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Kansas Perinatal Quality Collaborative

Severe Hypertension in Pregnancy Bundle

In-Person Event

April 23, 2025

Challenges and Success

1. Please find the large sheets of paper around the room.
2. Write out what you perceive to be the challenges and/or Successes at your facility of:

    a. Accurately checking Blood Pressures
    b. Asking patients if they have been pregnant or had a baby within the last year
    c. Treating severe blood pressures within 60 minutes or less from identification (antihypertensives vs. Magnesium Sulfate)

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KPQC Advisory Committee

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Ex-Officio
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Ex-Officio
Tara Chettiar, M.D.

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Agenda

Welcome & Introductions
Review Day's Agenda
• Introduce Birthing vs. Non-Birthing sites (map activity) • POST BIRTH Registration Links/QR Code • POST BIRTH Mobile Device Instructions • Strengths and Challenges • ACOG Algorithms; compare to facility protocols • Identification to treatment <60 minutes
Case Studies Transport Discussion (yarn activity)
Next Steps: • Pumping Survey if not completed • Learning Forum Reminders • Data Deadlines and Snippets • Q3 Simulation Conversations
Lunch with KPQC Advisory Board • Intro of SHTN Sites • Intro of KPQC Board • FTI Completion Ceremony
Adjourn AWHONN Happy Hour to Follow

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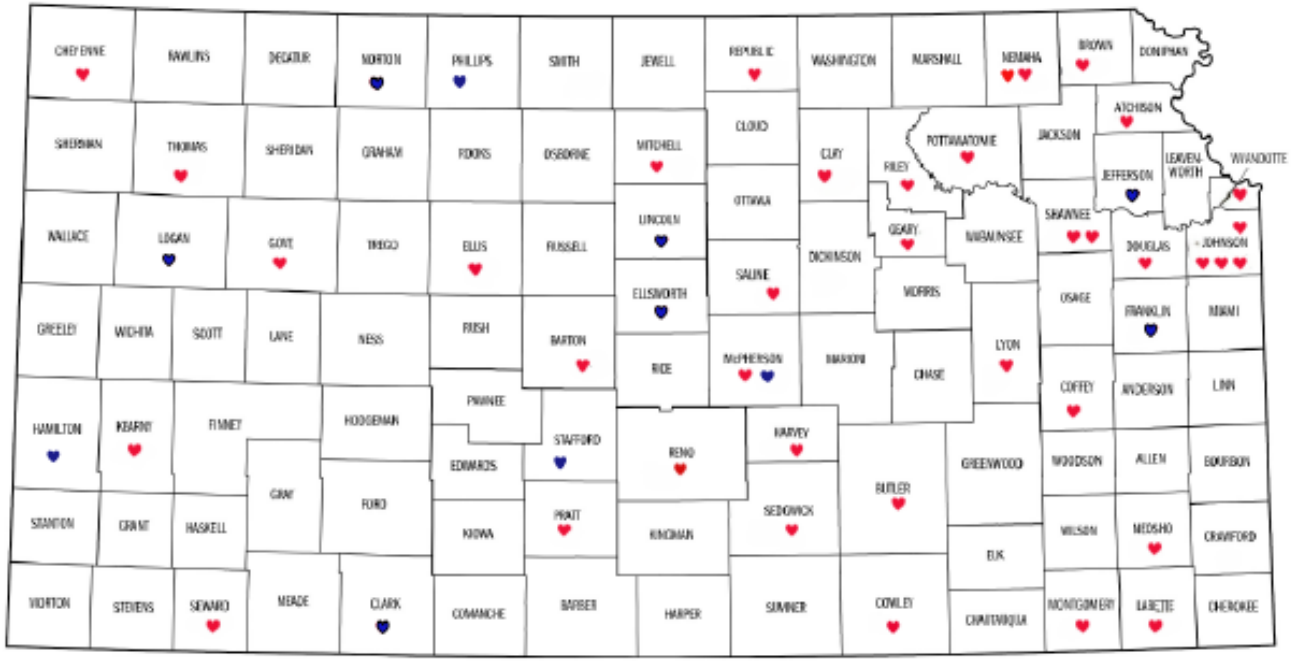
Severe Hypertension in Pregnancy enrolled facilities



Red ❤ Birthing Facilities

Advent Health Shawnee Mission, Johnson Co
AdventHealth South Overland Park, Johnson Co
Amberwell Hiawatha, Brown Co
Ascension Via Christi Manhattan, Riley Co
Amberwell Atchison, Atchison Co
Cheyenne County Hospital, Cheyenne Co
Citizens Medical Center, Thomas Co
Clay County Medical Center, Clay Co
Coffey County Hospital, Coffey Co
Coffeyville Regional Medical Center, Montgomery Co
Community Healthcare System, Pottawatomie Co
Gove Regional Medical Center, Gove Co
Hays Medical Center, Ellis Co
Hutchinson Regional Medical Center, Reno Co
Kearny County Hospital, Kearny Co
Labette Health, Labette Co
Lawrence Memorial Hospital, Douglas Co
McPherson County, McPherson Co
Mitchell County Hospital Health System, Mitchell Co
Nemaha Valley Community Hospital, Nemaha Co
Neosho Memorial Regional Medical Center, Neosho Co
Newman Regional Health, Lyon Co
Newton Medical Center, Harvey Co
Overland Park Regional, Johnson Co
Pratt Regional Medical Center, Pratt Co
Republic County Hospital, Republic Co
Sabetha Community Hospital, Nemaha Co
Salina Regional Health Center, Saline Co
Southwest Medical Center, Seward Co
Stormont Vail Health, Shawnee Co
Stormont Vail Health Flinthills, Geary Co
Susan B Allen Memorial Hospital, Butler Co
University of Kansas Health System - Great Bend, Barton Co
University of Kansas Health System - Olathe, Johnson Co
University of Kansas Health System - St. Francis, Shawnee Co
University of Kansas Health System-KC, Wyandotte Co
Wesley Medical Center, Sedgwick, Co
William Newton Hospital, Cowley Co

Blue 💙 Non-Birthing Facilities

AdventHealth Ottawa, Franklin Co
Ellsworth County Medical Center, Ellsworth Co
FW Huston Medical Center, Jefferson Co
Hamilton County Hospital, Hamilton Co
Lincoln County Hospital, Lincoln Co
Logan County Health Services, Logan Co
Mercy Hospital, Inc., McPherson Co
Minneola Healthcare, Clark Co
Norton County Hospital, Norton Co
Phillips County Health Systems, Phillips Co
Stafford County Hospital, Stafford Co

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Just one more reason why we do this…

- https://www.youtube.com/watch?v=mMW-oc014uc

POST BIRTH Registration

Here is the link:

[POST BIRTH Training - Kansas Perinatal Quality Collaborative]

- Use this QR Code to share with your staff

Scan me!

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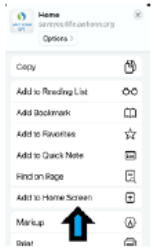
Post Birth Patient Mobile Device Instructions

POST-BIRTH Warning Signs Mobile Device Instructions

Scan the QR code with the mobile device

Scan here to download this handout in multiple languages.

iPhone/IPAD



1. On **Safari**, click on this icon
2. Or on **Chrome**, click on the up icon saveyourlife.awhonn.org
3. In the list of options, scroll down until you see **Add to Home Screen**.
4. Click **Add**
5. You will see this new "icon" SAVE YOUR LIFE or shortcut on your home screen

ANDROID

1. Click **Add to Home** Button at the bottom

Mobile Friendly Webpage Page Overview

Once the webpage opens, you will see this bar below

Home-Discusses POST-BIRTH Warning Signs and background
Info-Contains Frequently Asked Questions (FAQs)
Download-POST BIRTH Warning Signs Handout PDFs in multiple languages
Add To Home- Has the Mobile Friendly Device Instructions on this page

Hypertensive Disorders of Pregnancy

Chronic Hypertension

elevated pressure prior to pregnancy or <20 weeks

Gestational Hypertension

elevated pressure ≥140 systolic or ≥90 diastolic

2 occasions ≥4 hours apart

≥20 weeks gestation or <6 weeks postpartum

Preeclampsia

elevated pressure ≥140 systolic or ≥90 diastolic

+

proteinuria

Or

end organ damage

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Preeclampsia

HYPERTENSION

elevated pressure ≥140 systolic or ≥90 diastolic

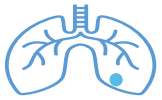
+

PROTEINURIA

- 300 mg or more per 24 hour urine
- Protein/creatinine ratio of 0.3

OR

END ORGAN DAMAGE

- Thrombocytopenia 
- Impaired liver function
- Renal sufficiency (serum creatinine >1.1 or doubling of serum creatinine) 
-  Pulmonary Edema
- New onset headache 
-  Visual disturbances

