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# **Timely Treatment of Severe Hypertension (SHTN) Maternal Learning Collaborative (MLC)**

**Breakthrough Series Collaborative Change Package**

# TABLE OF CONTENTS

Sources .....	1
Key Driver Diagram .....	2
Detailed Changes .....	3
1. READINESS .....	3
2. RECOGNITION AND PREVENTION .....	6
3. RESPONSE.....	8
4. REPORTING AND SYSTEMS LEARNING .....	9
5. RESPECTFUL, EQUITABLE, AND SUPPORTIVE CARE .....	10
Measures .....	11
MATERNAL HEALTH MEASURES .....	12

## Sources

The content of this change package was developed by the New Jersey Department of Health (DOH) Office of Healthcare Financing in partnership with Public Consulting Group (PCG). It has been adapted from the following sources and edited based on the opinion of an interprofessional panel of experts.

1. Alliance for Innovation on Maternal Health (AIM) Hypertension Bundle
2. AIM Reduction of Peripartum Racial/Ethnic Disparities Bundle
3. Institute for Healthcare Improvement (IHI) Better Maternal Outcomes: Reducing Harm from Hypertension During Pregnancy Workbook
4. Illinois Perinatal Quality Collaborative (PQC)
5. Alabama Perinatal Quality Collaborative
6. Centers for Disease Control and Prevention (CDC) Hypertension Control Change Package
7. Maternal Learning Collaborative (MLC) Expert Panel

## EXPERT PANELISTS

The MLC Expert Panel was established to support DOH in the policy design and implementation of the Quality Improvement Program-New Jersey (QIP-NJ) MLC. The Expert Panel is an interprofessional group of experts that represent a variety of perspectives in maternal health, treatment of severe hypertension (SHTN) in pregnancy and postpartum, and promotion of diversity, equity, and inclusion in maternal health practice. The Expert Panel met both in-person via videoconference and provided written recommendations to support MLC program design and development of the MLC Change Package. The MLC Change Package outlines detailed recommendations for best practices, and should be consulted along with the MLC Measurement Strategy, to support a data-driven approach to systematic improvements in the treatment of SHTN with a focus on addressing disparities and inequities in outcomes.

# Key Driver Diagram

## KEY DRIVER DIAGRAM: QUALITY IMPROVEMENT PROGRAM — NEW JERSEY (QIP-NJ) MATERNAL LEARNING COLLABORATIVE (MLC)

### QIP-NJ MLC AIM

By December 31, 2023, improve by 15% the rate of severe hypertension (SHTN) episodes treated with a first line agent within 30-60 minutes among birthing people ≥20 weeks GA—7 days postpartum receiving care at NJ acute care hospital inpatient maternity and emergency department (ED) units. A focus of this initiative will be to identify, address, and reduce racial inequities and disparities for Black birthing people.

