Learning Forum

“Help Save the Hearts!”

Feb 2025

Name & Agency in the Chat

Welcome to the newbies!

Rapid Response

Agenda for LF:

30 min: overview of Hypertension Disorders in PG

30 min: Meeting with SHTN Enrollees, Interested Facilities

Enrollment… extended!

✓ 32 birthing hospitals enrolled

FOUR new birthing hospitals (not in FTI)

✓ 6 FTI hospitals have not enrolled- YET!

✓ 3 Non-birthing hospitals have enrolled- five more pending

New Deadline for enrollment: **FEBRUARY 28th**

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Kansas SHTN: Facts Sheet

FREE!

Find text or tools

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Severe Hypertension in Pregnancy Safety Bundle

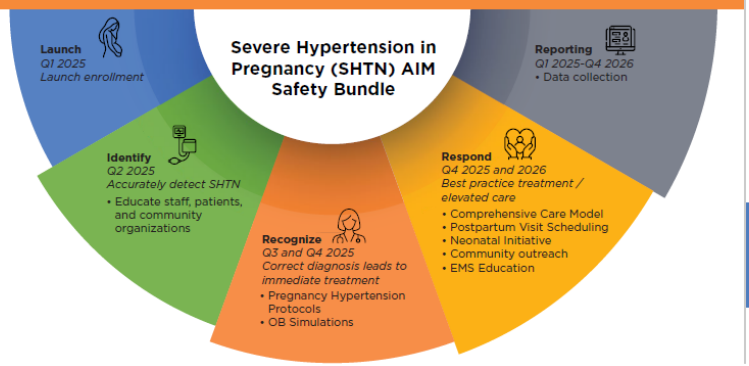
Our Call to Action
The Kansas Department of Health and Environment (KDHE) and the Kansas Perinatal Quality Collaborative (KPQC) are committed to improving maternal and infant outcomes in our state. Together, we are launching quality initiatives to reduce maternal and infant morbidity and mortality.

Addressing Maternal Hypertension Outcomes in Kansas
Data from the Kansas Maternal Mortality Review Committee (2016-2020) reveals that cardiovascular conditions and hypertension are the two leading causes of pregnancy-related deaths in Kansas. According to the 2022 Natality Report, preeclampsia ranks as the second-leading cause of Severe Maternal Morbidity (SMM) in Kansas.

An intentional intervention to address severe hypertension in pregnancy and the postpartum period is needed. Beginning Jan. 2025, Kansas will enroll hospitals in the Alliance for Innovation on Maternal Health (AIM) Safety Bundle, "Severe Hypertension in Pregnancy," as a statewide initiative to address this and other maternal adverse outcomes.

The Impact on the Newborn
Maternal hypertensive disorders significantly increase the risk of preterm delivery. In 2022, 10.5% of infants were delivered preterm (<37 weeks) in Kansas. Breastmilk provides optimal nutrition and is an immune-boosting substance for preterm newborns. Premature newborns face higher health risks, making early maternal lactation a critical, evidence-based intervention to support neonatal well-being.

What's Next?
Addressing maternal hypertension is a crucial part of improving health outcomes for both mothers and infants in Kansas. Through collaboration, education, and evidence-based strategies, KDHE and the KPQC are working to create safer pregnancies and healthier futures for families in our state.



NEW: Severe Hypertension in Pregnancy Model for Kansas

Recognize & Respond
- Identify hypertension
- SHTN protocols
- Screening for: medical conditions, mental health, substance abuse, breastfeeding, family planning, structural and social drivers of health (SSDOH)

Elevated Care Needed

Inpatient Transfer
- Transfer protocol
- Lactation initiation
- Specialty services
- SSDOH needs

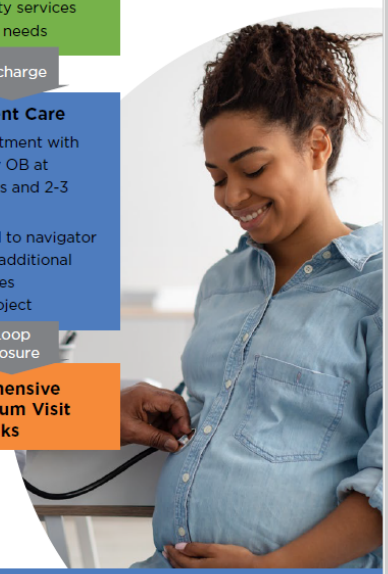
Discharge

Discharge

Outpatient Care
- Appointment with Primary OB at 72 hours and 2-3 weeks
- Referral to navigator and/or additional resources
- Cuff Project

Loop Closure

Comprehensive Postpartum Visit 6-12 weeks



For questions or to enroll, contact kari.smith@kansaspqc.org

To learn more, visit kansaspqc.org.

Funding
This initiative is supported by the Kansas Department of Health and Environment with funding through the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number #A3049988 and title *Alliance for Innovation on Maternal Health State Capacity Program.*

Jan 2025

KHA Kansas Hospital Association | KPQC | Kansas Department of Health and Environment | Kansas Maternal & Child Health

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Kansas SHTN: *Enrollment Form*

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Severe Hypertension in Pregnancy Initiative

Enrollment Packet 2025

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Department of Health and Environment

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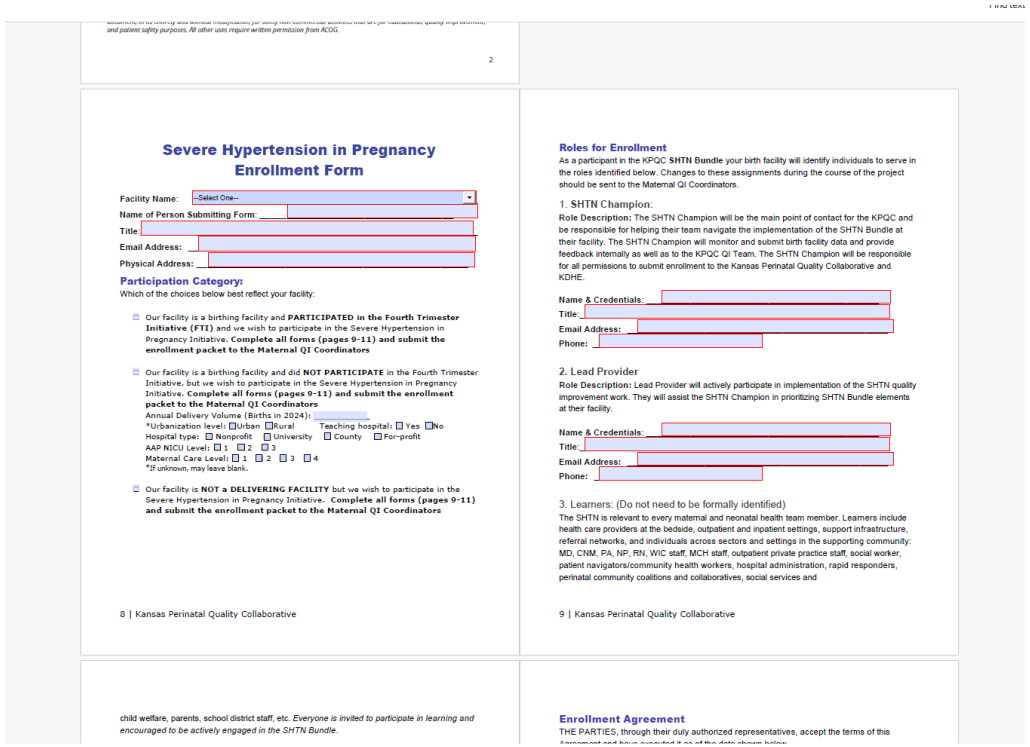
Vision
To make Kansas the best place to birth, be born, and to raise a family.

Mission
To improve Kansas' maternal and infant health outcomes by assuring quality perinatal care using data-driven, evidence-based practice, and quality improvement processes.

Background
Kansas Department of Health and Environment (KDHE) has teamed up with the Kansas Perinatal Quality Collaborative (KPQC) to launch maternal health quality initiatives aimed at decreasing maternal morbidity and mortality in our state. In 2021, Kansas officially enrolled as an Alliance for Innovation on Maternal Health (AIM) state, implementing the Postpartum Discharge Transition patient safety bundle (known in Kansas as the *Fourth Trimester Initiative)*.

According to 2016-2020 Kansas Maternal Mortality Review Committee data, cardiovascular conditions and hypertension were the first and second leading causes of pregnancy related death in Kansas. During that same time period, according to Kansas Hospital Discharge Data, approximately 1 in 161 Kansas women who delivered a baby experienced severe maternal morbidity (SMM). Preeclampsia is the second leading cause of SMM in Kansas (Hospital Discharge Data 2022). Recognizing that SMM occurs one hundred times more frequently than maternal mortality, it is clear that intentional interventions to address severe hypertension in pregnancy and in the postpartum period are needed.

Furthermore, there is an increased risk for preterm delivery in Kansas in the presence of maternal hypertensive disorder. In 2022, 10.5% of infants were delivered preterm (<37 weeks) in our state. To address optimal health outcomes for these neonates, recommendations for early initiation of lactation as an evidenced-based intervention is imperative.



