32 Hospitals Reporting
Min = 81.4%
Max = 100%
Mean = 97.0%

# Discussion

- Do you perform the risk assessment at all three time-points?
- What barriers, if any, prevent or make performing the risk assessment challenging?
- Is your hospital performing type & cross for all high risk patients?
  - Low resource settings may not have capacity
  - If not, do you have a standard for when you would?
- Are you seeing an increase in patients who have received antepartum iron infusions?
- Are you using other techniques to communicate hemorrhage risk to the team?
- Are you using other technologies to help improve response to PPH?
- Anything else to share?

# Hemorrhage Rate Data Results

- We received multiple requests from hospitals to collect hospital-specific hemorrhage rates for setting improvement targets and benchmarking purposes
- Hospitals self-reported quarterly hemorrhage data:
  - Numerator = Total number of pregnant and postpartum people with >1,000 mL blood loss during the birth admission
  - Denominator = Total number of birth admissions
- 27/32 hospitals submitted data

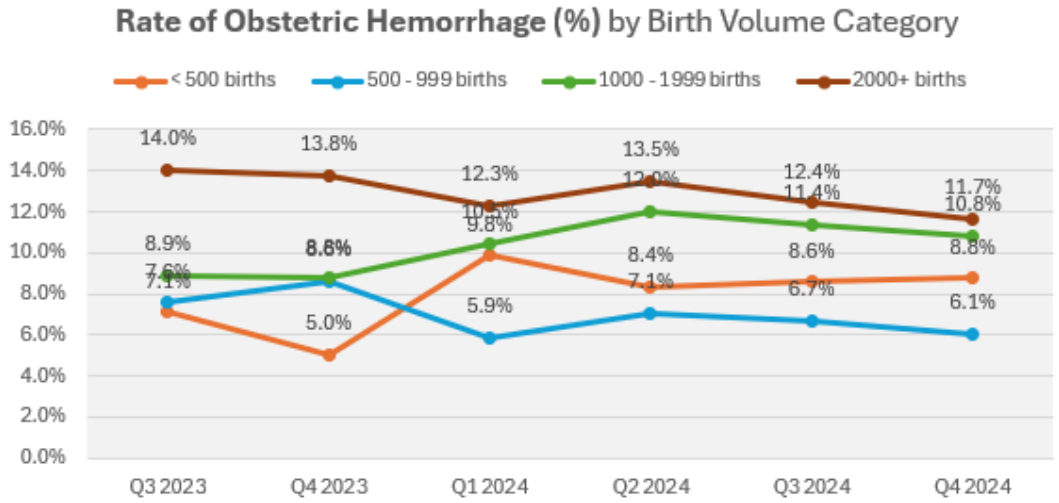
HQI
HEALTH QUALITY INNOVATORS

MDPQC

| | Q3 2023 | | | Q4 2023 | | | Q1 2024 | | | Q2 2024 | | | Q3 2024 | | | Q4 2024 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hospital ID | Num | Den | Rate | Num | Den | Rate | Num | Den | Rate | Num | Den | Rate | Num | Den | Rate | Num | Den | Rate | Trend |
| 1208 | 133 | 1014 | **13.1%** | 140 | 926 | **15.1%** | 140 | 972 | **14.4%** | 156 | 921 | **16.9%** | 154 | 1020 | **15.1%** | 171 | 997 | **17.2%** | |
| 4192 | | | | | | | | | | | | | | | | | | | |
| 2867 | | | | | | | | | | | | | | | | | | | |
| 4198 | 33 | 430 | **7.7%** | 32 | 365 | **8.8%** | 35 | 355 | **9.9%** | 19 | 284 | **6.7%** | 29 | 398 | **7.3%** | 30 | 415 | **7.2%** | |
| 5749 | | | | | | | 2 | 109 | **1.8%** | 1 | 113 | **0.9%** | 3 | 89 | **3.4%** | 2 | 82 | **2.4%** | |
| 9722 | 15 | 243 | **6.2%** | 14 | 202 | **6.9%** | 11 | 234 | **4.7%** | 18 | 212 | **8.5%** | 14 | 260 | **5.4%** | 15 | 247 | **6.1%** | |
| 4380 | | | | | | | | | | | | | | | | | | | |
| 6821 | 193 | 885 | **21.8%** | 178 | 825 | **21.6%** | 183 | 815 | **22.5%** | 198 | 884 | **22.4%** | 191 | 942 | **20.3%** | 149 | 810 | **18.4%** | |
| 2273 | 28 | 331 | **8.5%** | 25 | 305 | **8.2%** | 16 | 269 | **5.9%** | 29 | 257 | **11.3%** | 20 | 251 | **8.0%** | 24 | 231 | **10.4%** | |