### PRIMARY DRIVERS

### SECONDARY DRIVERS



# Detailed Changes

## 1. READINESS – EVERY CARE SETTING

Secondary Driver	Change Idea	Detailed Changes
<p><b>1.1</b> Processes for management of pregnant and postpartum patients with SHTN.</p>	<ul style="list-style-type: none"> <li>» In alignment with The Joint Commission (TJC) requirements, develop the following:</li> <li>» A standard protocol for maternal early warning signs, diagnostic criteria, monitoring, and treatment of SHTN (including order sets &amp; algorithms).</li> <li>» A process for the timely triage and evaluation of pregnant and postpartum patients with SHTN or related symptoms.</li> <li>» A system plan for escalation, obtaining appropriate consultation, and maternal transfer as needed.</li> <li>» Establish strict guidelines about fluid restriction when utilizing magnesium, particularly for ED staff who are likely unfamiliar with magnesium protocol.</li> </ul>	<ul style="list-style-type: none"> <li>» <a href="#">New York State DOH Preeclampsia Early Recognition Tool (PERT)</a></li> <li>» Place signage in ED and clinical areas that alert individuals to report or “skip the line” if they are pregnant or postpartum with hypertensive symptoms.</li> <li>» Develop a workflow and practice drills to treat or move patient from ED or clinical area to labor and delivery unit.</li> <li>» Integrate best practice alerts for SHTN into the EHR.</li> <li>» Integrate SHTN bundle(s) into EHR.</li> <li>» Assess if hospital has a rapid response team or code specific to OB care e.g., “Code OB” or “BP-OB”.</li> <li>» Identify champions in the ED and antenatal outpatient settings as well as inpatient obstetric units.</li> </ul>
<p><b>1.2</b> Ensure rapid access to all medications used for SHTN with a brief guide for administration and dosage in all areas where patients may be treated.</p>	<ul style="list-style-type: none"> <li>» In alignment with TJC requirements, build hypertension cart with supplies, medications, and guidance for administration and dosage.</li> <li>» Ensure that the unit has an appropriate range of blood pressure (BP) cuff sizes that will accommodate patients of all weights and sizes.</li> </ul>	<ul style="list-style-type: none"> <li>» Standard system for proper cuff measurement and fit, including documentation in EHR.</li> <li>» Consider BP cuff for each admitted patient that moves with them from admission to discharge that is the appropriate size.</li> </ul>

Secondary Driver	Change Idea	Detailed Changes
<p><b>1.3</b> Conduct interprofessional and interdepartmental team-based drills with timely debriefs that include the use of simulated patients.</p>	<ul style="list-style-type: none"> <li>» Conduct annual unit-wide simulation drills.</li> <li>» Engage in weekly review of cases to assess for improvement opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>» Host patient-focused or participatory debriefs to accurately assess improvement opportunities in response to SHTN.</li> <li>» Include scenarios where policies are not appropriately followed to demonstrate alternative methods to implement best practices.</li> </ul>
<p><b>1.4</b> Develop and maintain a set of referral resources and communication pathways between obstetric providers, community-based organizations, and state and public health agencies to enhance services and supports for pregnant and postpartum families.</p>	<ul style="list-style-type: none"> <li>» Ensure hospital policies are inclusive of partners, chosen and support persons, and doulas as members of care team.</li> <li>» Engage with community-based organizations that offer intrapartum support during hospitalization for labor, birth, and postpartum (i.e., birth educators, doulas, lactation educators, nutrition supports/ meals delivery services, home visitors).</li> <li>» Provide staff education related to the importance of doulas, chosen support advocates, and the associated benefit of positive maternal outcomes.</li> <li>» Understand what services and supports exist in your specific community and how they can be engaged in supporting care.</li> <li>» Identify and collaborate with community-based organizations who support Black birthing people.</li> <li>» Incorporate doula services that address the social determinants of health and/or are connected to resources to enhance the wellbeing of parent and child.</li> </ul>	<ul style="list-style-type: none"> <li>» Utilize a birth plan as an empowerment tool to identify support person(s), community resources, and potential barriers to care.</li> <li>» During the antenatal period, develop a postpartum care plan that includes discussion of hypertension risk for complications in the intra and postpartum periods and postpartum warning signs. Review and amend as needed postpartum.</li> <li>» Review Association of Women’s Health, Obstetric and Neonatal Nurses (<a href="#">AWHONN</a>) <a href="#">postpartum warning signs</a> antenatally with all patients at 28-week visit.</li> <li>» Create a doula policy that explicitly includes doulas as part of the health care team.</li> <li>» Ensure community doula training includes basic information about hypertension symptoms and importance of prompt attention to symptomatic patients.</li> <li>» Create a community advisory board for your institution that reflects that communities that are being served and balances providers of various disciplines, community-based organizations, parent advocates, and birth workers (i.e., community-based doulas).</li> </ul>