Severe Hypertension in Pregnancy Enrollment Form

Facility Name: --Select One--
Name of Person Submitting Form:
Title:
Email Address:
Physical Address:

Participation Category:
Which of the choices below best reflect your facility:

- Our facility is a birthing facility and **PARTICIPATED in the Fourth Trimester Initiative (FTI)** and we wish to participate in the Severe Hypertension in Pregnancy Initiative. **Complete all forms (pages 9-11) and submit the enrollment packet to the Maternal QI Coordinators**
- Our facility is a birthing facility and did **NOT PARTICIPATE** in the Fourth Trimester Initiative, **but we wish to participate in the Severe Hypertension in Pregnancy Initiative. Complete all forms (pages 9-11) and submit the enrollment packet to the Maternal QI Coordinators**
  Annual Delivery Volume (Births in 2024):
  *Urbanization level: ☐Urban ☐Rural Teaching hospital: ☐ Yes ☐No
  Hospital type: ☐ Nonprofit ☐ University ☐ County ☐ For-profit
  AAP NICU Level: ☐ 1 ☐ 2 ☐ 3
  Maternal Care Level: ☐ 1 ☐ 2 ☐ 3 ☐ 4
  *If unknown, may leave blank.
- Our facility is **NOT a DELIVERING FACILITY** but we wish to participate in the Severe Hypertension in Pregnancy Initiative. **Complete all forms (pages 9-11) and submit the enrollment packet to the Maternal QI Coordinators**

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Roles for Enrollment
As a participant in the KPQC **SHTN Bundle** your birth facility will identify individuals to serve in the roles identified below. Changes to these assignments during the course of the project should be sent to the Maternal QI Coordinators.

1. SHTN Champion:
Role Description: The SHTN Champion will be the main point of contact for the KPQC and be responsible for helping their team navigate the implementation of the SHTN Bundle at their facility. The SHTN Champion will monitor and submit birth facility data and provide feedback internally as well as to the KPQC QI Team. The SHTN Champion will be responsible for all permissions to submit enrollment to the Kansas Perinatal Quality Collaborative and KDHE.

Name & Credentials:
Title:
Email Address:
Phone:

2. Lead Provider
Role Description: Lead Provider will actively participate in implementation of the SHTN quality improvement work. They will assist the SHTN Champion in prioritizing SHTN Bundle elements at their facility.

Name & Credentials:
Title:
Email Address:
Phone:

3. Learners: (Do not need to be formally identified)
The SHTN is relevant to every maternal and neonatal health team member. Learners include health care providers at the bedside, outpatient and inpatient settings, support infrastructure, referral networks, and individuals across sectors and settings in the supporting community: MD, CNM, PA, NP, RN, WIC staff, MCH staff, outpatient private practice staff, social worker, patient navigators/community health workers, hospital administration, rapid responders, perinatal community coalitions and collaboratives, social services and

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child welfare, parents, school district staff, etc. *Everyone is invited to participate in learning and encouraged to be actively engaged in the SHTN Bundle.*

Enrollment Agreement
THE PARTIES, through their duly authorized representatives, accept the terms of this

Questions:
tstroda@gmail.com
Kari.smith@kansaspqc.org

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What happens next?

Quarter 1

Initiative	Q1 2025	Q2 2025	Q3 2025	Q4 2025	2026
Launch Bundle (Readiness)	Launch Bundle Enrollment Data Collection Survey (Redcap)				
Identify (Recognition)		Staff: Education (POST BIRTH; ACOG algorithms) Patient: Education Community Organizations: Education *Data collection to continue			
Recognize and Respond			Staff: Finalize ACOG Protocols and Follow up appointments		
			Staff: Simulations (Inpatient ,EMS, Emergency Departments) *Data collection to continue		
			Patient: Follow up/Follow through Comprehensive Care Model; **Patient: Pumping Protocol, Non hypertensive initiatives		
*Reporting: Ongoing Data Collection			Community Outreach: KDHE/Local health departments Connect with facilties with Support Implementation of PP Visits; Home Visits/CHW/Doula/Navigation assigned		EMS Education/Transfers; Pt Debriefs and Team

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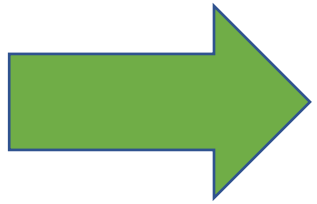
What happens next?

Quarter 2



Staff: Education (POST BIRTH; ACOG algorithms)
Patient: Education
Community Organizations: Education
*Data collection to continue

Identify Quarter 2 2025

Staff:

- Education: POSTBIRTH
  - Kari
- ACOG Algorithms/CMPQC Algorithms
  - Review protocols and options for “best practice”
- HTN Diagnosis
  - Providers, Nurses

Patient:

- POSTBIRTH embedded in discharge

Data Collection:

- Twice yearly: Redcap link for data input

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HELP SAVE THE HEARTS!

Launching a "new" model of HTN prevention and care

Growing Problem: Prevalence of Preeclampsia Dx in Kansas 2016-2023

Source: Kansas hospital discharge data

Year	Preeclamsia*	Delivery Hospitalizations	Prevalence (%)
2016	1679	34952	4.8
2017	1766	33499	5.3
2018	1793	31739	5.6
2019	1941	32453	6.0
2020	1857	31406	5.9
2021	2079	31434	6.6
2022	2116	30849	6.9
2023	2145	30878	6.9

*ICD-10-CM diagnosis codes for preeclampsia (O15)

The **prevalence of preeclampsia increased from 4.8% in 2016 to 6.9% in 2023, showing a statistically significant increase with an annual percent change (APC) of 5.28%.**

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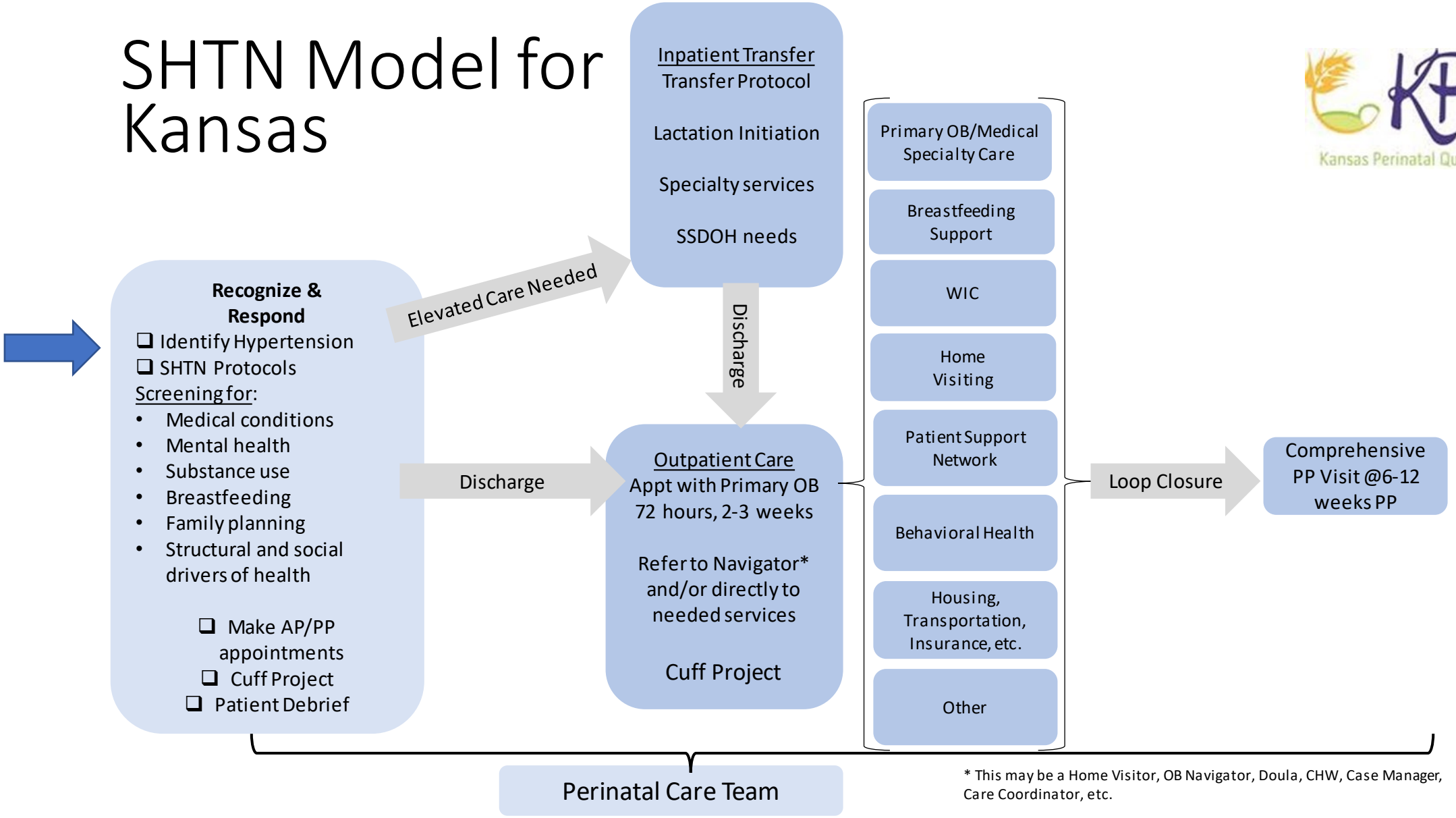
SHTN Model for Kansas



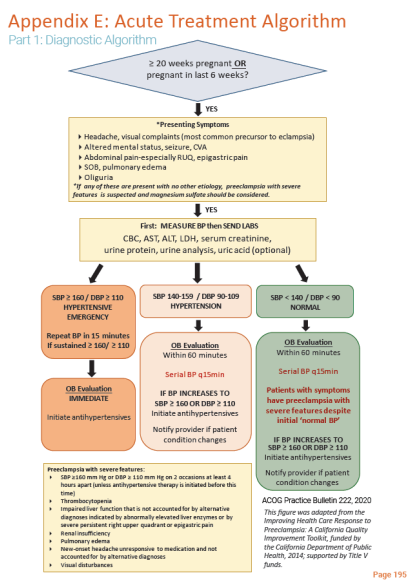
* This may be a Home Visitor, OB Navigator, Doula, CHW, Case Manager, Care Coordinator, etc.

