Severe Hypertension in Pregnancy and Postpartum Emergency Department Toolkit

Oregon Perinatal Collaborative

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We are also grateful for the members of the Hypertension Focus Group that included Black, Indigenous, and Pacific Islander people who experienced pregnancy related severe hypertension or preeclampsia in Oregon and shared their experiences to help inform the toolkit elements, including specific recommendations.

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Inclusive language notice:
This toolkit is intended to improve care and outcomes for pregnant and postpartum people who have a wide range of gender identities. For this reason, we use both gendered and non-gendered terms including "birthing person/people," "patient," "mother," and "maternal," to reflect this range of identities. We affirm that respecting individual patient preferences regarding gendered language throughout their care is essential to respectful, patient-centered care.

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Section I: Purpose and Background

Hypertensive disorders of pregnancy are a leading cause of maternal and perinatal morbidity and mortality in the United States. Oregon's prevalence of hypertensive disorders of pregnancy is 15.7% (Oregon Health Authority Center for Health Statistics, n.d.). Hypertensive disorders of pregnancy have an impact on short term outcomes like seizures and stroke in the birthing person during pregnancy and cardiovascular disease risk after the pregnancy ends. The postpartum period is increasingly recognized as an important time to monitor for symptoms and seek care when needed. Hypertensive disorders of pregnancy can also lead to health problems throughout the person's life after pregnancy, including increased risk of kidney disease and high blood pressure many years later. Hypertension during pregnancy also increases the risk of preterm birth, leading to short- and long-term impact on newborns.

Clinical quality improvement work must be thoughtfully designed and consider the impact of factors, such as housing, social support, reliable transportation, healthy food, and other basic needs. The long history of systemic racism in the United States has shaped the access and experience of Black, Indigenous, and all people of color inside and outside of healthcare. Quality improvement work aimed at the prevention of pregnancy related morbidity and mortality must consider this history. Mirroring available national data, Black, Indigenous, and Pacific Islander mothers and birthing people in Oregon are disproportionately impacted by morbidity from hypertension and preeclampsia (Oregon Maternal Data Center, n.d.). Proposed solutions must be developed with input from those who experience barriers to health.

Perinatal Quality Collaboratives (PQCs), including the Oregon Perinatal Collaborative, are state or multistate networks of teams working to improve the quality of care for mothers, birthing individuals, and babies. Members identify health care processes that need to be improved and use the best available methods to make changes as quickly as possible (CDC).

In 2024, the Oregon Perinatal Collaborative has partnered with the Alliance for Innovation on Maternal Health (AIM) to improve Oregonians' perinatal outcomes related to

hypertension. The severe hypertension in pregnancy and postpartum toolkit is designed by and for clinical (doctors, nurses, midwives, etc.) and non-clinical (doulas, community health workers, etc.) individuals and teams caring for pregnant and postpartum people

with hypertensive disorders of pregnancy to improve processes, outcomes, and clinical decision making and promote quality and equity statewide. The goal of this project is to decrease preventable maternal morbidity and mortality from hypertensive disorders in pregnancy and improve the health and wellbeing of birthing people and babies in Oregon.

To support teams implementing this toolkit, quality improvement information and tools are included. Simple tools, like those provided by the Institute for Healthcare Improvement (IHI) can be used by teams with minimal introduction or training. These tools help teams take complex topics like management of severe hypertension in pregnancy and organize them into a simplified workflow that can be implemented, resulting in meaningful change that benefits clinicians, birthing individuals, and our communities.

References

- CDC Press Release Pregnancy Related Deaths
- ACOG Preeclampsia and High Blood Pressure During Pregnancy
- Oregon Health Authority Center for Health Statistics
- Oregon Maternal Data Center
- Healthy People 2030 Social Determinants of Health

Key resources for this toolkit include:

- AIM Severe Hypertension in Pregnancy Patient Safety Bundle
- AIM Reduction of Peripartum Ethnic and Racial Disparities Patient Safety Bundle
- CDC Severe Hypertension in Pregnancy Change Package
- CMQCC Hypertensive Disorders of Pregnancy Toolkit
- IHI Severe Hypertension in Pregnancy Change Package

Section II: Emergency Department Specific Information

NOTE: *While not repeated in individual sections, teams are encouraged to incorporate trauma informed principles-trauma awareness, safety, choice & empowerment, and strength based—throughout development of tools/ processes/ workflows.*

Emergency departments are often where patients with symptoms or signs of severe hypertension come for care after delivery-especially in the first 6 weeks-and is therefore a key

clinical arena to prevent morbidity and mortality associated with severe hypertension during pregnancy and postpartum.

To support timely identification, assessment and appropriate consultations, each unit will:

- Develop processes and tools to:
    - Identify pregnant/ postpartum patients up to 6 weeks after pregnancy ends (including live birth, stillbirth, miscarriage, etc).
        - NOTE: While morbidity and mortality from hypertension occurs most frequently in the first 6 weeks after the end of pregnancy, screening for pregnancy within 12months is important for other complications.
    - Triage and evaluate pregnant and postpartum patients for severe hypertension or related symptoms using an evidence-based algorithm created with OB team (see example algorithm below).
        - Blood pressure readings of systolic >= 140 or diastolic >=90 (with previous normal blood pressure) warrants additional evaluation
        - Blood pressure readings of systolic >= 160 or diastolic >= 110 persisting for 15minutes or more is a hypertensive emergency and requires treatment
        - Timely OB consultation and labs are important
            - Hospitals without onsite L&D units need to confirm plan for timely external OB consultation.
- Provide role specific education on:
    - Warning signs for severe hypertension/ preeclampsia.
    - The hospital's evidence based severe hypertension/ preeclampsia procedure.
- Clearly post warning signs for severe hypertension/ preeclampsia where visible to all patients.
- Ensure rapid access to medications used for severe hypertension/ eclampsia with a brief guide for administration and dosage.
- Participate in interprofessional and interdepartmental team-based drills with timely debriefs that include the use of simulated patients.

Key resources that were recently developed by ACOG with support of the CDC include:

- ACOG. CDC Sign Pregnancy Status

- ACOG CDC Acute Hypertension Pregnancy Postpartum Algorithm
- ACOG CDC CVD in Pregnancy Postpartum
- ACOG CDC Eclampsia Algorithm
- ACOG EMS Information Sheet

Additional resources:

- CDC Hear Her Campaign Resources for Healthcare Professionals
- Preeclampsia Foundation Resource for Healthcare Providers
- AIM Obstetric Emergency Readiness Resource Kit