Secondary Driver	Change Idea	Detailed Changes
<p><b>1.5</b> Develop trauma-informed protocols and provider education to address health care team member biases to enhance equitable care.</p>	<ul style="list-style-type: none"> <li>» Provide staff-wide education on:               <ul style="list-style-type: none"> <li>• Implicit bias.</li> <li>• Peripartum racial and ethnic inequities and their root causes.</li> <li>• Best practices for shared decision making.</li> <li>• Interpreter services available.</li> </ul> </li> <li>» Establish a system of ongoing education for clinical and administrative staff (e.g., new staff orientation, continuing medical education (CME), establishing and assessing competencies)</li> </ul>	<ul style="list-style-type: none"> <li>» Require that preferred language and use of interpreter is documented in electronic health record (EHR).</li> <li>» Assess and report diversity of workforce.</li> <li>» Develop systems to report microaggressions.</li> <li>» Training for respectful care and language including staff in the outpatient, antepartum, triage labor &amp; delivery, postpartum, and ED service areas.</li> <li>» Provide standardized training for staff and providers regarding appropriate use of interpreters, including standardized documentation of use.</li> </ul>

## 2. RECOGNITION AND PREVENTION – EVERY PATIENT

Secondary Driver	Change Idea	Detailed Changes
<p><b>2.1</b> Assess and document if a patient presenting is pregnant or has been pregnant within the past year in all care settings.</p>	<ul style="list-style-type: none"> <li>» Implement system to identify pregnant/postpartum patients in all hospital departments (ED and other outpatient areas).</li> </ul>	<ul style="list-style-type: none"> <li>» Integrate a pregnant/postpartum patient notification system into EHR.</li> </ul>
<p><b>2.2</b> Ensure accurate measurement and assessment of blood pressure for every pregnant and postpartum patient.</p>	<p>In alignment with TJC requirements:</p> <ul style="list-style-type: none"> <li>» Develop and implement standard protocols and training for accurate blood pressure assessment including correct positioning and proper equipment.</li> <li>» Perform regular simulation drills of protocols with debriefs.</li> <li>» Create a competency for all staff to perform BP measurement in the context of best practice.</li> </ul>	<ul style="list-style-type: none"> <li>» See the California Maternal Quality Care Collaborative (<a href="#">CMQCC Accurate Blood Pressure Measurement</a>) toolkit.</li> <li>» Education and simulation drills across departments including outpatient, antepartum, triage, labor and delivery, postpartum, and ED.</li> <li>» Training for postpartum home visiting nurses.</li> </ul>

Secondary Driver	Change Idea	Detailed Changes
<p><b>2.3</b> Screen for structural and social drivers of health that might impact clinical recommendations or treatment plans and provide linkage to resources that align with the pregnant or postpartum person’s health literacy, cultural needs, and language proficiency.</p>	<ul style="list-style-type: none"> <li>» Use a standardized screening tool to assess for the social determinants of health and address their impacts on maternal health and support</li> <li>» Ensure adequate support systems are in place to connect patients to appropriate resources including social workers, nurse case managers, doulas, lactation consultants, and home visiting nurses.</li> </ul>	<ul style="list-style-type: none"> <li>» <a href="#">American Hospital Association Screening for Social Needs</a></li> <li>» <a href="#">The EveryONE Project</a></li> <li>» <a href="#">JustBirthSpace</a>, a virtual perinatal support space for patients centered in birth and reproductive justice</li> <li>» <a href="#">Illinois Perinatal Quality Collaborative (ILPQC) Social Determinants Screening Tool Comparison</a></li> <li>» <a href="#">Chicago PCC Community Wellness Centers Social Determinants of Health in Pregnancy Tool (SIPT) with actionable map and scoring sheet</a></li> <li>» <a href="#">Massachusetts General Hospital Obstetrics &amp; Gynecology and Mass General Brigham Partner Healthcare Screening Tool</a></li> </ul>
<p><b>2.4</b> Provide ongoing education to all patients on the signs and symptoms of hypertension and empower them to seek care.</p>	<ul style="list-style-type: none"> <li>» Ensure facility-wide standards for educating prenatal and postpartum women on signs and symptoms of SHTN.</li> <li>» Develop and test standardized prenatal and postpartum educational materials for the birthing population.</li> <li>» Standardize process for dissemination of facility and community-wide standardized patient educational materials.</li> <li>» Ensure that written information is available in multiple languages.</li> <li>» Establish standards of practice for clinicians and other health professionals in response to patients expressed needs and concerns.</li> </ul>	<ul style="list-style-type: none"> <li>» <a href="#">CDC Hear Her® Campaign</a></li> <li>» <a href="#">AWHONN post birth warning signs</a></li> <li>» Educate hospital and community health workers on the practice of motivational interviewing (<a href="#">OARS technique</a>) to listen and respond to patients’ expressed needs and concerns.</li> <li>» Host a community hospital town hall meeting to identify mutually aligned language, meaning, and measures of SHTN.</li> <li>» Develop community-wide standards for communicating the signs and symptoms of SHTN.</li> </ul>