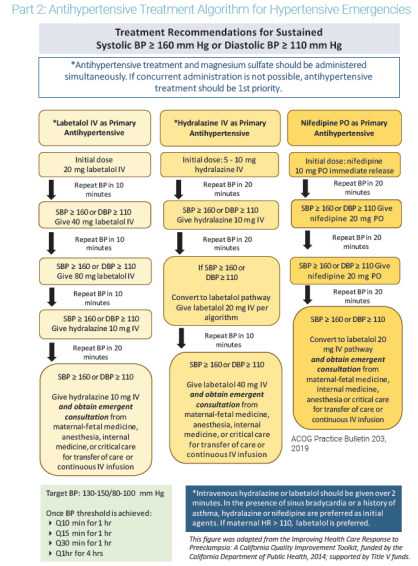
IDENTIFY

Normal vs Abnormal Blood Pressure in female patients, including Pregnant and Postpartum (1 year!)

Back to Basics:

Identify!





- ❑Watch the following & send out to staff/Admin/
  - https://vimeo.com/743542904\
- ❑CMQCC: Improving Health Care Response to Hypertensive Disorders of Pregnancy… 238 pages of fun!
  - CMQCC Hypertensive Toolkit
    Patient Education Checklist
- ❑How to properly take a blood pressure
  https://opqic.org/wp-content/uploads/2015/05/Accurate-BP-Flyer.pdf
- ❑Home BP Kit education
  - CMQCC YouTube Video

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Accurate Diagnosis

- **Chronic Hypertension**
- **Chronic Hypertension with Superimposed Preeclampsia**
- **Gestational Hypertension**
- **Preeclampsia**
  - With Severe Features
- **Eclampsia**

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Definitions: ACOG

Types of Hypertension	
Chronic Hypertension	○ SBP ≥ 140 **or** DBP ≥ 90 ○ Pre-pregnancy or <20 weeks
Gestational Hypertension	○ SBP ≥ 140 **or** DBP ≥ 90 on at least two occasions at least 4 hrs apart after 20 weeks gestation in women with previously normal BP ○ Absence of proteinuria or systemic signs/symptoms
Preeclampsia – Eclampsia	○ SBP ≥ 140 **or** DBP ≥ 90 ○ Proteinuria with or without signs/symptoms ○ Presentation of signs/symptoms/lab abnormalities but no proteinuria **Proteinuria not required for diagnosis eclampsia seizure in setting of preeclampsia*
Chronic Hypertension with Superimposed Preeclampsia	○ Preeclampsia in a woman with a history of hypertension before pregnancy or before 20 weeks of gestation
Preeclampsia with severe features *(ACOG Practice Bulletin #202, Gestational Hypertension and Preeclampsia, & ACOG Practice Bulletin #203, Chronic Hypertension in Pregnancy)*	○ SBP ≥ 160 **or** DBP ≥ 110 (can be confirmed within a short interval to facilitate timely antihypertensive therapy) ○ Thrombocytopenia (platelet count less than 100,000/microliter) ○ Impaired liver function that is not accounted for by alternative diagnoses and as indicated by abnormally elevated blood concentrations of liver enzymes (to more than twice the upper limit normal concentrations), or by severe persistent right upper quadrant or epigastric pain unresponsive to medications. ○ Renal insufficiency (serum creatinine concentration more than 1.1 mg/dL or a doubling of the serum creatinine concentration in the absence of other renal disease) ○ Pulmonary edema ○ New-onset headache unresponsive to medication and not accounted for by alternative diagnoses ○ Visual disturbances

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Taking a Blood Pressure

Correct Position!

- Sitting or Semi Fowlers
- Feet flat, not dangling
- If BP ≥ 160 systolic **and/or ≥** 110 diastolic, take steps to initiate treatment for severe hypertension—notifying provider, procuring medication

DO NOT REPOSITION PATIENT (yet)

- **Retake BP after 15 minutes**. If BP remains severe, obtain order for medication.
- Administer medication as ordered

***Treat ASAP*—at least within 1 hour of 1st severe reading**

Correct Cuff Size!

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RECOGNIZE

Recognize the Problem and think “ALGORITHM”!

Avoiding mistakes

Racism is a risk factor, NOT race

Do not assume:
Race, Obesity, SES status, Diet, Mental health, Pain, or Anxiety is the cause

CMQCC Preeclampsia Early Recognition Tool (PERT)

Everyone knows: POSTBIRTH!

NEURO symptoms= Immediate triage to facility or RESPONSE to change of status

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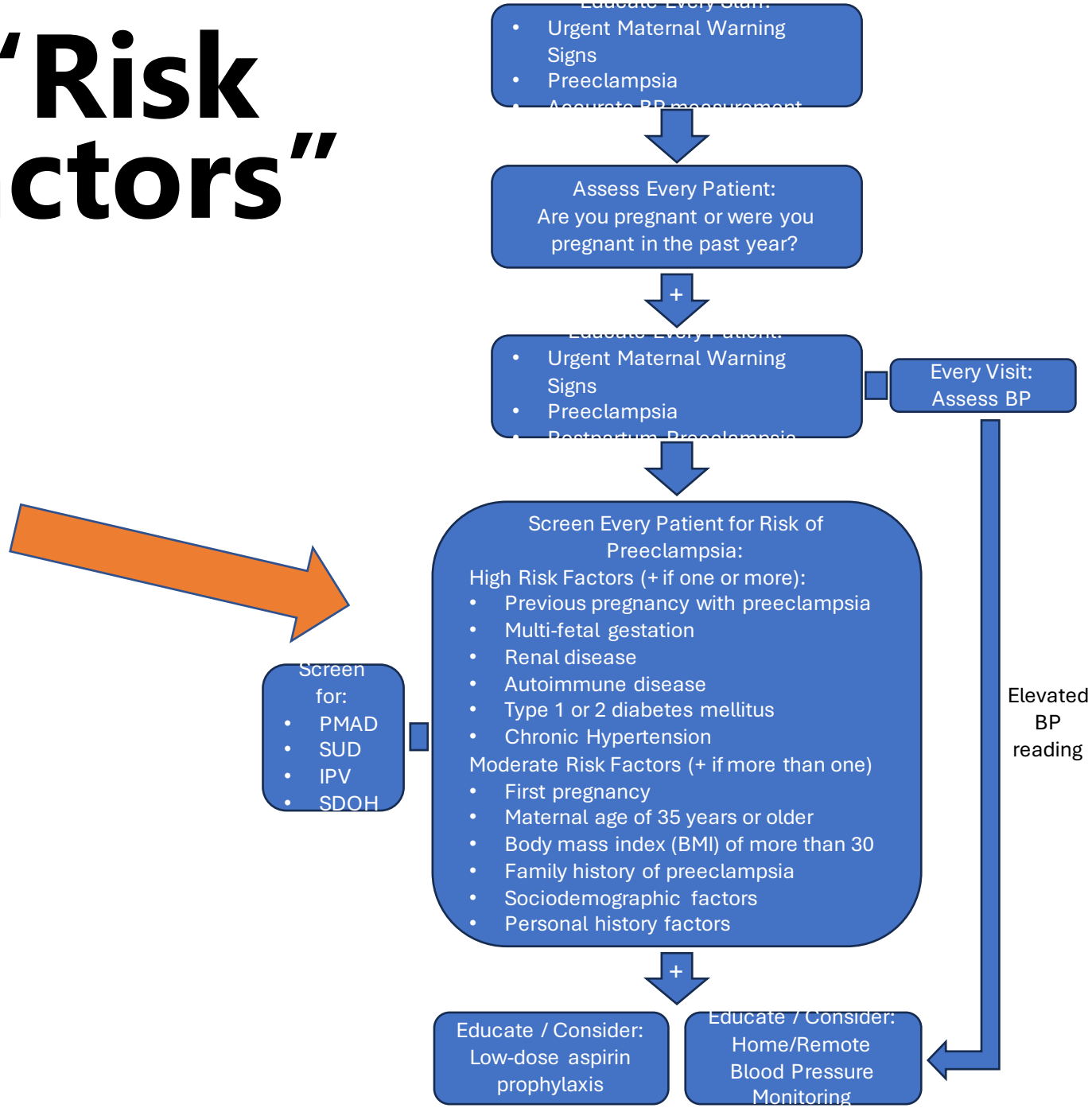
Statewide SHTN Initiative work

Prevention works!
AND
Prevention starts in the preconception & antepartum settings!