| 3188 | 52 | 582 | **8.9%** | 55 | 592 | **9.3%** | 69 | 587 | **11.8%** | 67 | 643 | **10.4%** | 59 | 611 | **9.7%** | 50 | 603 | **8.3%** | |
| 7826 | | | | | | | 19 | 290 | **6.6%** | 48 | 291 | **16.5%** | 50 | 329 | **15.2%** | 25 | 304 | **8.2%** | |
| 6506 | 110 | 709 | **15.5%** | 87 | 675 | **12.9%** | 92 | 640 | **14.4%** | 111 | 636 | **17.5%** | 108 | 718 | **15.0%** | 92 | 676 | **13.6%** | |
| 2192 | | | | | | | | | | | | | | | | 17 | 501 | **3.4%** | |
| 4399 | | | | | | | | | | | | | | | | | | | |
| 6705 | 15 | 122 | **12.3%** | 12 | 144 | **8.3%** | 12 | 168 | **7.1%** | 8 | 147 | **5.4%** | 12 | 150 | **8.0%** | 15 | 166 | **9.0%** | |
| 5838 | | | | 14 | 254 | **5.5%** | 11 | 257 | **4.3%** | 18 | 232 | **7.8%** | 23 | 229 | **10.0%** | 26 | 208 | **12.5%** | |
| 6206 | 13 | 292 | **4.5%** | 19 | 271 | **7.0%** | 29 | 296 | **9.8%** | 20 | 265 | **7.5%** | 27 | 312 | **8.7%** | 16 | 262 | **6.1%** | |
| 3873 | 53 | 664 | **8.0%** | 48 | 667 | **7.2%** | 54 | 634 | **8.5%** | 53 | 647 | **8.2%** | 72 | 681 | **10.6%** | 55 | 711 | **7.7%** | |
| 5394 | | | | | | | | | | | | | | | | | | | |
| 4810 | 53 | 378 | **14.0%** | 36 | 338 | **10.7%** | 43 | 351 | **12.3%** | 46 | 339 | **13.6%** | 60 | 390 | **15.4%** | 51 | 380 | **13.4%** | |
| 4724 | 51 | 555 | **9.2%** | 52 | 515 | **10.1%** | 47 | 512 | **9.2%** | 36 | 497 | **7.2%** | 49 | 575 | **8.5%** | 40 | 555 | **7.2%** | |
| 1635 | | | | | | | | | | | | | | | | 42 | 310 | **13.5%** | |
| 5647 | | | | | | | 73 | 542 | **13.5%** | 75 | 532 | **14.1%** | 81 | 612 | **13.2%** | 70 | 592 | **11.8%** | |
| 5031 | 11 | 132 | **8.3%** | 7 | 115 | **6.1%** | 19 | 110 | **17.3%** | 15 | 123 | **12.2%** | 18 | 105 | **17.1%** | 10 | 92 | **10.9%** | |
| 1125 | 20 | 239 | **8.4%** | 21 | 226 | **9.3%** | 14 | 220 | **6.4%** | 30 | 204 | **14.7%** | 23 | 269 | **8.6%** | 21 | 216 | **9.7%** | |
| 2971 | | | | | | | 60 | 541 | **11.1%** | 54 | 525 | **10.3%** | 60 | 573 | **10.5%** | 51 | 490 | **10.4%** | |
| 9271 | | | | | | | | | | | | | | | | | | | |
| 6768 | 6 | 107 | **5.6%** | 2 | 64 | **3.1%** | 5 | 96 | **5.2%** | 3 | 86 | **3.5%** | 2 | 107 | **1.9%** | 7 | 81 | **8.6%** | |
| 5501 | | | | | | | 77 | 417 | **18.5%** | 88 | 429 | **20.5%** | 78 | 454 | **17.2%** | 80 | 433 | **18.5%** | |
| 3426 | 14 | 217 | **6.5%** | 22 | 209 | **10.5%** | 18 | 222 | **8.1%** | 23 | 235 | **9.8%** | 20 | 231 | **8.7%** | 11 | 213 | **5.2%** | |
| **TOTAL** | | | **11.6%** | | | **11.4%** | | | **11.1%** | | | **12.4%** | | | **11.6%** | | | **10.9%** | |