### 3. RESPONSE – EVERY EVENT

Secondary Driver	Change Idea	Detailed Changes
<p><b>3.1</b> Utilize standardized protocol with checklists and escalation policies including a standard response to maternal early warning signs, listening and investigating patient-reported and observed symptoms, and assessment of standard labs for the management of patients with SHTN or related symptoms.</p>	<ul style="list-style-type: none"><li>» Implement standard severity-based hypertension management plan with checklists and escalation policies for SHTN.</li><li>» Endorse patient-centered model of assessment and communication.</li></ul>	<ul style="list-style-type: none"><li>» Follow approved TJC protocols such as <a href="#">American College of Obstetricians and Gynecologists (ACOG)</a> and <a href="#">CMQCC</a>.</li></ul>



Secondary Driver	Change Idea	Detailed Changes
<p><b>3.2</b> Standardize post-discharge systems of care.</p>	<ul style="list-style-type: none"> <li>» Provide oral and written patient discharge instructions.</li> <li>» Design discharge materials that meet patients' health literacy, language, social, and cultural needs.</li> <li>» Initiate postpartum follow-up visit to occur within three days of birth hospitalization discharge date for individuals whose pregnancy was complicated by hypertensive disorders.</li> <li>» Develop a self-measured blood pressure (SMBP) monitoring program.</li> <li>» Engage home visiting nurse program.</li> <li>» Provide patients with required medications on discharge.</li> </ul>	<ul style="list-style-type: none"> <li>» Start discharge planning on day of admission.</li> <li>» Ensure discharge instructions include information about warning signs, where to go, and whom to contact if they have questions or concerns.</li> <li>» Ensure medication is at home or bedside prior to discharge.</li> <li>» Establish a Meds to Beds program.</li> <li>» Consider using <a href="#">AWHONN post birth warning signs</a>.</li> <li>» Consider establishing a <a href="#">Universal Home Visiting Program</a> (UHV).</li> <li>» SMBP: <ul style="list-style-type: none"> <li>• Establish a process to obtain BP monitors for SMBP and ensure patient has a blood pressure monitor at home that fits properly for SMBP. Ensure patients are confident in how to use device and how to respond to elevated reading.</li> <li>• Partner with durable goods supply stores to keep home blood pressure monitors on site for dissemination.</li> <li>• Use teach-back and other supported self-management techniques to ensure patients are confident in using BP monitor.</li> </ul> </li> </ul>

Secondary Driver	Change Idea	Detailed Changes
<p><b>3.3</b> Provide trauma-informed support for patients, identified support network, and staff for serious complications of SHTN, including discussions regarding birth events, follow-up care, resources, and appointments.</p>	<ul style="list-style-type: none"> <li>» Engage in shared decision making throughout birthing process and when signs and symptoms of SHTN are present.</li> <li>» Provide trauma-informed care training to staff in all prenatal, antepartum, intrapartum, postpartum, outpatient, and ED areas.</li> <li>» Connect birthing people who experience trauma during birth with appropriate supports while in hospital and upon discharge.</li> </ul>	<ul style="list-style-type: none"> <li>» Conduct patient experience interviews post-discharge.</li> <li>» Provide list of local, accessible mental health resources to patients who may have experienced trauma during hospitalization.</li> <li>» ACOG Caring for Patients Who Have Experienced Trauma committee opinion</li> <li>» <a href="#">Postpartum Progress postpartum depression support organizations</a></li> <li>» <a href="#">Partnership for Maternal &amp; Child Health of Northern New Jersey</a></li> <li>» <a href="#">Central Jersey Family Health Consortium (CJFHC) Pregnancy &amp; Parenting Wellness Program</a></li> <li>» <a href="#">Southern New Jersey Perinatal Cooperative (SNJPC)</a></li> </ul>

