AIM

ALLIANCE FOR INNOVATION
ON MATERNAL HEALTH

Severe Hypertension in Pregnancy Patient Safety Bundle

Core Data Collection Plan

Version 2.0 January 2024

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Measurement Statement: Elements of AIM's Severe Hypertension in Pregnancy patient safety bundle can be implemented across a diversity of care settings, including outpatient, urgent care, and inpatient obstetric and emergency settings. Measurement development and revisions for AIM's Severe Hypertension in Pregnancy patient safety bundle focus on inpatient obstetric settings, with expansion of measurement to include emergency departments. Quality improvement measurement and best practices should be implemented across all settings that may provide care to pregnant and postpartum people with hypertensive disorders with appropriate modifications to data collection.

Outcome Measures

Metric	Name	Description	Notes
ALL O1*	Severe Maternal Morbidity (excluding transfusion codes alone)	**Report N/D** ***Disaggregate by race and ethnicity, payor*** **Denominator:** All qualifying pregnant and postpartum people during their birth admission **Numerator:** Among the denominator, those who experienced severe maternal morbidity, excluding those who experienced transfusion alone	
SHTN O1	Severe Maternal Morbidity among People with Preeclampsia, Eclampsia, and HELLP Syndrome (excluding transfusion codes alone)	**Report N/D** ***Disaggregate by race and ethnicity, payor*** **Denominator:** All qualifying pregnant and postpartum people during their birth admission with preeclampsia, eclampsia, and HELLP syndrome **Numerator:** Among the denominator, those who experienced severe maternal morbidity, excluding those who experienced transfusion alone	

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Process Measures

Metric	Name	Description	Notes
ALL P1-Version 1*	Provider Education on Respectful and Equitable Care	**Report estimates in 10% increments (round up)** 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**?	†The overarching intention of this measure is to capture all physicians and advanced practice clinicians who work in a primarily inpatient OB service line or on an L&D, Antepartum, or Postpartum unit. These clinicians will likely be interdisciplinary and could be inclusive of, but not limited to, OB/GYNs and subspecialists, advance practice nurses, nurse midwives, physician associates, and Family Medicine physicians or other specialties with delivering privileges at your institution
ALL P2*	Nursing Education on Respectful and Equitable Care	**Report estimates in 10% increments (round up)** 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**?	‡The overarching intention of this measure is to capture all nurses who work in a primarily inpatient OB service line or on an L&D, Antepartum, or Postpartum unit.
ALL P3A*	Unit Drills - Number of Drills	**Report integer.** During this reporting period, **how many OB drills** (In Situ and/or Sim Lab) were performed on your unit for any maternal safety topic?	
ALL P3B*	Unit Drills – Drill Topics	**Report TRUE/FALSE for the following drill topics: Hemorrhage, Severe Hypertension, Other.** During this reporting period, what **topics** were covered in the OB drills?	Ideally, drills related to severe hypertension will cover all sequelae, such as preeclampsia.

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Metric	Name	Description	Notes
SHTN P1	Timely Treatment of Persistent Severe Hypertension	**Report N/D** ***Disaggregate by race and ethnicity, payor*** **Denominator:** Pregnant and postpartum people with acute-onset severe hypertension that persists for 15 minutes or more, including those with preeclampsia, gestational or chronic hypertension **Numerator:** Among the denominator, **those who were treated within 1 hour with IV Labetalol, IV Hydralazine, or PO Nifedipine**. The 1 hour is measured from the first severe range BP reading, assuming confirmation of persistent elevation through a second reading.	Full measurement specifications can be found in this **SMFM Special Statement**