# Hemorrhage Rate – By Birth Volume

| Birth Volume | Q3 2023 | | | Q4 2023 | | | Q1 2024 | | | Q2 2024 | | | Q3 2024 | | | Q4 2024 | | | Trend |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Num | Den | Rate | Num | Den | Rate | Num | Den | Rate | Num | Den | Rate | Num | Den | Rate | Num | Den | Rate | |
| < 500 births | 17 | 239 | **7.1%** | 9 | 179 | **5.0%** | 26 | 264 | **9.8%** | 22 | 263 | **8.4%** | 24 | 280 | **8.6%** | 20 | 228 | **8.8%** | |
| 500 - 999 births | 44 | 582 | **7.6%** | 48 | 555 | **8.6%** | 43 | 733 | **5.9%** | 50 | 707 | **7.1%** | 49 | 730 | **6.7%** | 43 | 708 | **6.1%** | |
| 1000 - 1999 births | 198 | 2225 | **8.9%** | 199 | 2274 | **8.8%** | 424 | 4050 | **10.5%** | 463 | 3855 | **12.0%** | 500 | 4392 | **11.4%** | 476 | 4396 | **10.8%** | |
| 2000+ births | 541 | 3854 | **14.0%** | 508 | 3685 | **13.8%** | 680 | 5520 | **12.3%** | 753 | 5581 | **13.5%** | 743 | 5972 | **12.4%** | 704 | 6039 | **11.7%** | |

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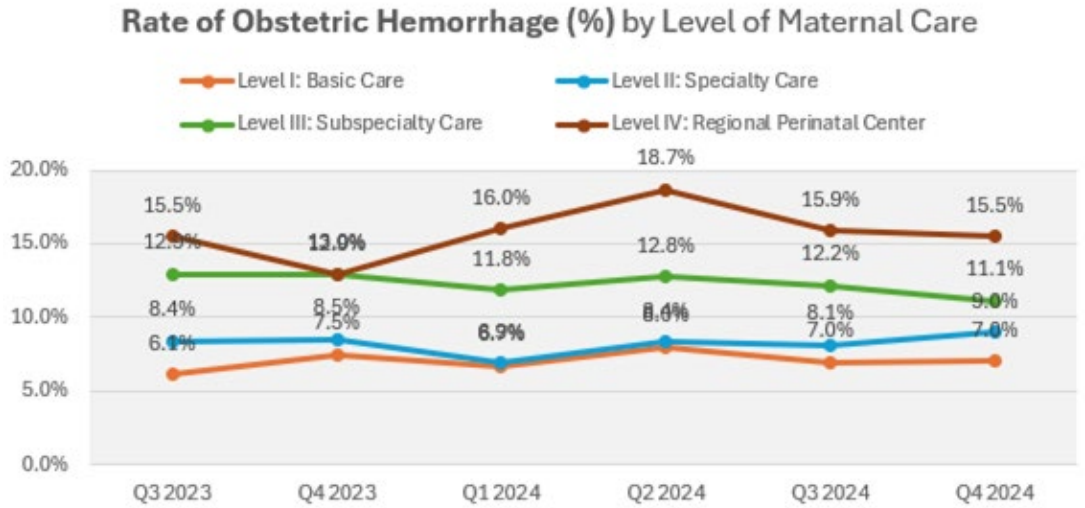
# Hemorrhage Rate – By Level of Maternal Care