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Preeclampsia with Severe Features

- Systolic BP ≥160 mm Hg or more, or diastolic BP of ≥110 mm Hg
- Thrombocytopenia (platelet count less than 100 × 10 9/L)
- Impaired liver function that is not accounted for by alternative diagnoses indicated by
  - Abnormally elevated blood concentrations of liver enzymes (to more than 2x the upper limit of normal)
  - Or 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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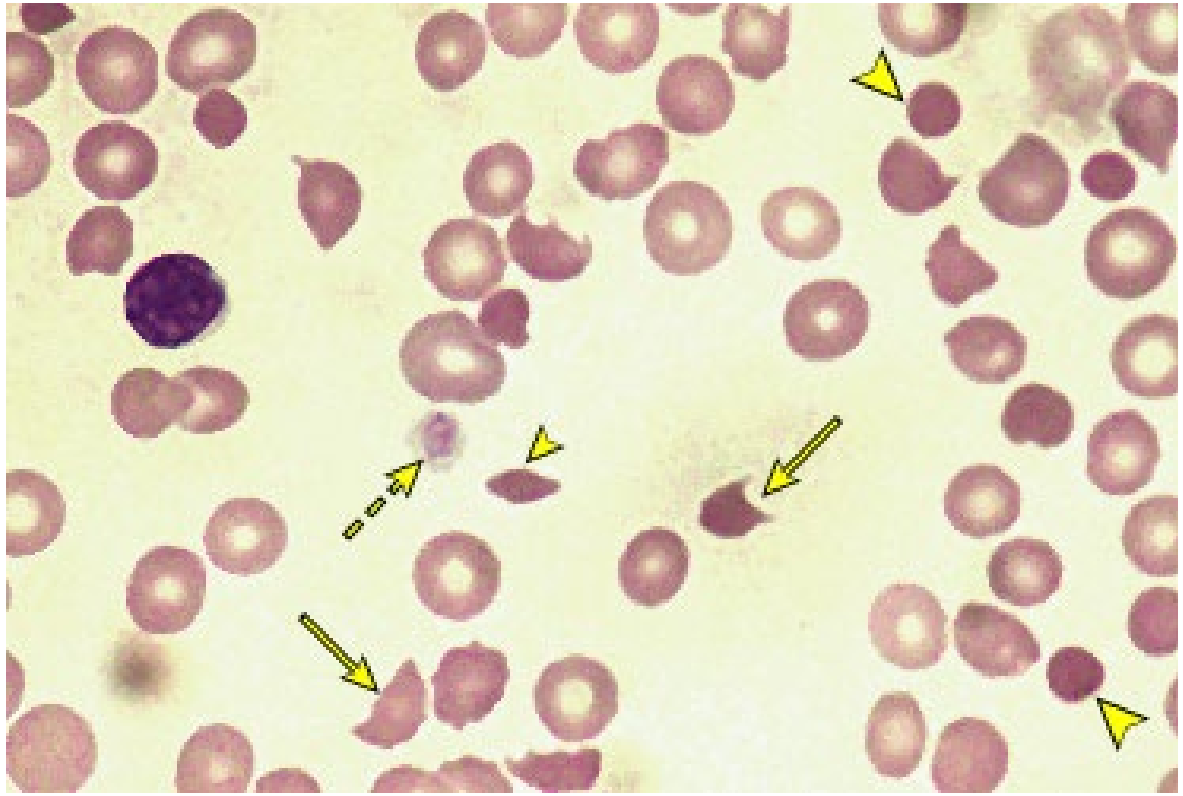
Hemolysis, Elevated Liver Enzymes, Low Platelet Count : HELLP



- Hemolysis
  - Lactate dehydrogenase (LDH) elevated to 600 IU/L or more, peripheral smear, anemia unrelated to blood loss
- Elevated Liver Enzymes
  - aspartate aminotransferase (AST) and alanine aminotransferase (ALT) elevated more than twice the upper limit of normal
- Low Platelet Count
  - platelets count < than 100 × 10 9/L.

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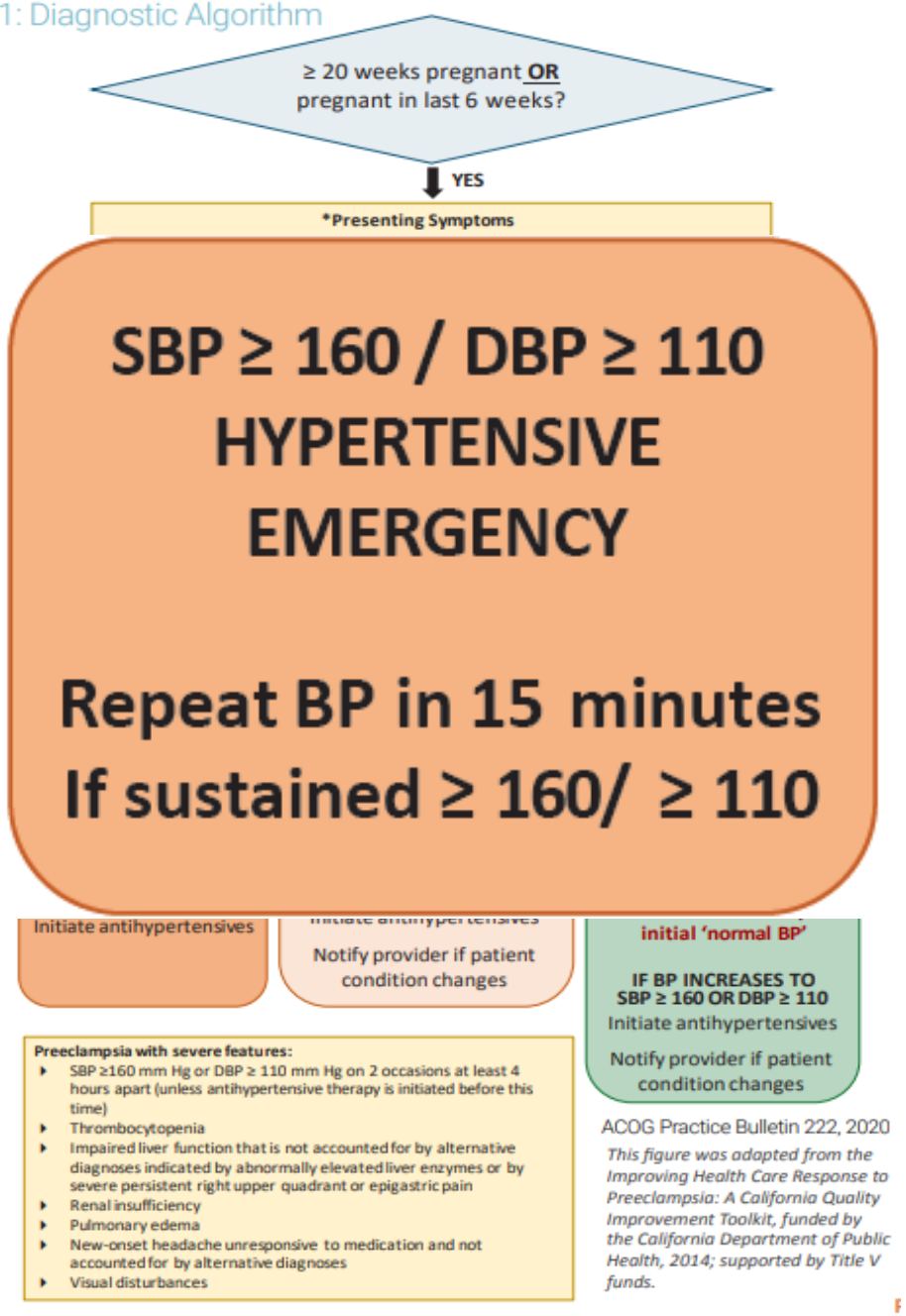
CMQCC Acute Treatment Algorithm Part 1

*Based off ACOG Practice Bulletin 222, Gestational Hypertension and Preeclampsia, June 2020, Reaffirmed 2023

Appendix E: Acute Treatment Algorithm

Part 1: Diagnostic Algorithm



ACOG Practice Bulletin 222, 2020

This figure was adapted from the Improving Health Care Response to Preeclampsia: A California Quality Improvement Toolkit, funded by the California Department of Public Health, 2014; supported by Title V funds.