#### 4. REPORTING AND SYSTEMS LEARNING – EVERY UNIT

Secondary Driver	Change Idea	Detailed Changes
<p><b>4.1</b> Establish a culture of multidisciplinary planning, huddles, and post-event debriefs for every case of SHTN that identifies successes, opportunities for improvement, and action planning for future events.</p>	<ul style="list-style-type: none"> <li>» Establish huddles to prepare for high-risk patients and regular debriefs after all SHTN cases.</li> <li>» Establish and monitor system to perform regular formal SHTN debriefs with staff and patients/families.</li> </ul>	<ul style="list-style-type: none"> <li>» Include situational awareness and communication with patient and family as post-event requirement.</li> <li>» Make debrief forms readily accessible to all staff and educate them on how to debrief after an event as well as what events should be debriefed.</li> <li>» Ensure anticipatory planning for each high-risk patient includes the patient.</li> <li>» Debrief with patient in the hospital after emergent treatment to ensure patient fully understands the treatment that occurred and the rationale for the treatment.</li> </ul>

Secondary Driver	Change Idea	Detailed Changes
<p><b>4.2</b> Perform multidisciplinary reviews of all SHTN cases per established facility criteria to identify systems issues.</p>	<ul style="list-style-type: none"> <li>» Perform multidisciplinary case reviews for all SHTN cases to identify system-level issues, including role of race, ethnicity, language, poverty, literacy, and other social determinants of health (e.g., racism at the interpersonal and system level) when conducting reviews.</li> </ul>	<ul style="list-style-type: none"> <li>» None</li> </ul>
<p><b>4.3</b> Monitor outcomes and process data related to SHTN with disaggregation by race and ethnicity due to known disparities in rates of SHTN.</p>	<ul style="list-style-type: none"> <li>» Develop a maternal health equity dashboard to share progress towards equity goals across your department and organization.</li> <li>» Implement accountability monitoring and mechanisms for patients to report incidents of disrespect, inequitable care, and/or racism.</li> <li>» Share data broadly (e.g., aggregate data stratified by race, use storyboards) to connect to purpose and create a narrative for efforts to eliminate inequity.</li> <li>» Use a registry to track and manage patients with HTN that includes race and ethnicity identification.</li> </ul>	<ul style="list-style-type: none"> <li>» Develop a data collection system that stratifies process and outcomes metrics by race and ethnicity, zip code, and insurance type with regular dissemination of the stratified performance data to staff and leadership.</li> <li>» Ensure reporting system is inclusive of all systems providing care to maternity patients, including outpatient, antepartum, triage, labor and delivery, postpartum, and ED.</li> <li>» Publicly share data across hospital systems.</li> <li>» Ensure race, ethnicity, and language are accurately collected via self-report at time of registration to allow for stratification and identification of disparities in care.</li> </ul>

## 5. RESPECTFUL, EQUITABLE, AND SUPPORTIVE CARE – EVERY UNIT/PROVIDER/TEAM MEMBER

Secondary Driver	Change Idea	Detailed Changes
<p><b>5.1</b> Engage in open, transparent, and empathetic communication with pregnant and postpartum people and their identified support network to understand diagnoses, options, and treatment plans.</p>	<ul style="list-style-type: none"> <li>» Provide staff training on patient communication best practices.</li> <li>» Engage pregnant and birthing patients and their support people in identifying areas for improvement and testing changes in the identification and treatment of SHTN.</li> </ul>	<ul style="list-style-type: none"> <li>» Community-based postpartum focus groups with individuals who have been treated for SHTN to discuss their experience and outcomes.</li> </ul>
<p><b>5.2</b> Include pregnant and postpartum persons as part of the multidisciplinary care team to establish trust and ensure informed, shared decision-making that incorporates the pregnant and postpartum person's values and goals.</p>	<ul style="list-style-type: none"> <li>» Involve pregnant and postpartum patients in team huddles and debriefs.</li> <li>» Engage in best practices for shared decision-making and informed consent.</li> <li>» Ensure that communication is at appropriate education level and that interpretation services are used and used appropriately.</li> </ul>	<ul style="list-style-type: none"> <li>» Form a patient advisory council (PAC).</li> </ul>