"Risk Factors"

DRAFT!



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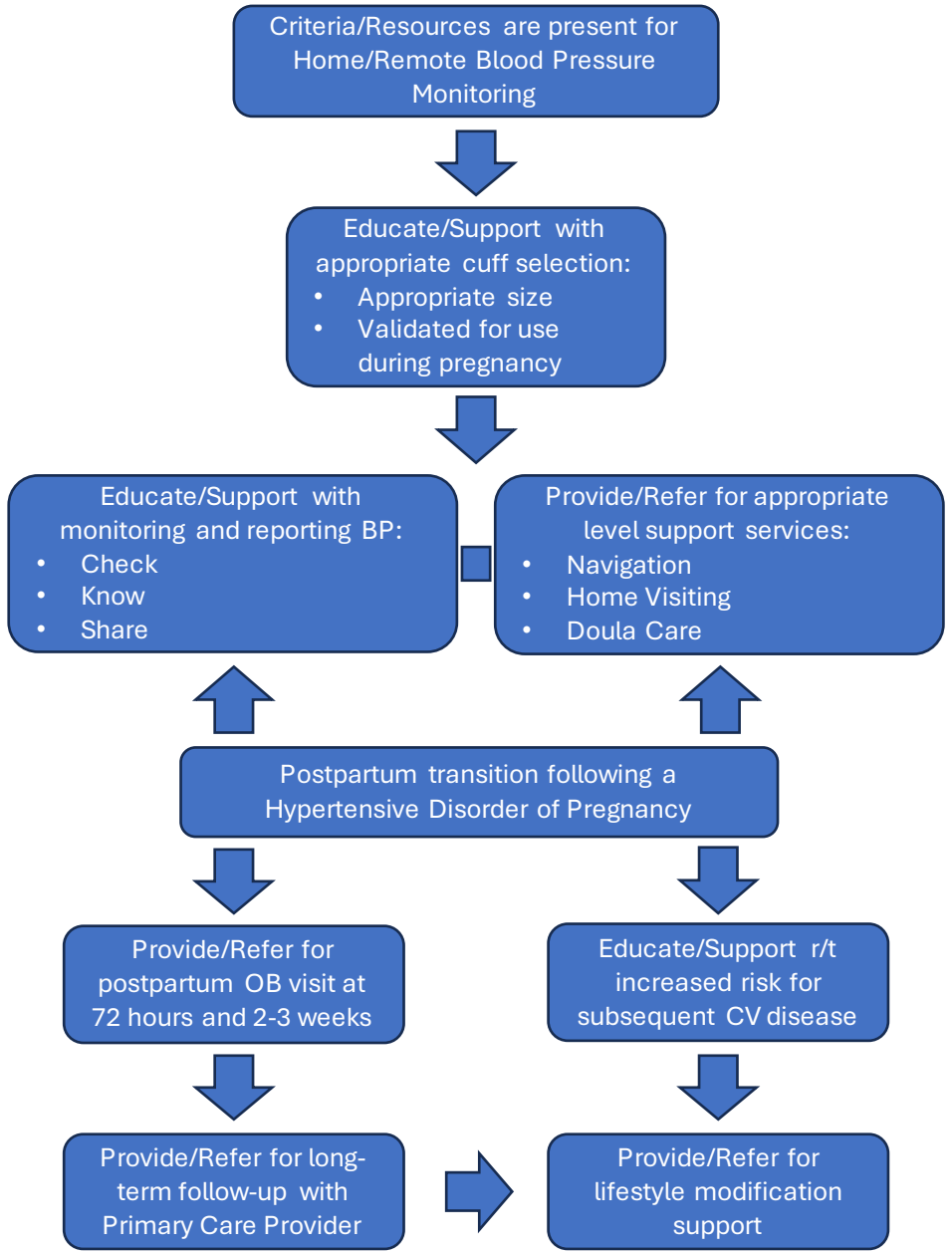
DRAFT!



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EVERYONE needs aspirin…?

Table S1: Cross-sectional survey of recommendations on the use of aspirin in pregnancy for the prevention of pre-eclampsia

Guideline (year)	Aspirin dose	Treatment duration	Recommendations for pregnant women with NSAID hypersensitivity
World Health Organization (2021)	75 mg daily	Start before 20 weeks' gestation	Not addressed
Australian Pregnancy Care Guidelines (2024; pending NHMRC approval)	150 mg daily	Start before 16 weeks' gestation	Contraindicated in patients with hypersensitivity to aspirin
National Institute for Health and Care Excellence, United Kingdom (2023)	75–150 mg daily	Start from 12 weeks' gestation and continue till delivery	Not addressed
Society of Obstetric Medicine of Australia and New Zealand (2023)	150 mg daily	Start before 16 weeks' gestation and stop between 34 weeks to delivery	Not addressed
European Society of Hypertension (2023)	100–150 mg daily	Start before 16 weeks' gestation and continue till 35 weeks	Not addressed
Society of Obstetricians and Gynecologists of Canada (2022)	81–162 mg daily	Start before 16 weeks' gestation and continue till 36 weeks	Not addressed
Sri Lanka College of Obstetricians and Gynaecologists (2022)	75–100 mg daily	Start from the early second trimester and continue till delivery	Not addressed
South African Society of Obstetricians and Gynaecologists (2022)	150 mg daily	Start from 12 weeks' gestation and continue till 36 weeks	Not addressed
American College of Obstetrics and Gynecology/Society for Maternal-Fetal Medicine (2021)	81 mg daily	Start between 12–28 weeks' gestation (optimally before 16 weeks) and continue till delivery	Contraindicated in patients with aspirin allergy, e.g., urticaria or hypersensitivity to NSAIDs (ACOG Committee Opinion No. 743)
US Preventive Services Task Force (2021)	81 mg daily	Start from 12 weeks' gestation	Not addressed

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RESPOND

Treatment= Algorithms, Algorithms, and MORE Algorithms!

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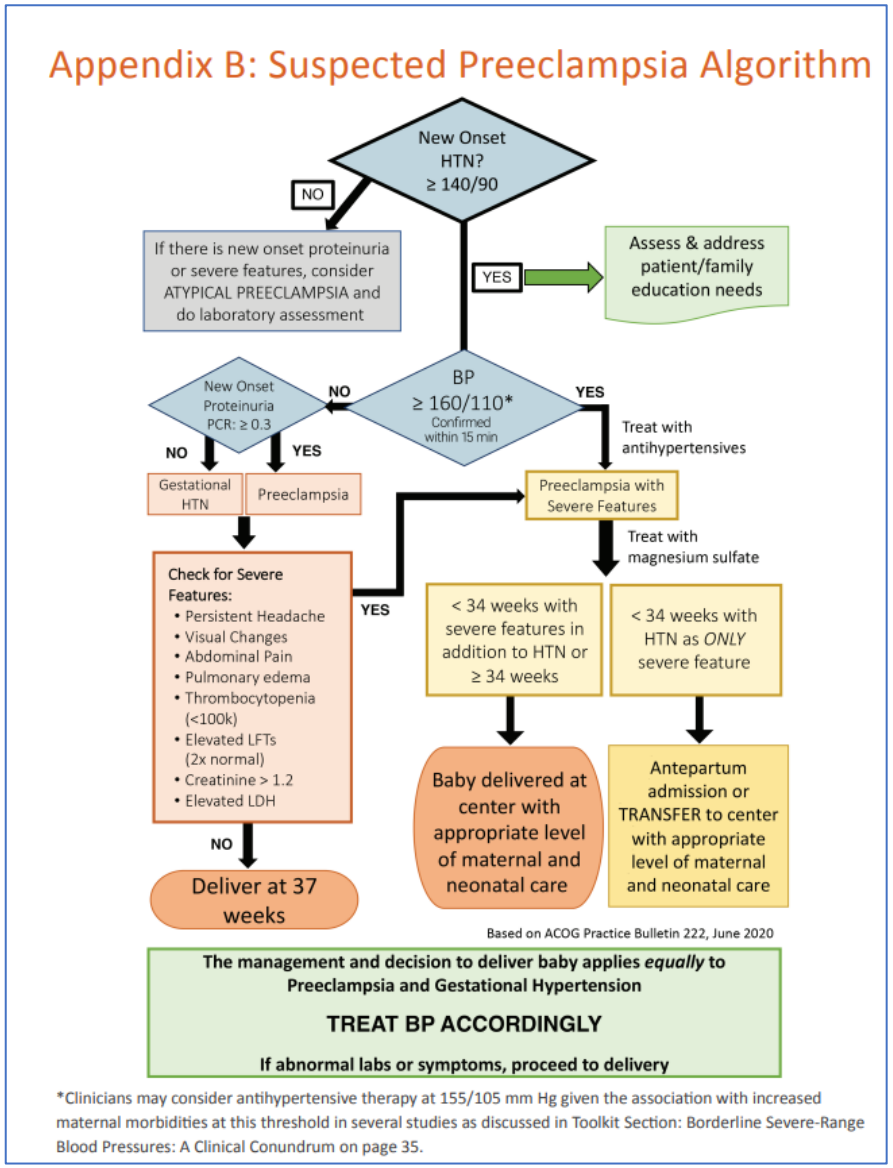
Recognition to Treatment