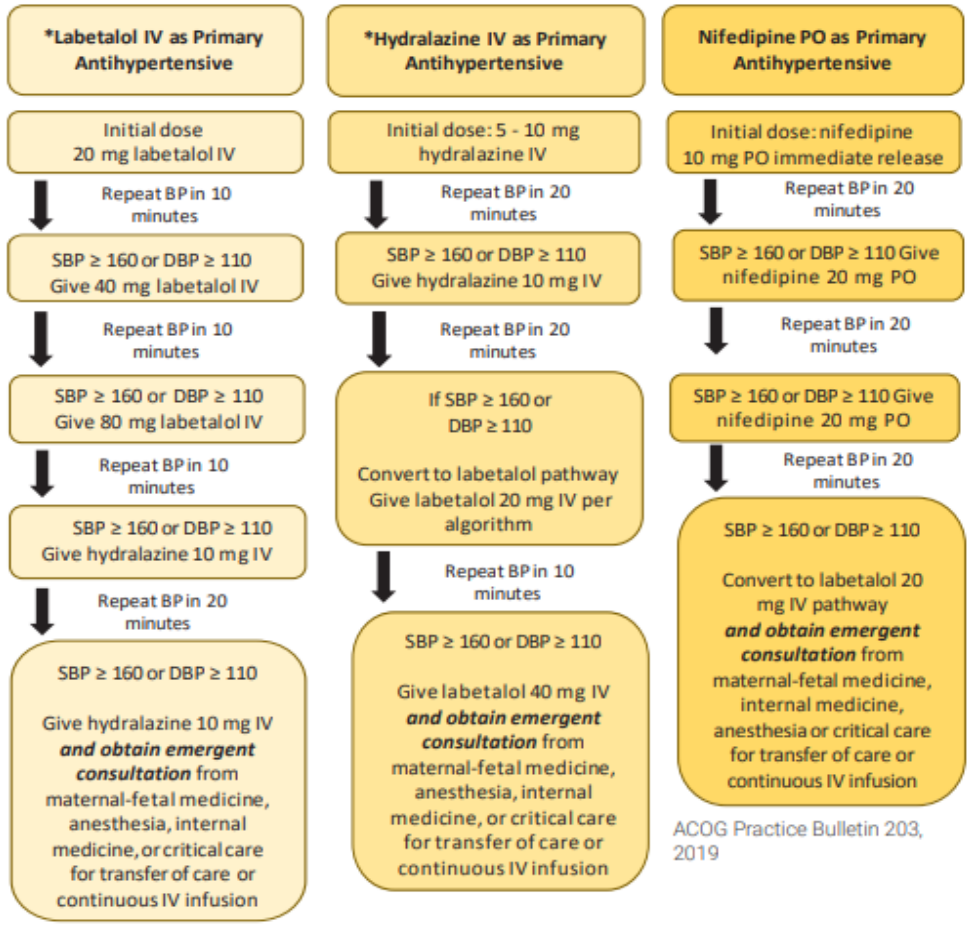
CMQCC Acute Treatment Algorithm Part 2

*Based off ACOG Practice Bulletin 222, Gestational Hypertension and Preeclampsia, June 2020, Reaffirmed 2023

Part 2: Antihypertensive Treatment Algorithm for Hypertensive Emergencies

Treatment Recommendations for Sustained Systolic BP ≥ 160 mm Hg or Diastolic BP ≥ 110 mm Hg

*Antihypertensive treatment and magnesium sulfate should be administered simultaneously. If concurrent administration is not possible, antihypertensive treatment should be 1st priority.



ACOG Practice Bulletin 203, 2019

Target BP: 130-150/80-100 mm Hg

Once BP threshold is achieved:
- Q10 min for 1 hr
- Q15 min for 1 hr
- Q30 min for 1 hr
- Q1hr for 4 hrs

*Intravenous hydralazine or labetalol should be given over 2 minutes. In the presence of sinus bradycardia or a history of asthma, hydralazine or nifedipine are preferred as initial agents. If maternal HR > 110, labetalol is preferred.

This figure was adapted from the Improving Health Care Response to Preeclampsia: A California Quality Improvement Toolkit, funded by the California Department of Public Health, 2014; supported by Title V funds.

CMQCC Acute Treatment Algorithm Part 3

*Based off ACOG Practice Bulletin 222, Gestational Hypertension and Preeclampsia, June 2020, Reaffirmed 2023

Part 3: Magnesium Dosing and Treatment Algorithm for Refractory Seizures

Magnesium: Initial Treatment

1. Loading Dose: 4-6 gm over 20-30 minutes (6 gm for BMI > 35)
2. Maintenance Dose: 1-2 gm per hour
3. Close observation for signs of toxicity
   - Disappearance of deep tendon reflexes
   - Decreased RR, shallow respirations, shortness of breath
   - Heart block, chest pain
   - Pulmonary edema
4. Calcium gluconate or calcium chloride should be readily available for treatment of toxicity

Monitor RR and lung sounds, urine output and DTR per policy (Q1 vs Q2hrs). Also be judicious with fluid administration.

For recurrent seizures while on magnesium

1. Secure airway and maintain oxygenation
2. Give 2nd loading dose of 2-4 gm Magnesium over 5 minutes
3. If patient still seizing 20 minutes after 2nd magnesium bolus, consider one of the following:
   - Midazolam 1-2 mg IV; may repeat in 5-10 min
     OR
   - Diazepam 5-10 mg IV slowly; may repeat q15 min to max of 30 mg
     OR
   - Phenytoin 1,250 mg IV at a rate of 50 mg/min
   - Other medications have been used with the assistance of anesthesia providers such as:
     - Sodium thiopental
     - Sodium amobarbital
     - Propofol
4. Notify anesthesia
5. Notify neurology and consider head imaging

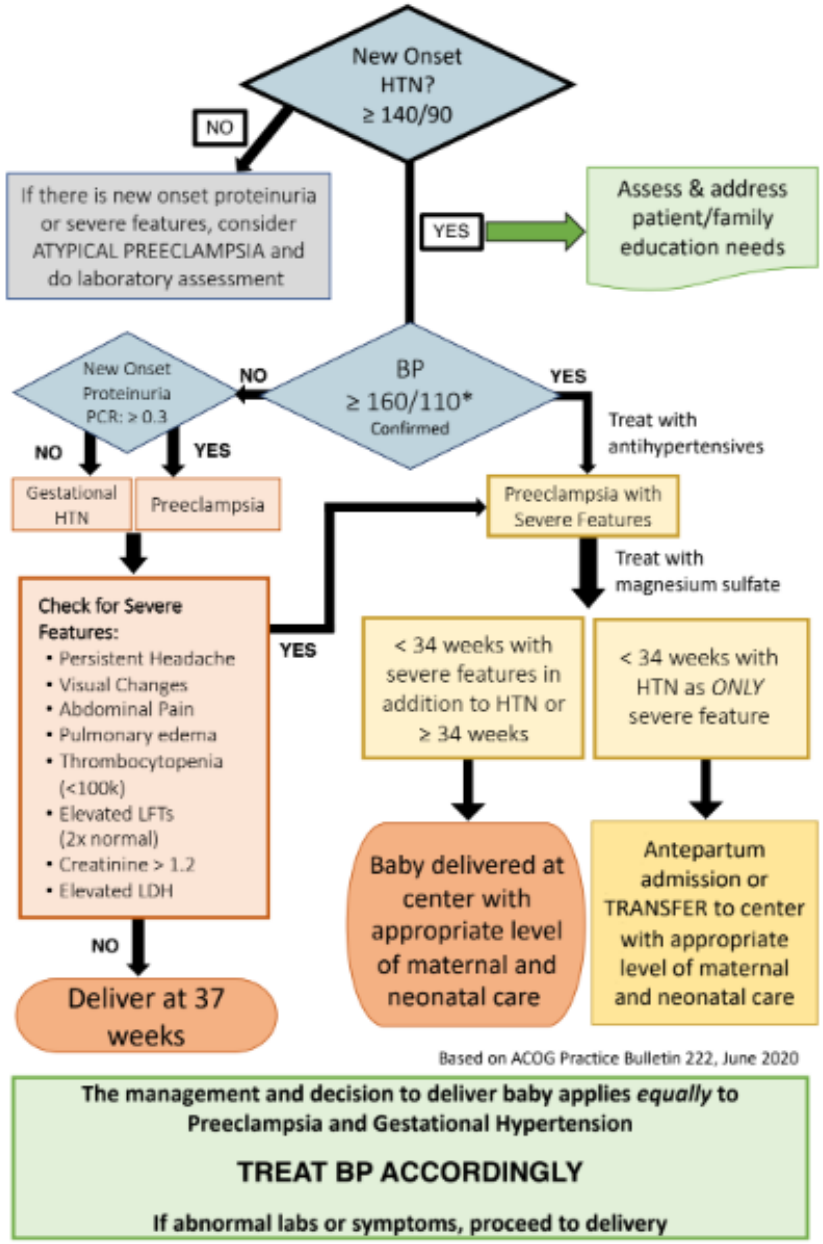
Seizures Resolve

1. Maintain airway and oxygenation
2. Monitor vital signs, cardiac rhythm/EKG for signs of medication toxicity
3. Consider brain imaging for:
   - Head trauma
   - Focal seizure
   - Focal neurologic findings
   - Other suspected neurologic diagnosis
4. Reassure patient with information, support
5. Debrief with team before shift end

