NNEPQIN
NORTHERN NEW ENGLAND
PERINATAL QUALITY IMPROVEMENT NETWORK

The following guidelines are intended only as a general educational resource for hospitals and clinicians, and are not intended to reflect or establish a standard of care or to replace individual clinician judgment and medical decision making for specific healthcare environments and patient situations.

NNEPQIN Guideline for the Management of Hypertensive Disorders of Pregnancy Revised 5/24/19

In November of 2013 the ACOG Task Force on Hypertension published an Executive Summary statement regarding the management of hypertension in pregnancy (1). The Task Force used strategies from the Grading of Recommendations Assessment, Development and Evaluation (GRADE) Working Group to evaluate the available evidence and make recommendations for care. In 2019 ACOG published Practice Bulletin #202 "Gestational Hypertension and Preeclampsia" and #203 "Chronic Hypertension in Pregnancy." These documents are the primary basis for this guideline.

Unit Structure

Each delivery unit should maintain standardized policy and procedure regarding the management of hypertensive disorders of pregnancy. Special consideration should be given toward the development of guidelines and order sets for the management of acute onset of severe hypertension with preeclampsia or eclampsia (2). Units should consider special training and simulated exercises in the care of patients with these conditions. Front-line staff performing patient assessment should be trained to recognize the signs and symptoms that indicate deterioration in the patient condition.

How to take a Blood Pressure

Blood pressure should not be taken until at least 10 minutes after arrival in the exam room and 30 minutes after caffeine and tobacco. Patient should be sitting, feet flat, legs uncrossed, with back support and not talking. An appropriate-sized cuff must be used on a bare arm with arm resting at heart level. Ideally, all blood pressure measurements should be taken twice with 60 seconds between measurements and recorded as the average.

Definitions:

- Gestational hypertension: Blood pressure ≥ 140 mmHg systolic or ≥ 90 mmHg diastolic on two occasions at least 4 hours apart, after 20 weeks gestation in a woman with previously normal blood pressure without significant proteinuria or severe features of preeclampsia. New diagnosis of hypertension in the second trimester should take into account the possibility that there is previously undiagnosed chronic hypertension.

- Preeclampsia: Blood pressure ≥ 140 mmHg systolic or ≥ 90 mmHg diastolic on two occasions at least 4 hours apart after 20 weeks gestation in a woman with previously normal blood pressure with:
    - proteinuria (24 hour urine protein ≥ 300 mg (or extrapolated by a shorter duration collection), urine protein/creatinine ratio ≥ 0.3 or 1+ dipstick)

      OR
    - evidence of preeclampsia with severe features

- Severe features of preeclampsia: any of the following:
    - Blood pressure ≥ 160 mmHg systolic or ≥ 110 mmHg diastolic on two occasions at least 4 hours apart. (Preeclampsia with severe features is considered present when antihypertensive medications are used to treat severe hypertension prior to a 4 hour period of time.)
    - Thrombocytopenia: platelet count < 100,000/microliter
    - Renal insufficiency: creatinine ≥ 1.1 mg/dl or doubling of serum creatinine in the absence of other renal disease
    - Impaired liver function: elevated hepatic transaminases to twice the upper limit of normal and/or severe persistent right upper quadrant or epigastric pain unresponsive to medication and not accounted for by alternative diagnosis
    - Pulmonary edema
    - New-onset cerebral or visual disturbance (including persistent severe headache and scotomata)

- Chronic hypertension: Diagnosis of hypertension prior to pregnancy or blood pressure ≥ 140 mmHg systolic or ≥ 90 mmHg diastolic prior to 20 weeks gestation. New national guidelines (American Heart Association and American Cardiology Association) have made new recommendations about the diagnostic criteria for hypertension and define stage I hypertension as 130-139/80-89 mm Hg. It is reasonable to treat women previously diagnosed with stage I hypertension as having chronic hypertension.

- Superimposed preeclampsia: diagnosis of preeclampsia in a woman with chronic hypertension

- Eclampsia: New onset grand mal seizures in a woman with preeclampsia or gestational hypertension

- HELLP syndrome: hemolysis, elevated liver enzymes and low platelets. LDH ≥600 IU/L, AST or ALT at least 2 times the upper limit of normal, and platelets < 100,000. The most common presenting symptoms are RUQ pain and malaise in 90% and nausea and vomiting in 50%. There may or may not be hypertension.

Summary of Recommendations of the ACOG Task Force on Hypertension in Pregnancy and 2019 ACOG Practice Bulletins."

Prevention of preeclampsia (ACOG and the USPTF)

- Recommend low dose aspirin initiated in the late first trimester (between 12 and 28 weeks gestation, ideally before 16 weeks) until delivery for the prevention of preeclampsia in women who have one or more high risk factors for preeclampsia or who have ≥ 2 risk factors (3). ACOG recommends 81 mg aspirin per day. There are studies which have successfully higher doses. If a dose above 81 mg is prescribed, no more than 1 ½ tabs of 81 mg tablets per day should be given.