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Treatment

First Line Therapies

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- Intravenous labetalol
- Intravenous hydralazine
- Oral nifedipine

Magnesium sulfate not recommended as antihypertensive agent

- Should be used for: seizure prophylaxis and controlling seizures in eclampsia
- IV bolus of 4-6 grams in 100 ml over 20 minutes, followed by IV infusion of 1-2 grams per hour. **Continue for 24 hours postpartum**
- If no IV access, 10 grams of 50% solution IM (5 g in each buttock)
- Contraindications: pulmonary edema, renal failure, myasthenia gravis

Anticonvulsants (for recurrent seizures or when magnesium is C/I):

- **Lorazepam**: 2-4 mg IV x 1, may repeat x 1 after 10-15 min
- **Diazepam**: 5-10 mg IV every 5-10 min to max dose 30 mg
- **Phenytoin**: 15-20 mg/kg IV x 1, may repeat 10 mg/kg IV after 20 min if no response. Avoid with hypotension, may cause cardiac arrhythmias.
- **Keppra**: 500 mg IV or orally, may repeat in 12 hours. Dose adjustment needed if renal impairment.

**There may be adverse effects and additional contraindications. Clinical judgement should prevail*

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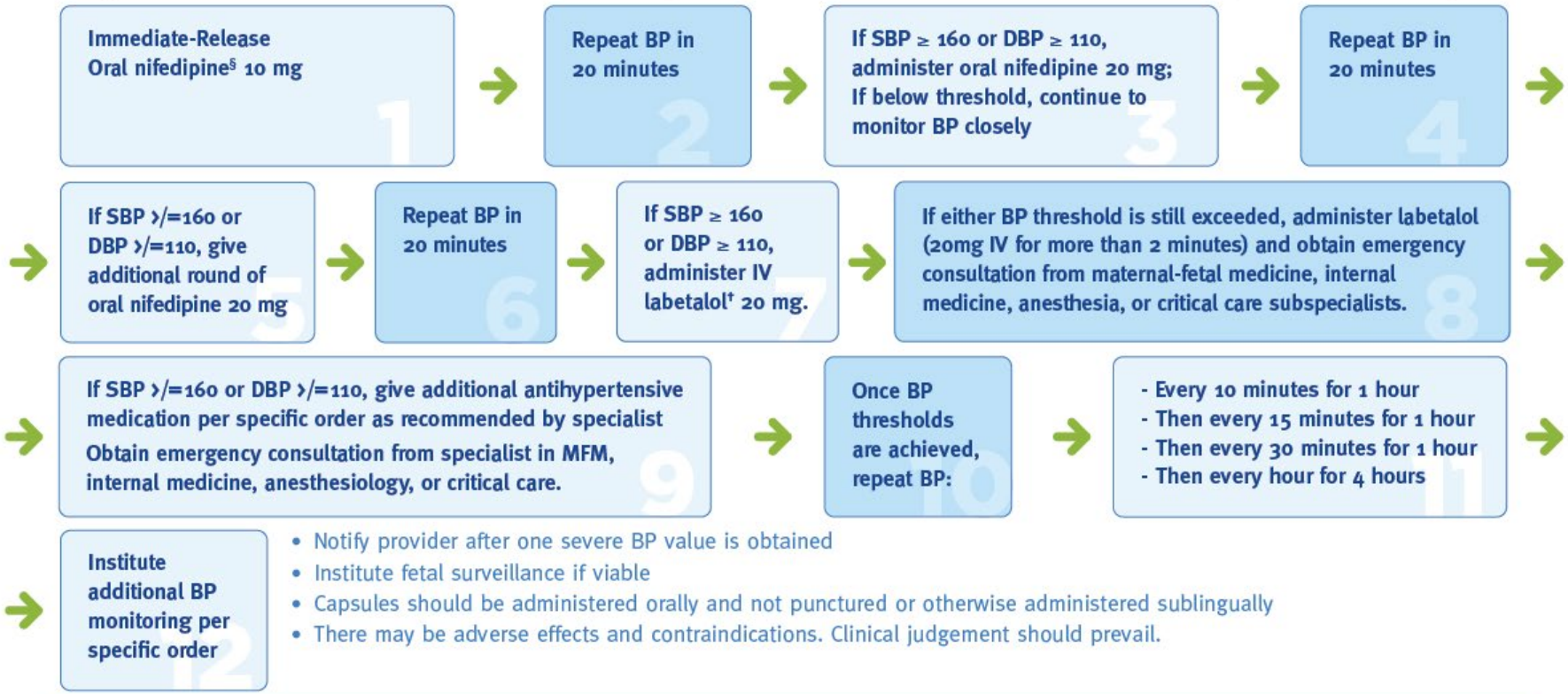
Immediate-Release Oral Nifedipine Algorithm EXAMPLE

Trigger: If severe elevations (SBP ≥160 or DBP ≥ 110) persist* for 15 min or more **OR** If two severe elevations are obtained within 15 min and tx is clinically indicated



- Notify provider after one severe BP value is obtained
- Institute fetal surveillance if viable
- Capsules should be administered orally and not punctured or otherwise administered sublingually
- There may be adverse effects and contraindications. Clinical judgement should prevail.

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* Two severe readings more than 15 minutes and less than 60 minutes apart

§ Immediate-release oral nifedipine has been associated with an increase in maternal heart rate and may overshoot hypotension.

† **Avoid parenteral labetalol with active‡ asthma, heart disease, or congestive heart failure; use with caution with history of asthma. May cause neonatal bradycardia.**

‡ "Active asthma" is defined as:

Ⓐ symptoms at least once a week, or
Ⓑ use of an inhaler, corticosteroids for asthma during the pregnancy, or
Ⓒ any history of intubation or hospitalization for asthma.

Safe Motherhood Initiative

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Hydralazine Algorithm

EXAMPLE

Trigger: If severe elevations (SBP ≥160 or DBP ≥ 110) persist* for 15 min or more **OR** If two severe elevations are obtained within 15 min and tx is clinically indicated

1. Administer hydralazine[§] 5 mg or 10 mg IV over 2 minutes
2. Repeat BP in 20 minutes
3. If SBP ≥ 160 or DBP ≥ 110, administer hydralazine 10 mg IV over 2 minutes
4. Repeat BP in 20 minutes
5. If SBP ≥ 160 or DBP ≥ 110, administer labetalol 20 mg[†] IV over 2 minutes; If BP below threshold, continue to monitor BP closely
6. Repeat BP in 10 minutes
7. If SBP ≥ 160 or DBP ≥ 110, administer labetalol 40 mg IV over 2 minutes, and obtain emergency consultation from specialist in MFM, internal medicine, anesthesiology, or critical care
8. Give additional antihypertensive medication per specific order as recommended by specialist
9. Once BP thresholds are achieved, repeat BP:
10. - Every 10 minutes for 1 hour
    - Then every 15 minutes for 1 hour
    - Then every 30 minutes for 1 hour
    - Then every hour for 4 hours
11. Institute additional BP monitoring per specific order

- Notify provider after one severe BP value is obtained
- Institute fetal surveillance if viable
- Hold IV labetalol for maternal pulse under 60
- There may be adverse effects and contraindications.
- Clinical judgement should prevail.

* Two severe readings more than 15 minutes and less than 60 minutes apart

[†] **Avoid parenteral labetalol with active[‡] asthma, heart disease, or congestive heart failure; use with caution with history of asthma. May cause neonatal bradycardia.**

[‡] "Active asthma" is defined as:
Ⓐ symptoms at least once a week, or
Ⓑ use of an inhaler, corticosteroids for asthma during the pregnancy, or
Ⓒ any history of intubation or hospitalization for asthma.

[§] Hydralazine may increase risk of maternal hypotension.