CMQCC Suspected Preeclampsia Algorithm

*Based off ACOG Practice Bulletin 222, Gestational Hypertension and Preeclampsia, June 2020, Reaffirmed 2023

Appendix B: Suspected Preeclampsia Algorithm



CMQCC Preeclampsia Screening Tools (MEWS and PERT)

Figure 1. Preeclampsia Screening Tools

A: Preeclampsia Early Recognition Tool integrated within a Maternal Early Warning System

Physiological Parameters	(Yellow) Triggers (Two or more)	(Red) Triggers (One or more)
Systolic BP, mm Hg (repeat in 15 min)	< 90 or > 155* – 159	≥ 160
Diastolic BP, mm Hg (repeat in 15 min)	105* - 109	≥ 110
Mean Arterial Pressure: mm Hg	< 65 or > 110	< 55
Heart Rate: beats per min	< 50 or 110-120	> 120
Respiratory Rate: breaths per min	< 12 or 25-30	> 30
Oxygen Saturation: % on room air	< 95	< 93
Oliguria: ml/hr for ≥ 2 hours	35-49	< 35
		Severe (Red) triggers
Altered mental status	Maternal agitation, confusion or unresponsiveness	
Neurologic	Unrelenting, severe headache unresponsive to medication	
Visual Disturbances	Blurred or impaired vision	
Physical	Shortness of breath or epigastric pain	

If "Yellow" or "Red" BP Triggers, recheck BP within 15 minutes

*Lowering the threshold for treatment should be considered at systolic BP of 155 mm Hg or diastolic BP of 105 mm Hg. See Section Borderline Severe-Range Blood Pressures

Abnormal Maternal Assessment

↓

If sustained for **15** minutes
OR
If the nurse is clinically concerned with patient status
REQUEST PROVIDER EVALUATION

↓

Sustained BP ≥ 160 systolic OR ≥ 110 diastolic
Initiate Hypertension in Pregnancy Protocol:
Treat blood pressure with antihypertensive therapy within 30-60 minutes of the initial severe-range BP
and
Treat with Magnesium Sulfate – 4-6** gm bolus, followed by maintenance dose 1-2 gm per hour based upon renal status
**Use 6 gm if BMI > 35

↓

IF O2 Sat < 93% or RR > 24
CONSIDER PULMONARY EDEMA

This figure was adapted from the Improving Health Care Response to Preeclampsia: A California Quality Improvement Toolkit, funded by the California Department of Public Health, 2014; supp

B: Preeclampsia Early Recognition Tool (PERT), page 1 of 2

ASSESS	NORMAL (GREEN)	WORRISOME (YELLOW)	SEVERE (RED)
Awareness	Alert/oriented	▸ Agitated/confused ▸ Drowsy ▸ Difficulty speaking	Unresponsive
Headache	None	▸ Mild headache ▸ Nausea, vomiting	Unrelieved headache
Vision	None	Blurred or impaired	Temporary blindness
Systolic BP (mm Hg)	100-139	≥ 155-159	≥ 160
Diastolic BP (mm Hg)	50-89	90-109	≥ 110
HR	61-110	110-120	> 120
Respiration	11-24	< 12 or 25-30	< 10 or > 30
SOB	Absent	Present	Present
O2 Sat (%)	≥ 95	< 95	< 93
Pain: Abdomen or Chest	None	▸ Nausea, vomiting ▸ Chest pain ▸ Abdominal pain	▸ Nausea, vomiting ▸ Chest pain ▸ Abdominal pain
Fetal Signs	▸ Category I ▸ Reactive NS	▸ Category II ▸ IUGR ▸ Non-reactive NST	Category III
Urine Output (ml/hr)	≥50	35-49	≤ 35 (in 2 hrs)
Proteinuria*	Trace	▸ ≥ +1** ▸ ≥ 300mg/24 hours	Protein/Creatinine Ratio (PCR) > 0.3 Dipstick ≥ 2+
Platelets	> 100	50-100	< 50
AST/ALT	< 70	> 70	> 70
Creatinine	≤ 0.8	0.9-1.1	≥ 1.1
Magnesium Sulfate Toxicity	▸ DTR +1 ▸ Respiration 16-20	Depression of patellar reflexes	Respiration < 12

B: Preeclampsia Early Recognition Tool, page 2 of 2

*Level of proteinuria is not an accurate predictor of pregnancy outcome

GREEN=NORMAL: proceed with caution

YELLOW=WORRISOME: Increase assessment frequency

1 Trigger, TO DO:
Notify provider

≥ 2 Triggers, TO DO:
- Notify charge RN
- In-person evaluation
- Order labs/test
- Anesthesia consult
- Consider magnesium sulfate
- Supplemental oxygen

**Provider should be made aware of worsening or new-onset proteinuria

RED=SEVERE: Trigger, 1 of any type listed below

1 of any type:
- Immediate evaluation
- Transfer to higher acuity level
- 1:1 staff ratio

Awareness, Headache, Visual
- Consider Neurology consult
- CT Scan
- R/O SAH/intracranial hemorrhage

BP
- Labetalol/Hydralazine/nifedipine within 30-60 min
- In-person evaluation
- Magnesium sulfate loading or maintenance infusion

Chest Pain
- Consider CT angiogram

Respiration SOB
- O2 at 10L per non-rebreather mask

This figure was adapted from the Improving Health Care Response to Preeclampsia: A California Quality Improvement Toolkit, funded by the California Department of Public Health, 2014; supported by Title V funds.

Eclampsia Algorithm

*From ACOG Safe Motherhood Initiative March 2025

Example

Eclampsia Checklist

- ☐ Call for Assistance
- ☐ Designate:
  - ☐ Team leader
  - ☐ Checklist reader/recorder
  - ☐ Primary RN
- ☐ Ensure side rails up / padding is possible
- ☐ Take Vital Signs (VS)
- ☐ Protect airway and improve oxygenation:
  - ☐ Maternal pulse oximetry
  - ☐ Supplemental oxygen (100% non-rebreather)
  - ☐ Lateral decubitus position
  - ☐ Bag-mask ventilation available
  - ☐ Suction available
- ☐ Continuous fetal monitoring
- ☐ Place IV / Draw preeclampsia labs
- ☐ Administer magnesium sulfate
- ☐ Antihypertensive therapy within 1 hour for persistent severe range BP (see Hypertensive Emergency Checklist)
- ☐ Develop delivery plan, if appropriate
- ☐ Antenatal corticosteroids (if indicated)
- ☐ Place indwelling urinary catheter
- ☐ Brain imaging if indicated
- ☐ Debrief patient, family, and obstetric team

Anticonvulsant Medications

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
- ☐ Maintenance 1-2 grams/hour

No IV access:

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

Recurrent seizures

- ☐ **Magnesium sulfate (re-bolus):** 2 grams over 3-5 minutes
- ☐ **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 of 30 mg
- ☐ **Midazolam (IV or IM when IV access is not available):** 10 mg IM or 0.2 mg/Kg once (maximum dose: 10 mg)

For Persistent Seizures

- ☐ Neuromuscular block and intubate
- ☐ Obtain radiographic imaging
- ☐ ICU admission
- ☐ Anticonvulsant medications
- ☐ Additional work-up

Guidance on Head Imaging

- Patients with seizures who do not fit the diagnosis of preeclampsia
- Persistent neurologic deficit
- Prolonged loss of consciousness
- Onset of seizures > 48 hours after giving birth
- Onset of seizures < 20 weeks
- Seizures despite magnesium therapy

ACOG District II | SMI Safe Motherhood Initiative

Hypertensive Emergency Checklist

*From ACOG Safe Motherhood Initiative March 2025

Example

Hypertensive Emergency Checklist

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

- ☐ Call for Assistance
- ☐ Designate:
  - ☐ Team leader
  - ☐ Checklist reader/recorder
  - ☐ Primary RN
- ☐ Ensure side rails up / padding if possible
- ☐ Institute fetal surveillance if viable
- ☐ Place IV / Draw preeclampsia labs
- ☐ Antihypertensive therapy within 1 hour for persistent severe range BP
- ☐ Administer seizure prophylaxis
- ☐ Antenatal corticosteroids (if indicated)
- ☐ Place indwelling urinary catheter
- ☐ If first line agents unsuccessful, emergency consult with specialist (MFM, internal medicine, OB anesthesiology, critical care) is recommended
- ☐ Brain imaging if unremitting headache or neurological symptoms
- ☐ Debrief patient, family, and obstetric team