Metric	Name	Description	Notes
SHTN P2	Scheduling of Postpartum Blood Pressure and Symptoms Checks	**Report N/D for each submeasure** ***Disaggregate by race and ethnicity, payor*** **SHTN P2A: Severe Hypertension During the Birth Admission** **Denominator:** Pregnant and postpartum people during their birth admission with acute-onset severe hypertension that persists for 15 minutes or more, including those with preeclampsia, gestational or chronic hypertension **Numerator:** Among the denominator, those who had a postpartum **blood pressure and symptoms check scheduled to occur within 3 days** after their birth hospitalization discharge date. **SHTN P2B: All Other Hypertensive Disorders During Pregnancy** **Denominator:** Pregnant and postpartum people during their birth admission with a documented diagnosis of preeclampsia, gestational or chronic hypertension, excluding those who experienced persistent severe hypertension during their birth admission (**see SHTN P2A**) **Numerator:** Among the denominator, those who had a postpartum **blood pressure and symptoms check scheduled to occur within 7 days** after their birth hospitalization discharge date	• For SHTN P2B, the denominator can be determined by identifying ICD-10 codes or diagnoses at the time of discharge including, but not limited to O10.xx, O11.xx, O13.xx, O14.xx, and O16.xx and excluding those who meet criteria for persistent severe hypertension. • Exclude those who were transferred out of your facility prior to discharge. • Blood pressure measurement and symptoms checks can be scheduled at any point during the 3- and 7-day time periods and do not necessarily require an in-person visit. • Planning and considerations should be made for patients with weekend discharges and/or those with 3- and 7-day follow up periods that fall on the weekend. These patients should be included in the denominator as part of quality measurement. • See **ACOG Committee Opinion 736 on Optimizing Postpartum Care**

Metric	Name	Description	Notes
SHTN P3	Provider Education on Severe Hypertension and Preeclampsia	**Report estimate in 10% increments (Round up)** 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 **Severe Hypertension/ Preeclampsia that includes the unit-standard protocols and measures?**	†The overarching intention of this measure is to capture all physicians and advanced practice clinicians who work in a primarily inpatient OB service line or on an L&D, Antepartum, or Postpartum unit. These clinicians will likely be interdisciplinary and could be inclusive of, but not limited to, OB/GYNs and subspecialists, advance practice nurses, nurse midwives, physician associates, and Family Medicine physicians or other specialties with delivering privileges at your institution.
SHTN P4	Nursing Education on Severe Hypertension and Preeclampsia	**Report estimate in 10% increments (Round up)** At the end of this reporting period, what cumulative proportion of OB nurses‡ has received in the last 2 years an education program on **Severe Hypertension/Preeclampsia that includes the unit-standard protocols and measures?**	‡The overarching intention of this measure is to capture all nurses who work in a primarily inpatient OB service line or on an L&D, Antepartum, or Postpartum unit.
SHTN P5	Emergency Department (ED) Provider & Nursing Education – Hypertension and Pregnancy	**Report estimate in 10% increments (Round up)** At the end of this reporting period, what cumulative proportion of clinical ED providers and nursing staff has received within the last 2 years an **education on signs and symptoms of severe hypertension and preeclampsia** in pregnant and postpartum people?	

Structure Measures

Metric	Name	Description	Notes
ALL S1*	Patient Event Debriefs	**Rate progress (1, not yet started – 5, fully in place) towards putting and keeping the structure measure fully in place** Has your department established a **standardized process to conduct debriefs with patients** after a severe event?	• Include patient support networks during patient event debriefs, as requested. • Severe events may include **the The Joint Commission sentinel event definition**, severe maternal morbidity, or fetal death. • This measure is not intended to represent a disclosure conversation but rather reflects a standard part of care that is a discussion between the patient and their care team.
ALL S2*	Clinical Team Debriefs	**Rate progress (1, not yet started – 5, fully in place) towards putting and keeping the structure measure fully in place** Has your department established a system to perform regular **formal debriefs with the clinical team** after cases with major complications?	Major complications will be defined by each facility based on volume, with a minimum being **The Joint Commission Severe Maternal Morbidity Criteria**.
ALL S3*	Multidisciplinary Case Reviews	**Rate progress (1, not yet started – 5, fully in place) towards putting and keeping the structure measure fully in place** 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)?	For greatest impact, we suggest that in addition to the minimum instances for review defined in this measure, hospital teams also implement missed opportunity reviews for key bundle process measures in both unit debriefs and multidisciplinary case reviews.