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Labetalol Algorithm

EXAMPLE

Trigger: If severe elevations (SBP ≥160 or DBP ≥ 110) persist* for 15 min or more **OR** If two severe elevations are obtained within 15 min and tx is clinically indicated

1. Labetalol 20 mg† IV over 2 minutes
2. Repeat BP in 10 minutes
3. If SBP ≥ 160 or DBP ≥ 110, administer labetalol 40 mg IV over 2 minutes; If BP below threshold, continue to monitor BP closely
4. Repeat BP in 10 minutes
5. If SBP ≥ 160 or DBP ≥ 110, administer labetalol 80 mg IV over 2 minutes; If BP below threshold, continue to monitor BP closely
6. Repeat BP in 10 minutes
7. If SBP ≥ 160 or DBP ≥ 110, administer hydralazine§ 10 mg IV over 2 minutes; If below threshold, continue to monitor BP closely
8. Repeat BP in 20 minutes
9. If SBP ≥ 160 or DBP ≥ 110 at 20 minutes, obtain emergency consultation from specialist in MFM, internal medicine, anesthesiology, or critical care
10. Give additional antihypertensive medication per specific order as recommended by specialist
11. Once BP thresholds are achieved, repeat BP:
12. - Every 10 minutes for 1 hour
    - Then every 15 minutes for 1 hour
    - Then every 30 minutes for 1 hour
    - Then every hour for 4 hours
13. Institute additional BP monitoring per specific order

- Notify provider after one severe BP value is obtained
- Institute fetal surveillance if viable
- Hold IV labetalol for maternal pulse under 60
- Maximum cumulative IV-administered dose of labetalol should not exceed 300 mg in 24 hours
- There may be adverse effects and contraindications. Clinical judgement should prevail.

* Two severe readings more than 15 minutes and less than 60 minutes apart

† **Avoid parenteral labetalol with active‡ asthma, heart disease, or congestive heart failure; use with caution with history of asthma. May cause neonatal bradycardia.**

‡ "Active asthma" is defined as:
Ⓐ symptoms at least once a week, or
Ⓑ use of an inhaler, corticosteroids for asthma during the pregnancy, or
Ⓒ any history of intubation or hospitalization for asthma.

§ Hydralazine may increase risk of maternal hypotension.

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Revised February 2020

EXAMPLE

Hypertensive Emergency Checklist

HYPERTENSIVE EMERGENCY:

- Two severe BP values (≥160/110) taken 15-60 minutes apart. Values do not need to be consecutive.
- May treat within 15 minutes if clnically indicated

- ☐ Call for Assistance
- ☐ Designate:
  - ○ Team leader
  - ○ Checklist reader/recorder
  - ○ Primary RN
- ☐ Ensure side rails up
- ☐ Ensure medications appropriate given patient history
- ☐ Administer seizure prophylaxis (magnesium sulfate first line agent, unless contraindicated)
- ☐ Antihypertensive therapy within 1 hour for persistent severe range BP
- ☐ Place IV; Draw preeclampsia labs
- ☐ Antenatal corticosteroids (if <34 weeks of gestation)
- ☐ Re-address VTE prophylaxis requirement
- ☐ Place indwelling urinary catheter
- ☐ Brain imaging if unremitting headache or neurological symptoms
- ☐ Debrief patient, family, and obstetric team

† "Active asthma" is defined as:
Ⓐ symptoms at least once a week, or
Ⓑ use of an inhaler, corticosteroids for asthma during the pregnancy, or
Ⓒ any history of intubation or hospitalization for asthma.

Magnesium Sulfate

Contraindications: Myasthenia gravis; avoid with pulmonary edema, use caution with renal failure

IV access:

- ☐ Load 4-6 grams 10% magnesium sulfate in 100 mL solution over 20 min
- ☐ Label magnesium sulfate; Connect to labeled infusion pump
- ☐ Magnesium sulfate maintenance 1-2 grams/hour

No IV access:

- ☐ 10 grams of 50% solution IM (5 g in each buttock)

Antihypertensive Medications

For SBP ≥ 160 or DBP ≥ 110
(See SMI algorithms for complete management when necessary to move to another agent after 2 doses.)

- ☐ **Labetalol** (initial dose: 20mg); **Avoid parenteral labetalol with active asthma, heart disease, or congestive heart failure; use with caution with history of asthma**
- ☐ **Hydralazine** (5-10 mg IV* over 2 min); **May increase risk of maternal hypotension**
- ☐ **Oral Nifedipine** (10 mg capsules); Capsules should be administered orally, not punctured or otherwise administered sublingually

** Maximum cumulative IV-administered doses should not exceed 220 mg labetalol or 25 mg hydralazine in 24 hours*

***Note:** If first line agents unsuccessful, emergency consult with specialist (MFM, internal medicine, OB anesthesiology, critical care) is recommended*

Anticonvulsant Medications

For recurrent seizures or when magnesium sulfate contraindicated

- ☐ **Lorazepam (Ativan):** 2-4 mg IV x 1, may repeat once after 10-15 min
- ☐ **Diazepam (Valium):** 5-10 mg IV q 5-10 min to maximum dose 30 mg

Safe Motherhood Initiative

ACOG

Revised January 2019

EXAMPLE

Eclampsia Checklist

- ☐ Call for Assistance
- ☐ Designate
  - ○ Team leader
  - ○ Checklist reader/recorder
  - ○ Primary RN
- ☐ Ensure side rails up
- ☐ Protect airway and improve oxygenation:
  - ○ Maternal pulse oximetry
  - ○ Supplemental oxygen (100% non-rebreather)
    - ☐ Lateral decubitis position
    - ☐ Bag-mask ventilation available
    - ☐ Suction available
- ☐ Continuous fetal monitoring
- ☐ Place IV; Draw preeclampsia labs
- ☐ Ensure medications appropriate given patient history
- ☐ Administer magnesium sulfate
- ☐ Administer antihypertensive therapy if appropriate
- ☐ Develop delivery plan, if appropriate
- ☐ Debrief patient, family, and obstetric team

† "Active asthma" is defined as:
Ⓐ symptoms at least once a week, or
Ⓑ use of an inhaler, corticosteroids for asthma during the pregnancy, or
Ⓒ any history of intubation or hospitalization for asthma.

Magnesium Sulfate

Contraindications: Myasthenia gravis; avoid with pulmonary edema, use caution with renal failure

IV access:

- ☐ Load 4-6 grams 10% magnesium sulfate in 100 mL solution over 20 min
- ☐ Label magnesium sulfate; Connect to labeled infusion pump
- ☐ Magnesium sulfate maintenance 1-2 grams/hour

No IV access:

- ☐ 10 grams of 50% solution IM (5 g in each buttock)

Antihypertensive Medications

For SBP ≥ 160 or DBP ≥ 110
(See SMI algorithms for complete management when necessary to move to another agent after 2 doses.)

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***Note:** If persistent seizures, consider anticonvulsant medications and additional workup*

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For Persistent Seizures

- ☐ Neuromuscular block and intubate
- ☐ Obtain radiographic imaging
- ☐ ICU admission
- ☐ Consider anticonvulsant medications

Postpartum (and Antepartum) Preeclampsia

EXAMPLE

EMERGENCY DEPARTMENT

Postpartum Preeclampsia Checklist

IF PATIENT < 6 WEEKS POSTPARTUM WITH:

- BP ≥ 160/110 or
- BP ≥ 140/90 with unremitting headache, visual disturbances, epigastric pain

- ☐ Call for Assistance
- ☐ Designate:
  - ○ Team leader
  - ○ Checklist reader/recorder
  - ○ Primary RN
- ☐ Ensure side rails up
- ☐ Call obstetric consult; Document call
- ☐ Place IV; Draw preeclampsia labs
  - ○ CBC
  - ○ PT
  - ○ PTT
  - ○ Fibrinogen
  - ○ Chemistry Panel
  - ○ Uric Acid
  - ○ Hepatic Function
  - ○ Type and Screen
- ☐ Ensure medications appropriate given patient history
- ☐ Administer seizure prophylaxis
- ☐ Administer antihypertensive therapy
  - ○ Contact MFM or Critical Care for refractory blood pressure
- ☐ Consider indwelling urinary catheter
  - ○ Maintain strict I&O — patient at risk for pulmonary edema
- ☐ Brain imaging if unremitting headache or neurological symptoms

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Ⓐ symptoms at least once a week, or
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Safe Motherhood Initiative

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EXAMPLE

Postpartum Surveillance

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District II

Necessary to prevent additional morbidity as preeclampsia/eclampsia can develop postpartum

INPATIENT

- Measure BP every 4 hours after delivery until stable
- Do not use NSAIDs for women with elevated BP
- Do not discharge patient until BP is well controlled for at least 24 hours

OUTPATIENT

- For pts with preeclampsia, visiting nurse evaluation recommended:

✓ Within 3-5 days

✓ Again in 7-10 days after delivery (earlier if persistent symptoms)

ANTIHYPERTENSIVE THERAPY

- Recommended for persistent postpartum HTN: SBP ≥ 150 or DBP ≥ 100 on at least two occasions at least 4 hours apart
- Persistent SBP ≥ 160 or DBP ≥ 110 should be treated within 1 hour

ACOG
The American College of

Post-Discharge Evaluation

ACOG
The American College of Obstetricians and Gynecologists
District II

ELEVATED BP AT HOME, OFFICE, TRIAGE

Postpartum triggers:

- SBP ≥ 160 or DBP ≥ 110 or
- SBP ≥ 140-159 or DBP ≥ 90-109 with unremitting headaches, visual disturbances, or epigastric/RUQ pain

↓

- Emergency Department treatment (OB /MICU consult as needed)
- AntiHTN therapy suggested if persistent **SBP ≥ 150 or DBP ≥ 100** on at least two occasions at least 4 hours apart
- Persistent **SBP ≥ 160 or DBP ≥ 110** should be treated within 1 hour

↓

Good response to antiHTN treatment and asymptomatic

↓

Admit for further observation and management
(L&D, ICU, unit with telemetry)

Signs and symptoms of eclampsia, abnormal neurological evaluation, congestive heart failure, renal failure, coagulopathy, poor response to antihypertensive treatment

↓

Recommend emergency consultation for further evaluation (MFM, internal medicine, OB anesthesiology, critical care)

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The American College of Obstetricians and Gynecologists
District II

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Kansas Perinatal Quality Collaborative

Next Month….