| Level of Maternal Care | Q3 2023 | | | Q4 2023 | | | Q1 2024 | | | Q2 2024 | | | Q3 2024 | | | Q4 2024 | | | Trend |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Num | Den | Rate | Num | Den | Rate | Num | Den | Rate | Num | Den | Rate | Num | Den | Rate | Num | Den | Rate | |
| Level I: Basic Care | 39 | 638 | **6.1%** | 42 | 561 | **7.5%** | 52 | 779 | **6.7%** | 58 | 722 | **8.0%** | 59 | 845 | **7.0%** | 49 | 696 | **7.0%** | |
| Level II: Specialty Care | 123 | 1468 | **8.4%** | 139 | 1629 | **8.5%** | 115 | 1662 | **6.9%** | 132 | 1580 | **8.4%** | 138 | 1696 | **8.1%** | 173 | 1930 | **9.0%** | |
| Level III: Subspecialty Care | 528 | 4085 | **12.9%** | 496 | 3828 | **13.0%** | 837 | 7069 | **11.8%** | 899 | 7039 | **12.8%** | 933 | 7661 | **12.2%** | 849 | 7636 | **11.1%** | |
| Level IV: Regional Perinatal Center | 110 | 709 | **15.5%** | 87 | 675 | **12.9%** | 169 | 1057 | **16.0%** | 199 | 1065 | **18.7%** | 186 | 1172 | **15.9%** | 172 | 1109 | **15.5%** | |

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# MDPQC Obstetric Hemorrhage Bundle

## Progress Report Scorecard

The following table shows a blinded progress report through Q4-2024 for each birthing hospital in the MDPQC and each intervention in the maternal obstetric hemorrhage bundle. For more information about the 15 metrics included in this table, see page 3 of this report.

**TIMEFRAME:** Q4-2024

**DATA SOURCE:** AIM Data Center

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# Hemorrhage Scorecard – Process Measures

| Metric ID | Metric Name | Metric Description | Score for Full Implementation | % Hospitals Fully Implemented |
|---|---|---|---|---|
| ALL P1 | Provider Education on Respectful and Equitable Care | At the end of this reporting period, what cumulative proportion of OB physicians and other advanced practice clinicians at your institution has received in the last 2 years an education program on respectful and equitable care? | 90-100% | 75.0% |
| ALL P2 | Nursing Education on Respectful and Equitable Care | At the end of this reporting period, what cumulative proportion of OB nurses has received in the last 2 years an education program on respectful and equitable care? | 90-100% | 90.6% |
| ALL P3A | Unit Drills - Number of Drills | During this reporting period, how many total OB drills (In Situ and/or Sim Lab) were performed on your unit for any maternal safety topic? | 1 or more in the last year | 96.9% |
| HEM P1 | Provider Education on Obstetric Hemorrhage | At the end of this reporting period, what cumulative proportion of OB physicians and other advanced practice clinicians at your institution has received in the last 2 years an education program on Obstetric Hemorrhage that includes the unit standard protocols and measures? | 90-100% | 78.1% |
| HEM P2 | Nursing Education on Obstetric Hemorrhage | At the end of this reporting period, what cumulative proportion of OB nurses has received in the last 2 years an education program on Obstetric Hemorrhage that includes the unit standard protocols and measures? | 90-100% | 93.8% |
| HEM P3 | Hemorrhage Risk Assessment | Denominator: All birth admissions, whether from sample or entire population<br>Numerator: Number of birth admissions that had a hemorrhage risk assessment completed with risk level assigned, performed at least once between admission and birth | 95% | 50.0% |
| HEM P4 | Patient Support After Obstetric Hemorrhage | Denominator: Pregnant and postpartum people with ≥ 1,000 ml blood loss during the birth admission<br>Numerator: Among the denominator, those who received a verbal briefing on their obstetric hemorrhage by their care team before discharge | 95% | 15.6% |
| HEM P5 | Quantified Blood Loss | Denominator: All birth admissions, whether from sample or entire population<br>Numerator: Number of birth admissions that had measurement of blood loss from birth through the recovery period using quantitative and cumulative techniques | 95% | 46.9% |