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
☐ Maintenance 1-2 grams/hour

No IV access:
☐ 10 grams of 50% solution IM (5 g in each buttock)

If contra-indicated:
Levetiracetam can be considered as a second line agent

Antihypertensive Medications (see table)

Labetalol

- Maximum cumulative IV dose in 24 hours : 300 mg
- Hold IV labetalol for maternal pulse under 60
- Avoid parenteral labetalol with active asthma, heart disease, or congestive heart failure
- Use with caution with history of asthma

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

- Maximum cumulative IV dose in 24 hours: 20 mg
- May increase risk of maternal hypotension

Oral Nifedipine (immediate-release)

- Maximum daily dose: 180 mg
- Capsules should be administered orally, not punctured or otherwise administered sublingually

Guidance on Head Imaging

- Patients with seizures who do not fit the diagnosis of preeclampsia
- Persistent neurologic deficit
- Prolonged loss of consciousness
- Onset of seizures > 48 hours after giving birth
- Onset of seizures < 20 weeks
- Seizures despite magnesium therapy

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Hypertensive Emergency Checklist

*From ACOG Safe Motherhood Initiative March 2025

PROTOCOLS FOR THE TREATMENT OF SEVERE HYPERTENSION
SBP ≥ 160 mm Hg or DBP ≥ 110 mm Hg and persistent for 15 minutes

Time (min)	0	10	20	30	40	50	60
LABETALOL (IV)	**20 mg IV**	SBP ≥ 160 or DBP ≥ 110 **40 mg IV**	SBP ≥ 160 or DBP ≥ 110 **80 mg IV**	SBP ≥ 160 or DBP ≥ 110 **10 mg IV HYDRALAZINE**		SBP ≥ 160 or DBP ≥ 110 **CONSULT AND TREAT**	

Time (min)	0	10	20	30	40	50	60
HYDRALAZINE (IV)	**5-10 mg IV**		SBP ≥ 160 or DBP ≥ 110 **10 mg IV**		SBP ≥ 160 or DBP ≥ 110 **20 mg IV LABETALOL**	SBP ≥ 160 or DBP ≥ 110 **40 mg IV LABETALOL CONSULT AND TREAT**	

Time (min)	0	10	20	30	40	50	60
NIFEDIPINE (PO)	**10 mg PO**		SBP ≥ 160 or DBP ≥ 110 **20 mg PO**		SBP ≥ 160 or DBP ≥ 110 **20 mg PO**		SBP ≥ 160 or DBP ≥ 110 **20 mg IV LABETALOL CONSULT AND TREAT**

Adapted from Fishel Bartal M, Sibai BM. Eclampsia in the 21st century. Am J Obstet Gynecol. 2022 Feb;226(2S):S1237-S1253.

ACOG District II

SMI Safe Motherhood Initiative

Emergency Department Postpartum Preeclampsia Checklist

*From ACOG Safe Motherhood Initiative March 2025

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
- ☐ **Call obstetric consult, Document call**
- ☐ **Place IV; Draw preeclampsia labs:**
  - ☐ CBC
  - ☐ PT
  - ☐ PTT
  - ☐ Fibrinogen
  - ☐ Chemistry Panel
  - ☐ Uric Acid
  - ☐ Hepatic Function
  - ☐ Type and Screen
- ☐ **Administer seizure prophylaxis**
- ☐ **Administer anti-hypertensive 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**

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
- ☐ Maintenance 1-2 grams/hour

No IV access:
- ☐ 10 grams of 50% solution IM (5 g in each buttock)

If contra-indicated:
Keppra: 500 mg IV or orally, may repeat in 12 hours. Dose adjustment needed if renal impairment

Antihypertensive Medications (see table)

Labetalol

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- Hold IV labetalol for maternal pulse under 60
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- Onset of seizures > 48 hours after giving birth
- Onset of seizures < 20 weeks
- Seizures despite magnesium therapy

ACOG District II | SMI Safe Motherhood Initiative

Emergency Department Postpartum Preeclampsia Checklist

*From ACOG Safe Motherhood Initiative March 2025

PROTOCOLS FOR THE TREATMENT OF SEVERE HYPERTENSION
SBP ≥ 160 mm Hg or DBP ≥ 110 mm Hg and persistent for 15 minutes

Time (min)	0	10	20	30	40	50	60
LABETALOL (IV)	**20 mg IV**	SBP ≥ 160 or DBP ≥ 110 **40 mg IV**	SBP ≥ 160 or DBP ≥ 110 **80 mg IV**	SBP ≥ 160 or DBP ≥ 110 **10 mg IV HYDRALAZINE**		SBP ≥ 160 or DBP ≥ 110 **CONSULT AND TREAT**	

Time (min)	0	10	20	30	40	50	60
HYDRALAZINE (IV)	**5-10 mg IV**		SBP ≥ 160 or DBP ≥ 110 **10 mg IV**		SBP ≥ 160 or DBP ≥ 110 **20 mg IV LABETALOL**	SBP ≥ 160 or DBP ≥ 110 **40 mg IV LABETALOL CONSULT AND TREAT**	

Time (min)	0	10	20	30	40	50	60
NIFEDIPINE (PO)	**10 mg PO**		SBP ≥ 160 or DBP ≥ 110 **20 mg PO**		SBP ≥ 160 or DBP ≥ 110 **20 mg PO**		SBP ≥ 160 or DBP ≥ 110 **20 mg IV LABETALOL CONSULT AND TREAT**

Adapted from Fishel Bartal M, Sibai BM. Eclampsia in the 21st century. Am J Obstet Gynecol. 2022 Feb;226(2S):S1237-S1253.

ACOG District II

SMI Safe Motherhood Initiative

Case Study #1

Patient: **A 32-year-old, G2P1, woman, 3 weeks postpartum, presented to the clinic with complaints of severe headache, blurry vision, and right upper quadrant pain. Her blood pressure was 160/100 mmHg, and she had a history of gestational hypertension during pregnancy.**

History: The patient had a vaginal delivery 3 weeks prior, with a normal pregnancy course except for gestational hypertension. She was discharged home with labetalol for hypertension management.

Symptoms/Findings:

- **Hypertension:** Systolic blood pressure persistently elevated at 160 mmHg or higher.
- **Neurological:** Severe headache, blurry vision, and possible visual disturbances.
- **Abdominal Pain:** Right upper quadrant pain, potentially indicating liver involvement.
- **Labs:** Elevated liver enzymes (AST, ALT), thrombocytopenia, and elevated creatinine.

What Diagnosis do you anticipate?

- Diagnosis: The patient's symptoms, blood pressure, and lab results strongly suggest postpartum preeclampsia with HELLP syndrome.