Understanding Hypertensive Disorders of Pregnancy

March 25, 2025, from 12-1 CST

***BE ON THE LOOKOUT!!!**

You will receive the recording of this session along with the PowerPoint to share and/or review with your colleagues and staff from the KPQC email.

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Thank you!

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STAY if you're enrolled, or POSSIBLY enrolled

Severe Hypertension in Pregnancy Patient Safety Bundle (2022)

Element Implementation Details

SAVE THE DATE!

KANSAS PERINATAL QUALITY COLLABORATIVE

IN-PERSON CONFERENCE

April 23rd, 2025 9am-1pm *Lunch will be served

Agenda:

- Severe Hypertension in Pregnancy: Bundle work
- Celebration of FTI Completion: Awards Presentation

Note: All enrolled facilities should send at least one representative to be in attendance

Sunflower Foundation, 5820 SW 6th Ave, Topeka, KS 66606

Further details coming soon!

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AGENDA

- Enrollment questions
- *NEW sites: set up with TA (KCC, MAVIS, High 5, KBC, etc)
- RedCap link questions
  - *Cheat Sheet
- Non-birthing facility questions
  - *Updated “Facts Sheet” Timeline & Goals: *coming soon*
- Kari
  - *Breastfeeding survey, plans, and questions
  - *POSTBIRTH plans

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Back to Basics:
Identify!

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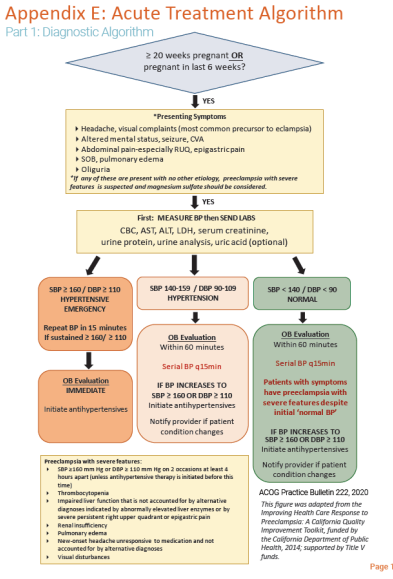
- ❑AIM Bundle docs: https://saferbirth.org/psbs/severe-hypertension-in-pregnancy/

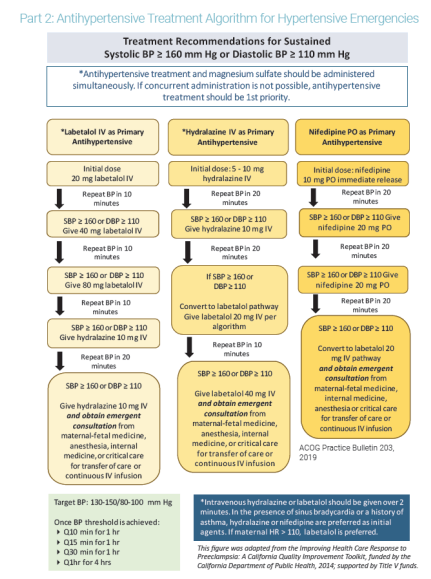
- ❑Watch the following & send out to staff/Admin/QI
  - https://vimeo.com/743542904\

- ❑CMQCC: Improving Health Care Response to Hypertensive Disorders of Pregnancy… 238 pages of fun!
  - CMQCC Hypertensive Toolkit
    Patient Education Checklist

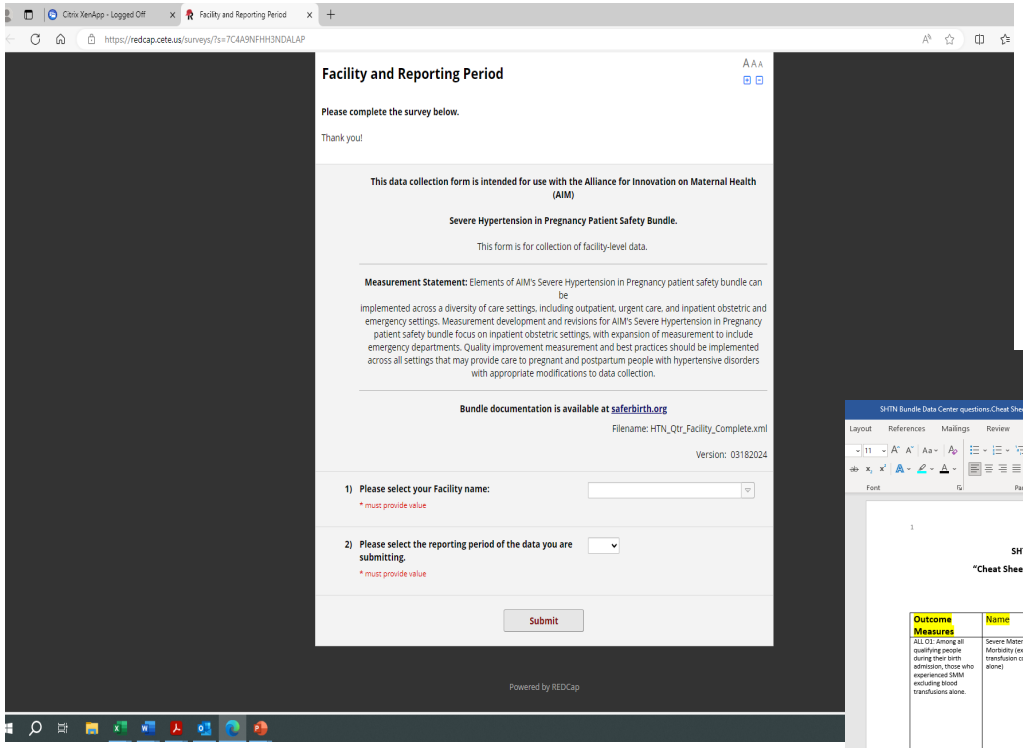
- ❑How to properly take a blood pressure
https://opqic.org/wp-content/uploads/2015/05/Accurate-BP-Fly

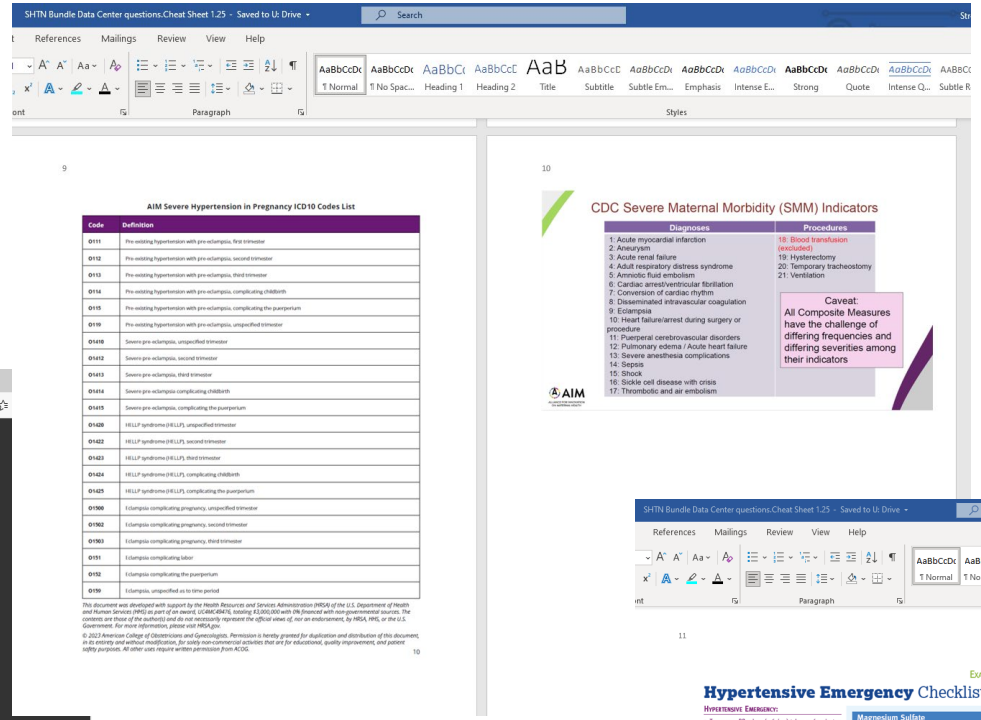
- ❑Home BP Kit education
  - CMQCC YouTube Video