Secondary Driver	Change Idea	Detailed Changes
<p><b>5.3</b> Recognize and address language and behaviors that negatively impact treatment for Black pregnant and birthing people.</p>	<ul style="list-style-type: none"> <li>» Collect patient stories of positive and negative experiences of care focusing specifically on those from Black birthing people.</li> <li>» Ensure systems of accountability exist for reports of bias or racism from patients or staff.</li> <li>» Ensure all maternal health staff and providers are trained on implicit bias and systemic racism as well as how to recognize, address, and prevent it.</li> <li>» Collaborate with Black birthing people and their supports to gain feedback on experience and identify improvements to care and the system.</li> </ul>	<ul style="list-style-type: none"> <li>» <a href="#">Partnership for Maternal &amp; Child Health of Northern New Jersey</a> maternal experience survey</li> <li>» <a href="#">ILPQC Birth Equity Initiative Patient Reported Experience Measure (PREM) survey</a></li> <li>» Explore race/ethnicity and maternal health-specific question availability within existing hospital patient experience surveys.</li> </ul>

*All the links provided in this document were active as of June 2024.*

# Measures

The following proposed measures are intended to support the improvement process for participating teams. This list represents a combination of measures included in the QIP-NJ pay-for-performance framework and additional measures intended to support the quality improvement process based on recommendations from an interprofessional expert panel. The Measurement Strategy is another companion resource in this series.

The New Jersey DOH, in collaboration with Public Consulting Group (PCG), has tested the feasibility of these measures with frontline care teams in acute care hospitals across the state. That testing process will also guide the development of a MLC data collection guide to be released to teams prior to the MLC start. Teams participating in the MLC will not be asked to collect data on more than eight measures each month.

## MATERNAL HEALTH MEASURES

<b>1</b>	<b>Treatment of Severe Hypertension</b>	Percentage of birthing people aged 15 to 55 years old with a SHTN episode that is treated within 30-60 min by a recommended first-line agent.	Outcome
<b>2</b>	<b>Maternal Experience</b>	Survey of experience of maternal care at participating hospital – specific tools and approaches to be confirmed.	Outcome
<b>3</b>	<b>Severe Maternal Morbidity</b>	Percentage of birthing people with SHTN who experience severe maternal morbidities (e.g., acute renal failure, acute respiratory distress syndrome (ARDS), pulmonary edema, puerperal central nervous system (CNS) disorders such as seizure, disseminated intravascular coagulation (DIC), ventilation, and abruption.	Outcome
<b>4</b>	<b>Discharge Education</b>	Percentage of birthing people with SHTN who receive facility-wide standardized postpartum discharge education prior to discharge from the hospital.	Process
<b>5</b>	<b>Postpartum Follow-Up Care</b>	Percentage of birthing people with SHTN who have follow-up care (virtual or in person) within 7-10 days, or 72 hours for birthing people with SHTN on medications after discharge from hospital.	Process
<b>7</b>	<b>BP Medications on Discharge</b>	Percentage of birthing people who have been prescribed blood pressure medications that have those medications at time of discharge	Process
<b>6</b>	<b>Access to Home Blood Pressure Monitoring</b>	Percentage of birthing people who have access to at-home blood pressure monitoring, if recommended, at time of discharge	Process
<b>8</b>	<b>Clinician Education</b>	Percentage of nurses, delivering physicians, and midwives that have completed (within the last two years) an education program on SHTN that includes the unit-standard protocols and measures.	Process