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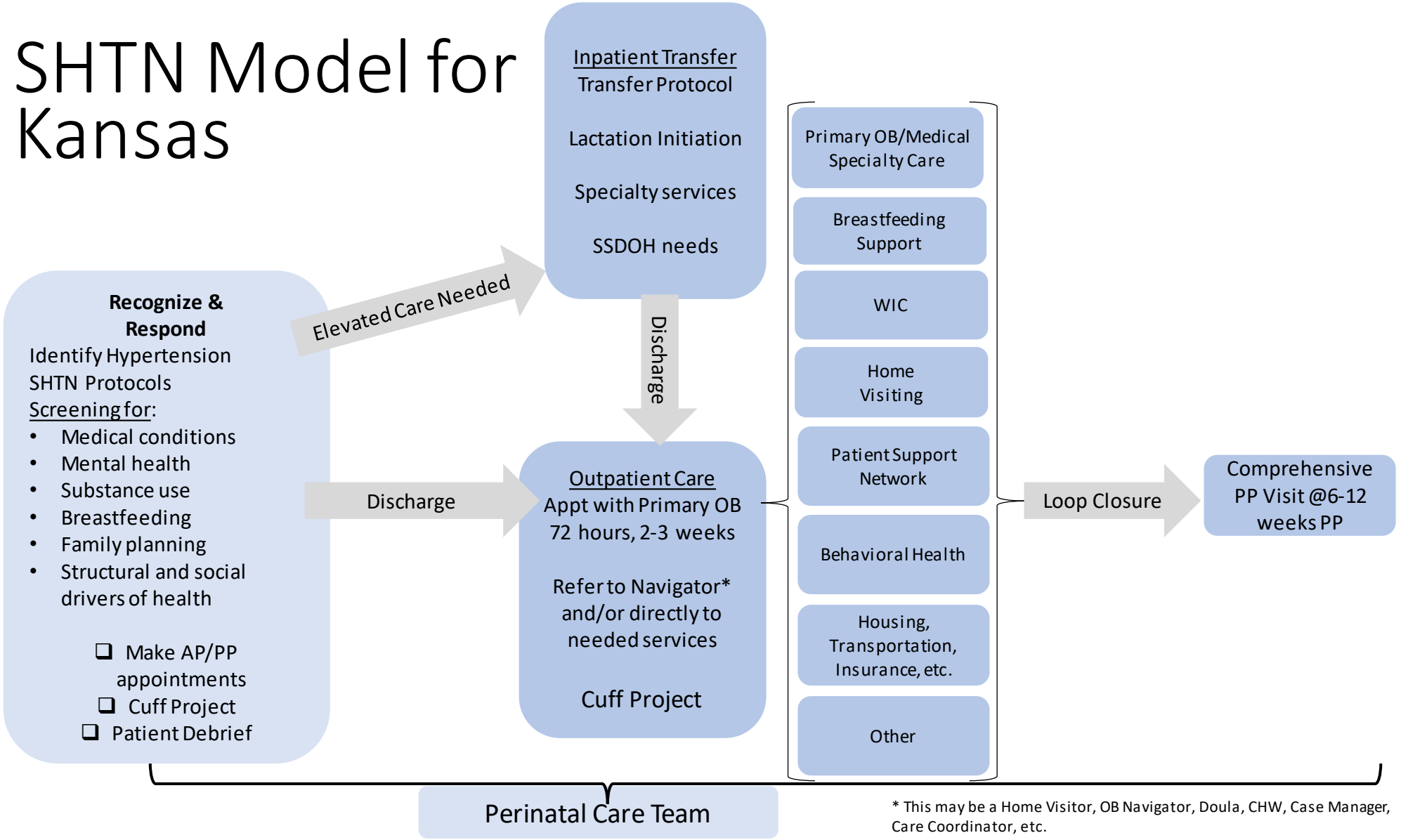
Case Study #1 continued…

Management:

- **Hospitalization:** Immediate admission to the hospital for intensive monitoring and management.
- **Blood Pressure Control:** Aggressive management of hypertension with medications like hydralazine or labetalol (if not already on it).
- **Magnesium Sulfate:** Magnesium sulfate (MGSO4) is administered to prevent seizures.
- **HELLP Syndrome Management:** Address thrombocytopenia and liver dysfunction with blood transfusions, corticosteroids, and other supportive measures.
- **Delivery:** If the patient is at term, delivery may be considered, depending on the severity of the condition and fetal status.
- **Corticosteroids** for fetal lung maturity: Betamethasone/Dexamethasone
- **Long-Term Follow-up:** Postpartum follow-up is essential to monitor for recurrence and other complications.
- SSDOH needs
- Lactation Needs

Outcome: The patient's condition stabilized after aggressive treatment, and she was discharged home with a plan for continued hypertension management and regular follow-up appointments.

SHTN Model for Kansas



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

Case Study #2 (Rural ED Presentation, Non-birthing facility)

Patient: 25-year-old G1P0 woman presents to a small rural ED 30 weeks gestation.

Symptoms/findings: Complaints of 10hrs pain, pelvic cramping (4/10) radiating to lower back as well as gradual onset 8/10 diffuse throbbing headache with blurred vision.

Denies vaginal bleeding, urinary symptoms, GI symptoms, fever or chills. Denies neck pain or stiffness, limb weakness or numbness or speech difficulty.

BP 175/115, HR 95, RR 17, T 36.5C.

GCS 15, PERL, normal gait, no pronator drift, DTR's hyperreflexia.

Cervix 2cm with greenish discharge per os. GBS unknown.

- Urine dip 3+ protein and 2+ blood. Routine labs sent but no results yet. Time to transfer to closest tertiary center is approx. 4 hours.

What is your initial impression?

- **Preterm Labor with severe preeclampsia Management:**
- MGSO4 (for 2 reasons) maternal seizure prophylaxis and fetal neuro protection
- Antihypertensive (labetalol, nifedipine or hydralazine)
- Ampicillin (unknown GBS with labor) prior to transfer
- Betamethasone IM (fetal lung maturity <36 weeks) 12mg IM q24h x 2 or Dexamethasone 6mg IM q 12h prior to transfer

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Case Study #2 (Rural ED Presentation) continued…

Administered 4gm MGSO4 over 20-30 minutes. As loading dose finishes, she begins to seize.

Would you give an additional MGSO4 bolus or infusion now that she is seizing?

Yes: 2g over 5 minutes followed by 1.5g/hr. If 2 boluses don't resolve the seizer, then second line agent such as midazolam 5mg IV should be considered.

On your way to the tertiary care center, you learn her platelets are 43,000. What are your thoughts?

Delivery: Transferred to a tertiary care center and was delivered by c-section with a good neonatal outcome.

During the transfer, she remained on MgSO4 1 g/hour.

She received 1 unit of platelets on arrival to the tertiary care center.

Outcome: She had subsequent resolution of hypertension and did not develop any further sequelae.

*Note about IM MGSO4 for transfer

SSDOH?

Lactation?

Follow up plan?

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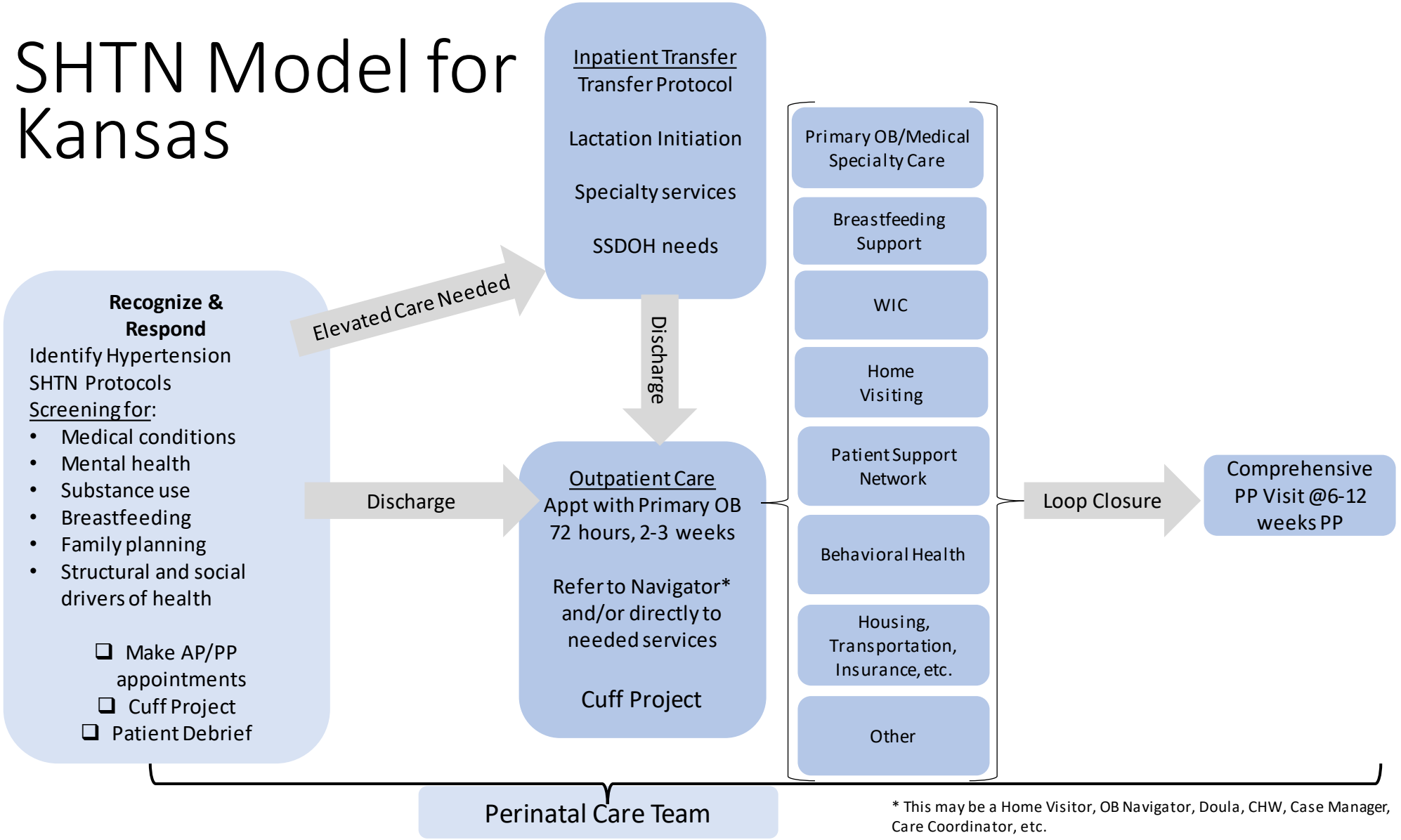
SHTN Model for Kansas



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Case Study #3

Patient: 28yo G2P1001 at 34w2d presenting for headache and blurry vision.