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# Hemorrhage Scorecard – Structure Measures

| Metric ID | Metric Name | Metric Description | Score for Full Implementation | % Hospitals Fully Implemented |
|---|---|---|---|---|
| ALL S1 | Patient Event Debriefs | Has your department established a standardized process to conduct debriefs with patients after a severe event? | 5 | 40.6% |
| ALL S2 | Clinical Team Debriefs | Has your department established a system to perform regular formal debriefs with the clinical team after cases with major complications? | 5 | 68.8% |
| ALL S3 | Multidisciplinary Case Reviews | Has your hospital established a process to perform multidisciplinary systems-level reviews of cases of severe maternal morbidity (including, at a minimum, pregnant and postpartum patients admitted to the ICU or who received ≥ 4 units RBC transfusions)? | 5 | 75.0% |
| ALL S4 | Patient Education Materials on Urgent | Has your department developed/curated patient education materials on urgent postpartum warning signs that align with culturally and linguistically appropriate standards? | 5 | 93.8% |
| HEM S1 | Hemorrhage Cart | Does your hospital have obstetric hemorrhage supplies readily available in a cart or mobile box? | 5 | 100.0% |
| HEM S2 | Unit Policies & Procedures | Does your hospital have obstetric hemorrhage policies and procedures (reviewed and updated in the last 2 years) that contain the following:<br>• An obstetric rapid response team appropriate to the facility's Maternal Level of Care<br>• A standardized, stage based, obstetric hemorrhage emergency management plan with | 5 | 81.3% |
| HEM S3 | Quantitative Blood Loss | Does your facility have the resources and supplies readily available to quantify cumulative blood loss for both vaginal and cesarean births? | 5 | 87.5% |