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Metric	Name	Description	Notes
ALL S4*	Patient Education Materials on Urgent Postpartum Warning Signs	**Rate progress (1, not yet started – 5, fully in place) towards putting and keeping the structure measure fully in place.** Has your department developed/ curated **patient education materials on urgent postpartum warning signs** that align with culturally and linguistically appropriate standards?	
ALL S5*	Emergency Department (ED) Screening for Current or Recent Pregnancy	**Rate progress (1, not yet started – 5, fully in place) towards putting and keeping the structure measure fully in place** Has your ED established or continued **standardized verbal screening for current pregnancy and pregnancy in the past year** as part of its triage process?	More detail on screening for current and recent pregnancy can be found in **AIM's Pregnancy Screening Statement.**
SHTN S1	Unit Policy and Procedure	**Rate progress (1, not yet started – 5, fully in place) towards putting and keeping the structure measure fully in place** Does your hospital have a **Severe hypertension/preeclampsia policy and procedure** (reviewed and updated in the last 2 years) that contain the following: • Measuring blood pressure. • Treatment of severe hypertension/ preeclampsia, • The use of seizure prophylaxis, including treatment for overdose	

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Optional Process Measure: For the sake of streamlining the above project measurement strategy and due to it also being incorporated as a structure measure (see **ALL S1 Patient Event Debriefs**), this measure has been included as optional but highly encouraged.

Optional Measures

Metric	Name	Description	Notes
SHTN OP1	Patient Support After Persistent Severe Hypertension	**Report N/D** ***Disaggregate by race and ethnicity, payor*** **Denominator:** Pregnant and postpartum people with acute-onset severe hypertension that persists for 15 minutes or more, including those with preeclampsia, gestational or chronic hypertension **Numerator:** Among the denominator, those who received a verbal briefing on their persistent severe hypertension by their care team before discharge	• The denominator criteria are established for the purposes of standardized data collection and reporting and are not meant to represent all instances in which a verbal briefing with a patient may be appropriate • A verbal briefing for support should include elements such as those described in the **CMQCC publication Hypertensive Disorders of Pregnancy Toolkit**, Appendix J: Sample Script: Physician Explanation of Hypertensive Disease Process and Management Plan • This measure is not intended to represent a disclosure conversation but rather reflects a standard part of care that is a discussion between the patient and their care team.

AIM Severe Hypertension in Pregnancy ICD10 Codes List

Code	Definition
O111	Pre-existing hypertension with pre-eclampsia, first trimester
O112	Pre-existing hypertension with pre-eclampsia, second trimester
O113	Pre-existing hypertension with pre-eclampsia, third trimester
O114	Pre-existing hypertension with pre-eclampsia, complicating childbirth
O115	Pre-existing hypertension with pre-eclampsia, complicating the puerperium
O119	Pre-existing hypertension with pre-eclampsia, unspecified trimester
O1410	Severe pre-eclampsia, unspecified trimester
O1412	Severe pre-eclampsia, second trimester
O1413	Severe pre-eclampsia, third trimester
O1414	Severe pre-eclampsia complicating childbirth
O1415	Severe pre-eclampsia, complicating the puerperium
O1420	HELLP syndrome (HELLP), unspecified trimester
O1422	HELLP syndrome (HELLP), second trimester
O1423	HELLP syndrome (HELLP), third trimester
O1424	HELLP syndrome (HELLP), complicating childbirth
O1425	HELLP syndrome (HELLP), complicating the puerperium
O1500	Eclampsia complicating pregnancy, unspecified trimester
O1502	Eclampsia complicating pregnancy, second trimester
O1503	Eclampsia complicating pregnancy, third trimester
O151	Eclampsia complicating labor
O152	Eclampsia complicating the puerperium
O159	Eclampsia, unspecified as to time period

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