History: Her medical history is uncomplicated. Her previous pregnancy was complicated by gestational hypertension at 38 weeks, resulting in induction of labor and uncomplicated spontaneous vaginal delivery.

- She has no known drug allergies
- She has been taking Aspirin 81mg daily during pregnancy

States she has a headache started about 2 hours ago and is severe. About an hour ago, she developed blurry vision. Patient states she "just doesn't feel right."

Symptoms/Finding:

Initial vital signs taken 15 minutes prior were: BP 145/99, HR 81, RR 18, O2 Sat 98% on room air.

- FHR Tracing (if available): Baseline 140, moderate variability, no accelerations, no decelerations. Tocodynamometer: flat

Laboratory Data (on admission):

- Hemoglobin: 12.2 g/dL
- Hematocrit: 36.6 %
- WBC: 12,000 K/uL
- Platelets: 218,000 K/uL
- AST: 22 IU/L
- ALT: 32 IU/L
- Serum Creatinine: 0.7 mg/dL
- Urine Protein/Creatinine Ratio: pending (this will not become available during the case study)
- Last ultrasound performed at 32 weeks with fetus measuring appropriate for gestational age.

Case Study #3 continued…

What is your first impression?

Next BP 170/105, HR 88

How would you anticipate management?

MGSO4 bolus if not already started, continuous pulse ox, Antihypertensives IV

After treatment: BP 155/92, HR 100, O2 98% RA, RR 18

Discuss delivery options and further management.
Talk to the family!!!

Delivery: Not imminent. But steroids for fetal lungs; Continue to monitor BPs with treatment as necessary. If neuro symptoms do not resolve, continue mag and start induction.

Transfer if needed?

SSDOH?

Lactation if delivered?

Follow up plan?

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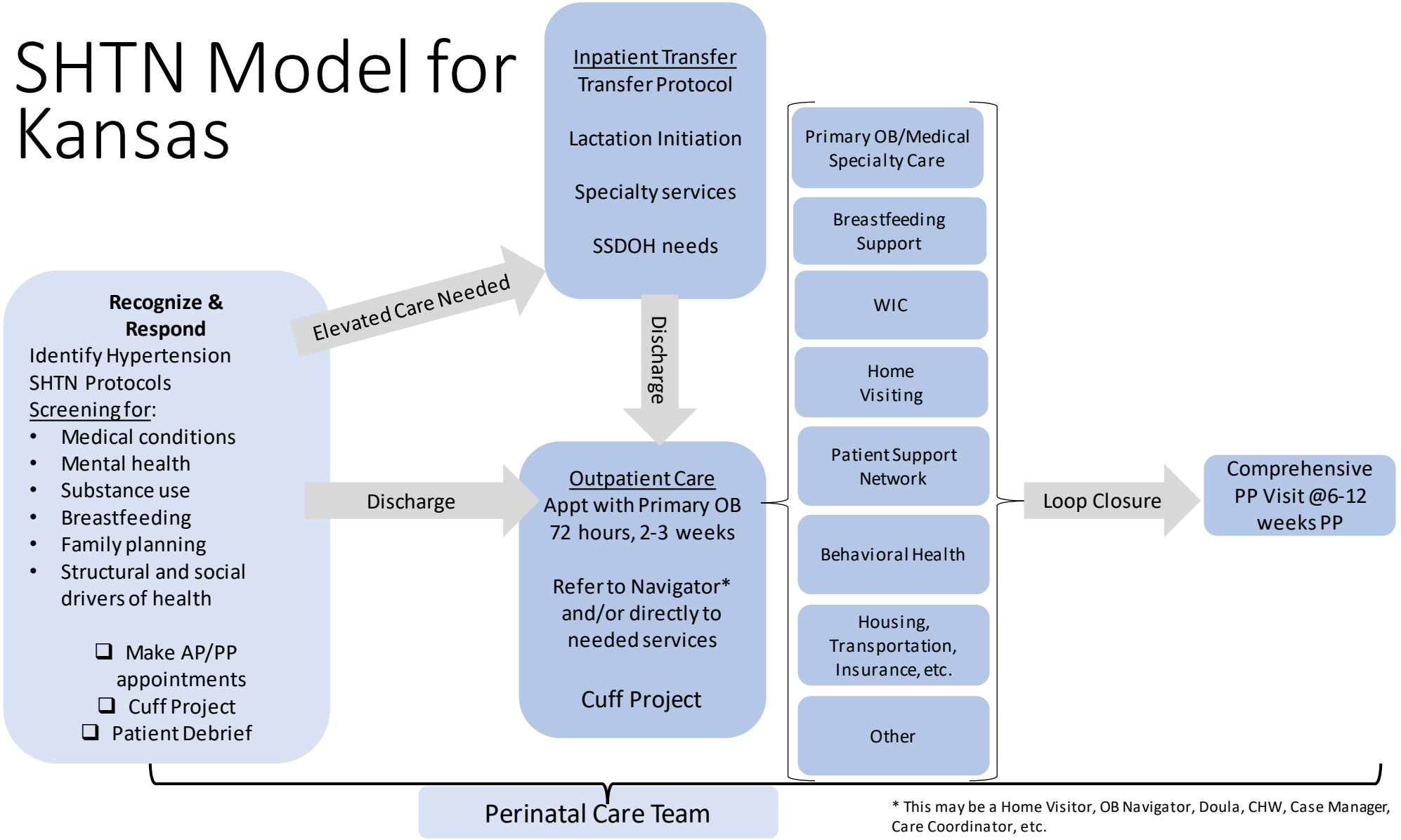
SHTN Model for Kansas



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Case Study #4

Patient: 28 -year-old patient G4P1 at 34.6 weeks presented to triage for elevated BP's in addition to a headache she is rating a 6/10.

Symptoms/findings:

Blood pressure at 180/120mmHg, +++ protein,

Headache and epigastric pain

FHR 145bpm, category 2 tracing; Labs: AST- ALT both elevated, Platelets- 61,000

- How would you anticipate management?
- Antihypertensives, Magnesium Sulfate bolus and maintenance, Steroids for fetal lungs, Possible Delivery?
- Delivery: The patient delivered via a C/S due to her history of a prior C/S as her BP's continued to be elevated within the severe ranges despite antihypertensives and her neuro symptoms worsened.
- She discharged home on pp day 3.
- SSDOH?
- Lactation?
- Follow up?