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Fully Implemented: ✓

Partially Implemented: ↗

Not Reported: ✗

| HOSPITAL ID | ALL P1 | ALL P2 | ALL P3A | HEM P1 | HEM P2 | HEM P3 | HEM P4 | HEM P5 | ALL S1 | ALL S2 | ALL S3 | ALL S4 | HEM S1 | HEM S2 | HEM S3 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3562 | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ↗ | ↗ | ↗ | ↗ | ↗ | ✓ | ✓ | ✓ | ✓ | 9 |
| 2867 | ✓ | ✓ | ✗ | ✓ | ✓ | ↗ | ↗ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | 10 |
| 6821 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 14 |
| 1208 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 14 |
| 3188 | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ↗ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 11 |
| 3873 | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ✓ | 12 |
| 2192 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ✓ | ↗ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | 12 |
| 4380 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 14 |
| 6506 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 13 |
| 4192 | ↗ | ↗ | ✓ | ↗ | ✓ | ✓ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 11 |
| 1635 | ↗ | ↗ | ✓ | ↗ | ↗ | ✓ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 10 |
| 2971 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ✓ | ✓ | ✓ | 14 |
| 5501 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | ↗ | ✓ | ✓ | ↗ | ✓ | ✓ | ✓ | 12 |
| 4724 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 13 |
| 4810 | ↗ | ✓ | ✓ | ↗ | ✓ | ✓ | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 12 |
| 2273 | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 13 |
| 4198 | ✓ | ✓ | ✓ | ↗ | ↗ | ✓ | ✗ | ✓ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 11 |
| 5394 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ↗ | ↗ | ✓ | ✓ | ↗ | ✓ | 11 |
| 4399 | ✓ | ✓ | ✓ | ✗ | ✓ | ↗ | ✗ | ↗ | ✗ | ↗ | ↗ | ✓ | ✓ | ↗ | ↗ | 6 |
| 5647 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 14 |
| 9271 | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 13 |
| 7826 | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ↗ | ✓ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 12 |
| 6206 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ✓ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 13 |
| 5838 | ↗ | ✓ | ✓ | ↗ | ✓ | ↗ | ✗ | ↗ | ↗ | ✓ | ✓ | ✓ | ✓ | ↗ | ✓ | 8 |
| 1125 | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ✗ | ✓ | ↗ | ✓ | ↗ | ✓ | ✓ | ✓ | ✓ | 11 |
| 9722 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 14 |
| 5749 | ↗ | ↗ | ✓ | ↗ | ✓ | ✓ | ↗ | ↗ | ↗ | ↗ | ↗ | ✓ | ✓ | ↗ | ↗ | 5 |
| 3426 | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ✓ | ✓ | ↗ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | 12 |
| 6705 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ↗ | ↗ | ↗ | ✓ | ✓ | ✓ | ✓ | ✓ | 11 |
| 5031 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ↗ | ↗ | ↗ | ↗ | ✓ | ✓ | ✓ | ✓ | 10 |
| 6768 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ↗ | ↗ | ↗ | ↗ | ✓ | ✓ | ✓ | ✓ | 10 |
| 7164 | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ↗ | ↗ | ↗ | ✓ | ✓ | ↗ | ↗ | 9 |

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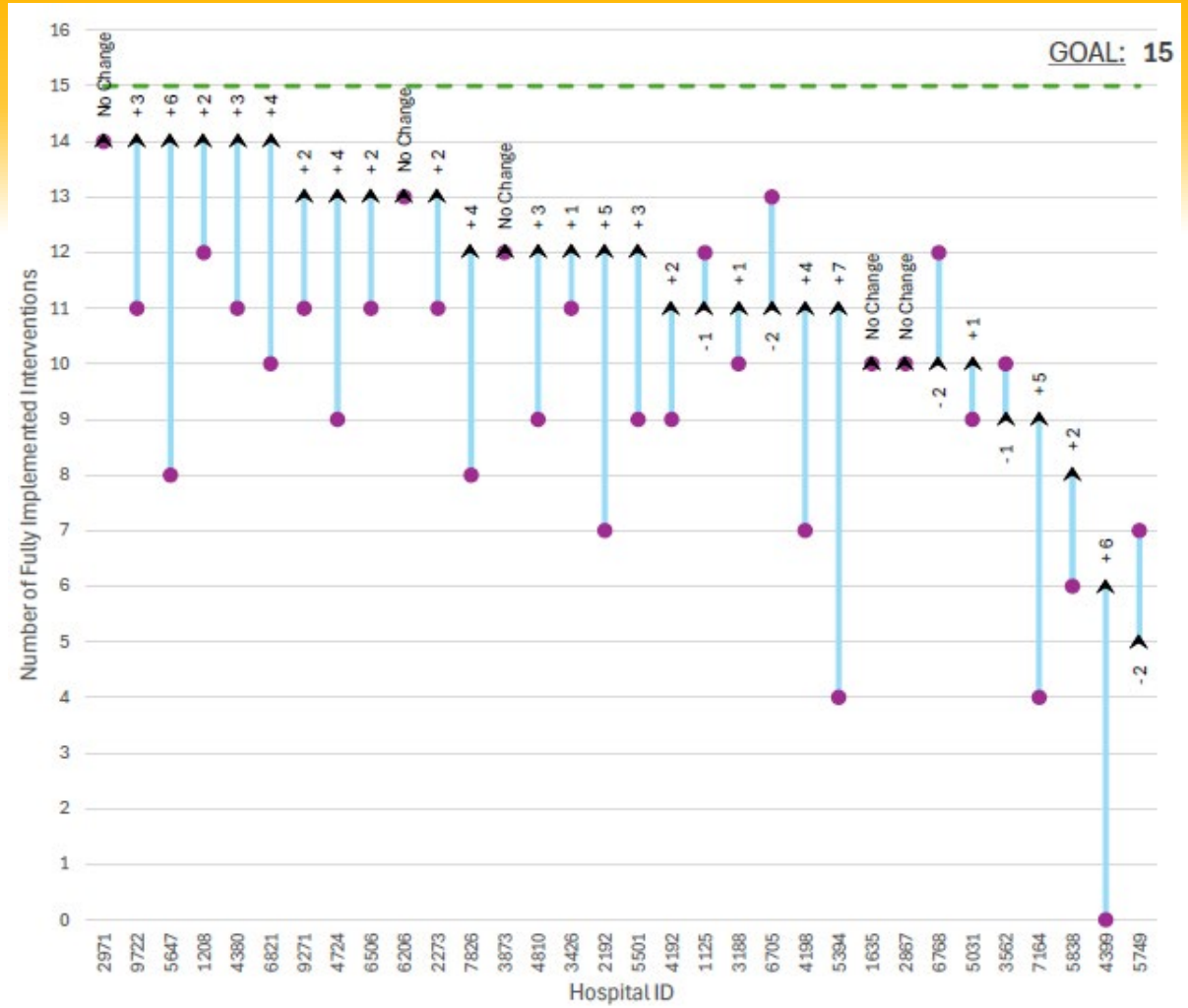
# Number of Fully Implemented Interventions in the Obstetric Hemorrhage AIM Bundle by Birthing Hospital