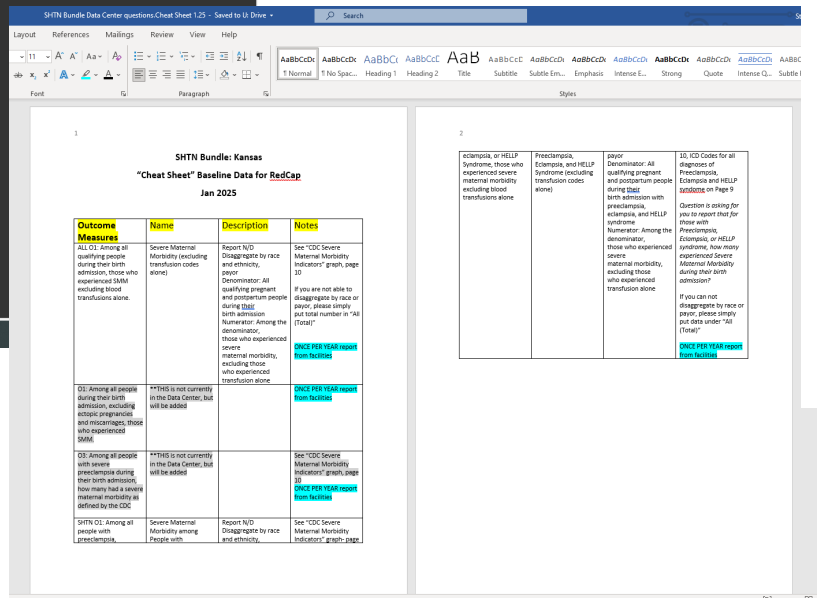


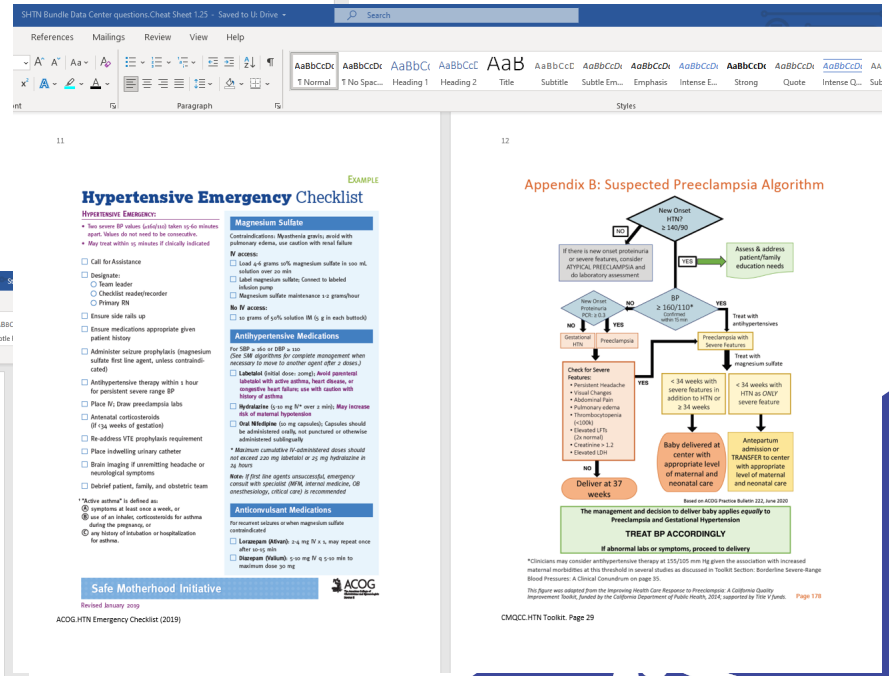


I'm ENROLLED!
What happens next?









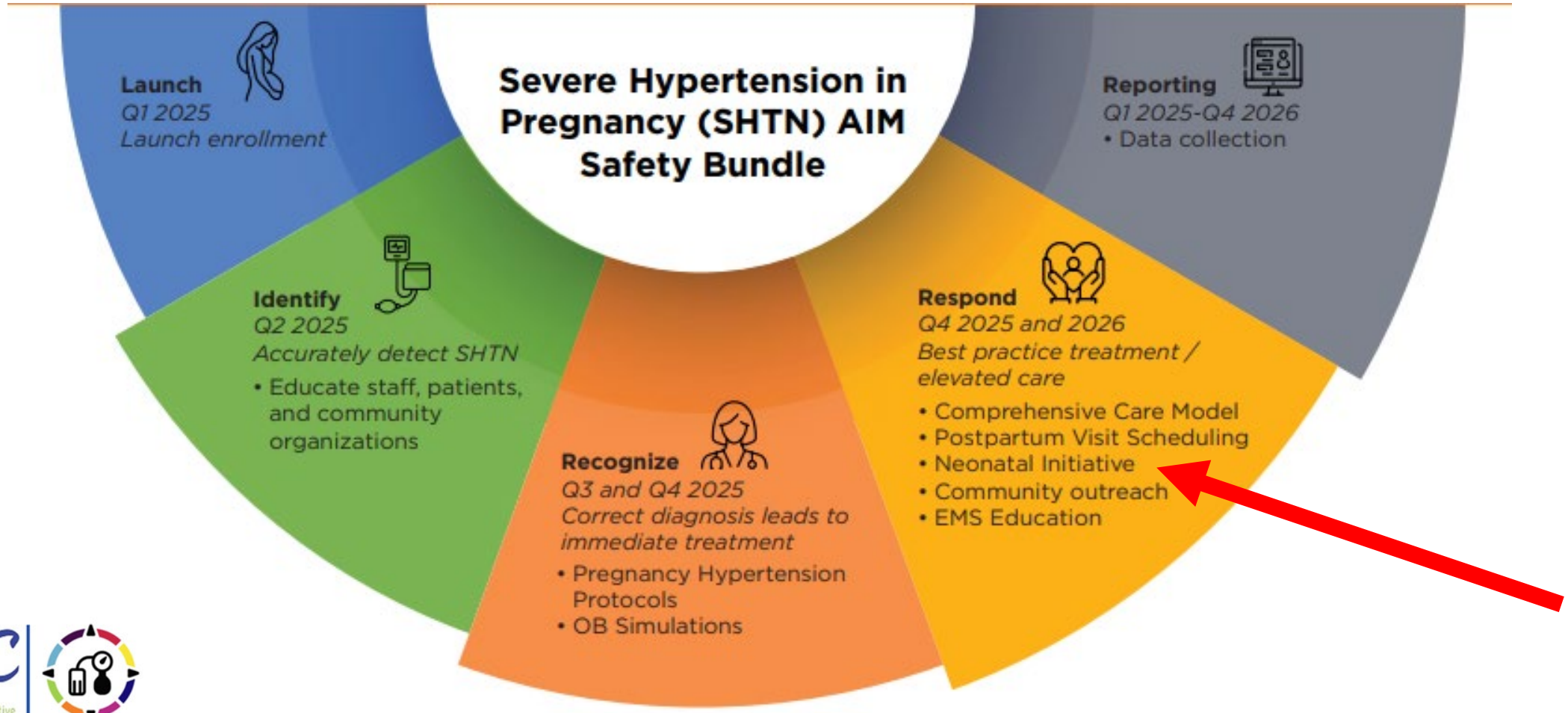
CDC Severe Maternal Morbidity (SMM) Indicators

Diagnoses	Procedures
1: Acute myocardial infarction 2: Aneurysm 3: Acute renal failure 4: Adult respiratory distress syndrome 5: Amniotic fluid embolism 6: Cardiac arrest/ventricular fibrillation 7: Conversion of cardiac rhythm 8: Disseminated intravascular coagulation 9: Eclampsia 10: Heart failure/arrest during surgery or procedure 11: Puerperal cerebrovascular disorders 12: Pulmonary edema / Acute heart failure 13: Severe anesthesia complications 14: Sepsis 15: Shock 16: Sickle cell disease with crisis 17: Thrombotic and air embolism	18: Blood transfusion (excluded) 19: Hysterectomy 20: Temporary tracheostomy 21: Ventilation

Caveat:
All Composite Measures have the challenge of differing frequencies and differing severities among their indicators

AIM
ALLIANCE FOR INNOVATION ON MATERNAL HEALTH

Why am I completing a Breastfeeding Survey?



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POST BIRTH Warning Signs Education

UPDATED in 2023: AWHONN's POST BIRTH Warning Signs Education course provides a standard approach to postpartum pre- and post-discharge education for all patients, regardless of risk factors. Participants are educated about the US maternal morbidity and mortality crisis, definitions, causes and contributing factors. This education provides participants with strategies to educate patients and their families to recognize POST BIRTH Warning Signs.

Training Dates:

Monday, March 24, 2025 0800-0930	Monday May 12, 2025 0800-0930
Friday April 11, 2025 0800-0930	Friday May 23, 2025 0800-0930
Thursday April 17, 2025 2000-2130	Thursday June 5, 2025 1900-2030
Monday April 21, 2025 0800-0930	Friday June 20, 2025 0800-0930
Monday May 5, 2025 1200-1330	Monday June 30, 2025 1900-2030

Link to register will be coming!

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