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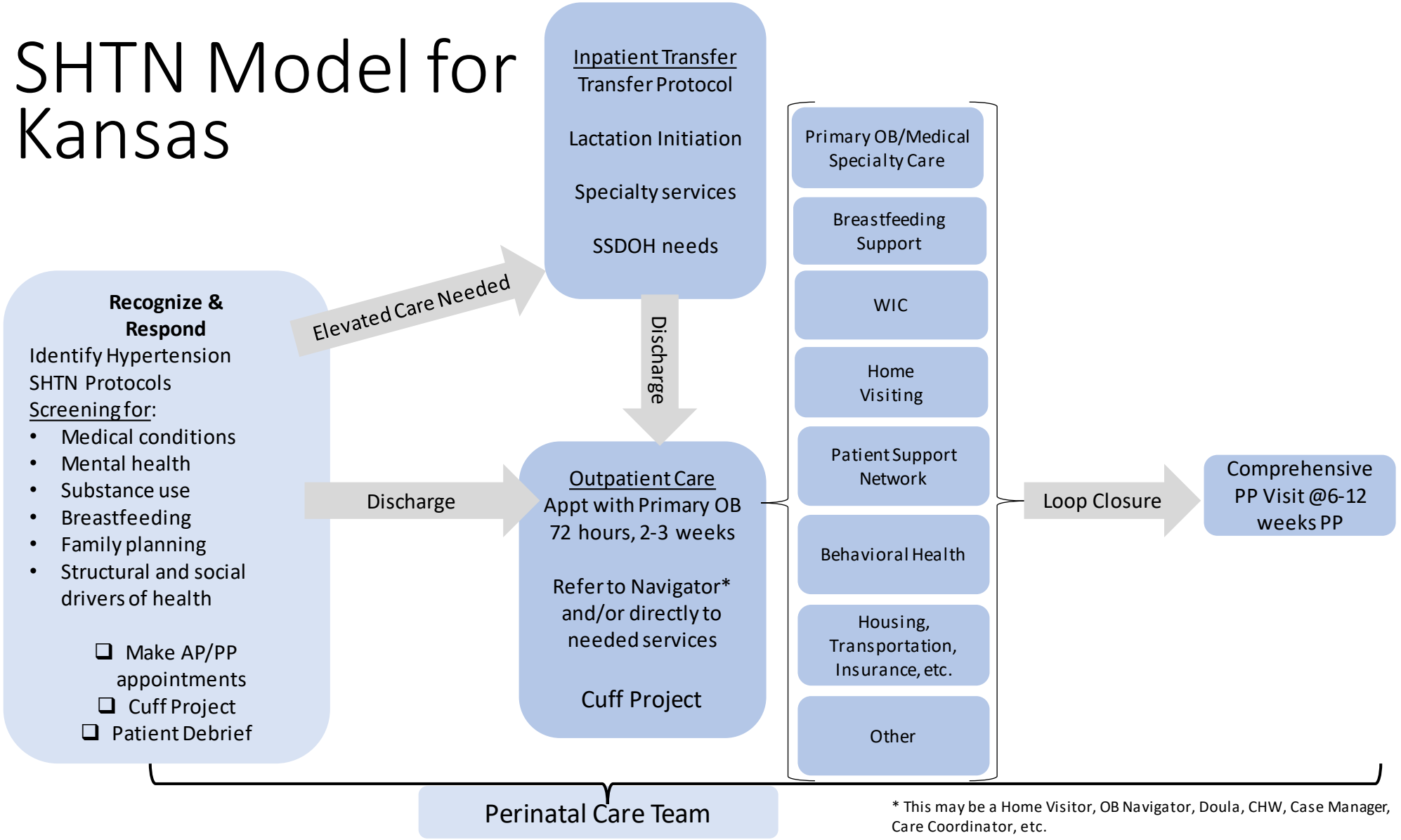
SHTN Model for Kansas



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Let's talk about Transport

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Next Steps…

Pumping Survey

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Learning Forums

Another perk of being enrolled!!!

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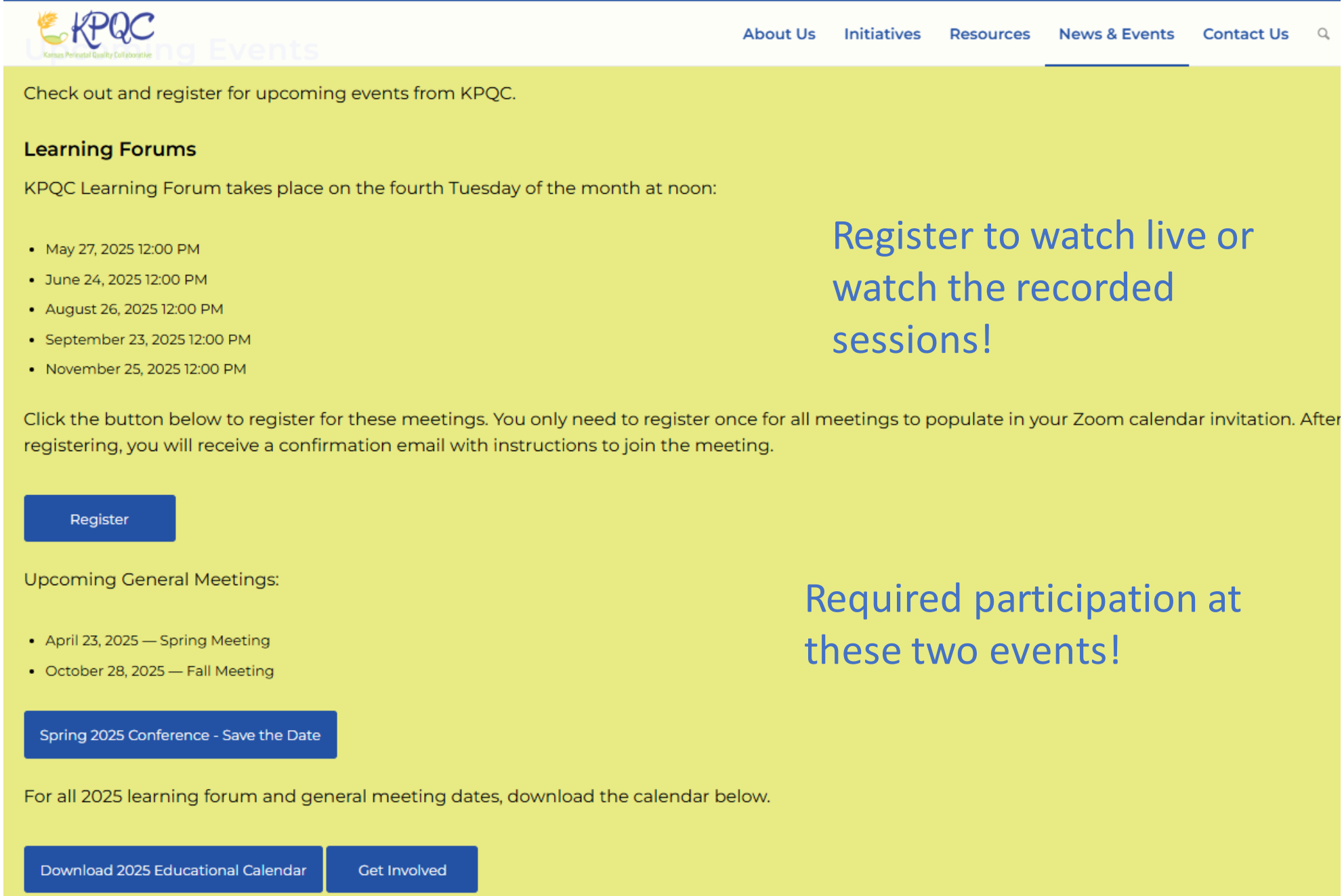

Register to watch live or watch the recorded sessions!

Required participation at these two events!

https://kansaspqc.kdhe.ks.gov/news-events/

Data Deadlines: Next input due July 30, 2025

Submitted (Total 21)	
Advent Health Shawnee Mission	
Amberwell Hiawatha	
Atchison Hospital Association dba Amberwell Atchison	
Cheyenne County Hospital	
Citizens Medical Center	
Coffeyville Regional Medical Center	
Community Healthcare System	
Gove Regional Medical Center	
Kearny County Hospital	
Lawrence Memorial Hospital	
McPherson Hospital	
Mitchell County Hospital Health System	
Nemaha Valley Community Hospital	
Neosho Memorial Regional Medical Center	
Newman Regional Health	
Newton Medical Center	
Pratt Regional Medical Center	
Stormont Vail Health	
University of Kansas Health System - Kansas City	
University of Kansas Health System - St. Francis	
William Newton Hospital	

For questions, please touch base with Michelle Black:

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Simulations

- KU Care Collaborative
- Kansas Perinatal Quality Collaborative
- Community Clinical Experts

We are all working together to provide these simulations. Stay tuned!!!

Discussion: Challenges and Successes

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- Ascension Via Christi Pittsburgh
- Coffeyville Regional Medical Center
- Kearny County Hospital
- Labette Health
- Republic County Hospital
- Salina Regional Health Center

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FOURTH TRIMESTER INITIATIVE

SILVER LEVEL

- AdventHealth South Overland Park
- Atchison Hospital Association dba Amberwell Atchison
- Newton Medical Center
- Overland Park Regional Medical Center
- Sabetha Community Hospital
- Smith County Memorial Hospital
- Southwest Medical Center
- University of Kansas Health System- St. Francis

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FOURTH TRIMESTER INITIATIVE

GOLD LEVEL

- AdventHealth Shawnee Mission
- Amberwell Hiawatha
- Ascension Via Christi Manhattan
- Ascension Via Christi Wichita St. Joseph
- Clay County Medical Center
- Citizens Medical Center
- Community Healthcare System
- Hays Medical Center
- Hutchinson Regional Medical Center
- Lawrence Memorial Hospital
- McPherson Center for Health
- Mitchell County Hospital Health System
- Nemaha Valley Community Hospital
- Neosho Memorial Regional Medical Center
- Newman Regional Health
- Pratt Regional Medical Center
- Stormont Vail Health- Flint Hills Campus
- Stormont Vail Health- Topeka Campus
- University of Kansas Health System- Great Bend
- University of Kansas Health System- KC
- University of Kansas Health System, Olathe Campus
- Wesley Medical Center

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