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# What Should You Do With Your Data?

- ✓ Review to make sure everything looks right
  - If you see any issues, please reach out
- ✓ Note measures with increases or decreases
  - Celebrate the wins
  - Investigate areas of opportunity
- ✓ Share results with your quality improvement team
- ✓ Share results with your unit physicians/nurses
- ✓ Summarize for hospital administration

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Practice Bulletin No. 183: Postpartum Hemorrhage. Obstetrics & Gynecology 130(4):p e168-e186, October 2017. | DOI: 10.1097/AOG.0000000000002351

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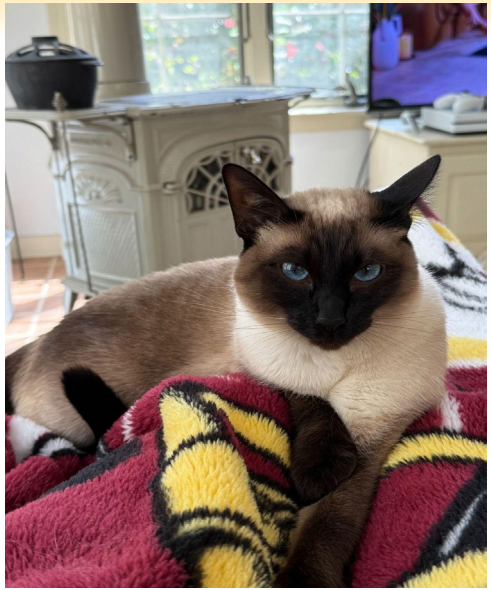
# Q&A



THANK YOU!

Please complete the evaluation poll before you go!

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# Next Month

June Maternal Health Office Hours:

- Engaging Physicians in Education
- Tuesday, June 3rd, 12pm-1pm
- ***Teams*** Webinar
- Register here: https://events.teams.microsoft.com/event/d68809d2-b7e5-429a-9adb-8b12b568e380@d2798d0f-9fe2-4eac-bdf1-66c9890342c9

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# Contact Us




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