Table 1. Clinical Risk Assessment for Preeclampsia

High Risk Factors	**Recommendation**
History of preeclampsia	Recommend low-dose aspirin if the patient has ≥ 1 of these high-risk factors
Multifetal gestation	
Chronic hypertension	
Type 1 or type 2 diabetes	
Renal disease	
Autoimmune disease (i.e. lupus, antiphospholipid syndrome)	
Moderate Risk Factors	Consider low-dose aspirin if the patient has ≥ 2 of these moderate-risk factors*
Nulliparity	
Obesity (BMI > 30 kg/m^2)	
Family history of preeclampsia (mother or sister)	
Age ≥ 35 years	
Sociodemographic characteristics (African American race, low SES)	
Personal history factors (e.g. prior SGA infant, prior adverse pregnancy outcome, > 10 year interval since last pregnancy)	

Initial assessment of chronic hypertension in pregnancy

Women with a diagnosis of chronic hypertension: obtain baseline labs including CBC and complete metabolic profile, urinalysis, proteinuria assessment with either a 24- hour urine or spot urine protein creatinine ratio. Electrocardiogram if poor control for at least 4 years or onset of hypertension before age 30 years. If the patient has not had care from a primary care provider, consider referral for evaluation for secondary hypertension.

Initial assessment of hypertension of pregnancy (appendix 1)

- Women with normal blood pressure until after the 20th week of gestation who develop either systolic BP ≥ 140 mmHg or diastolic BP ≥ 90 mmHg on two occasions at least 4 hours apart require evaluation including:
    - Evaluation for the symptoms of preeclampsia with severe features
    - CBC, creatinine, liver enzyme studies
    - LDH if thrombocytopenia or elevated hepatic transaminases are detected
    - Proteinuria assessment (protein/creatinine ratio or 24-hour urine)
    - Ultrasound for EFW and amniotic fluid volume assessment
    - If ≥ 32 weeks, NST (BPP if nonreactive)
- Women with normal blood pressure until after the 20th week of gestation who develop either systolic BP ≥ 160 or diastolic BP ≥ 110 on 2 occasions at least 4 hours apart require hospitalization for initial evaluation.

Surveillance for outpatient expectant management

- All women with gestational hypertension or preeclampsia without severe features should have:
    - Daily maternal assessment of fetal movement and symptoms (headache, visual changes, epigastric/RUQ pain and shortness of breath)
    - Weekly or twice weekly assessment of blood pressure
    - Weekly or twice weekly antenatal testing (usually nonstress tests) starting as early as 32 weeks
    - Weekly ultrasound for amniotic fluid volume
    - Weekly assessment of urine protein (if not already elevated), platelet count, creatinine and liver function
    - LDH if thrombocytopenia or elevated hepatic transaminases are detected
    - Ultrasound for fetal growth every 3 weeks
- If fetal growth restriction is identified, umbilical artery Doppler studies should be included with antenatal testing weekly.

General issues of expectant management

- For women with gestational hypertension or preeclampsia with a persistent blood pressure < 160 mmHg systolic and <110 mmHg diastolic, medication is not indicated. If use of antihypertensive medications is ever considered, it is recommended that not they not be initiated in the outpatient setting.
- Strict bed rest should not be prescribed
- Hospitalization is indicated when preeclampsia with severe features is present, or if fetal growth restriction <5th percentile or nonreassuring fetal testing is present.
- Preeclampsia with severe features at < 34 0/7 weeks with stable maternal and fetal condition should be managed at facilities with adequate maternal and neonatal intensive care resources.
- Hospitalization for delivery is recommended at 37 0/7 weeks for women with gestational hypertension or preeclampsia without severe features.

Inpatient Assessment and General Management (Appendix 1)

- Upon admission:
    - Evaluate for symptoms of preeclampsia with severe features
    - CBC, creatinine, liver enzyme studies, LDH
    - Coagulation studies if platelets < 150,000
    - Proteinuria assessment
    - Ultrasound for EFW and amniotic fluid volume, if not recently performed
    - NST, BPP if nonreactive
- Women with systolic BP ≥ 160 mmHg or diastolic BP ≥ 110 mmHg, persisting for longer than 15 minutes require urgent antihypertensive treatment. Options for medication include IV labetalol (avoid in women with asthma unless it is well-controlled and mild intermittent), IV hydralazine and oral short acting nifedipine. (Appendices 4, 5 and 6)
    - The target blood pressure for treatment is systolic BP 140-160 mmHg and diastolic BP 90-110 mmHg.
- Magnesium Sulfate
    - Magnesium sulfate is indicated for seizure prophylaxis when preeclampsia with severe features or eclampsia is present.
    - Universal use of magnesium sulfate is not recommended for women with preeclampsia without severe features, but should be considered with certain signs or symptoms, including headache, altered mental status, blurred vision, scotomata, clonus and right upper quadrant pain.
    - Magnesium sulfate should be continued in the operating room during cesarean delivery.

    - When magnesium is administered, it should be discontinued after 24-48 hours if delivery is not indicated.
- Neuraxial anesthesia is recommended for labor analgesia and cesarean delivery.
- Mode of delivery with preeclampsia should be determined by fetal gestational age, fetal presentation, cervical status, and maternal and fetal condition.

Delivery Timing and Corticosteroids

- Regardless of gestational age, if unstable maternal or fetal condition, deliver soon after maternal stabilization is achieved
- If ≥ 37 0/7 weeks, deliver if gestational hypertension or preeclampsia without severe features is present.
- If ≥ 34 0/7 weeks, deliver if gestational hypertension or preeclampsia without severe features is associated with:
    - PPROM or labor
    - EFW <5th percentile
    - Oligohydramnios (MVP < 2 cm)
    - Persistent BPP 6/10 or less
    - Suspected placental abruption
- If ≥ 34 0/7 weeks, deliver if severe preeclampsia or HELLP syndrome is present, soon after maternal stabilization is achieved
- If < 34 0/7 weeks, administer first corticosteroid dose, but do not delay delivery after maternal stabilization for preeclampsia with severe features with:
    - Uncontrollable severe hypertension
    - Eclampsia
    - Pulmonary edema
    - Placental abruption
    - DIC
    - Nonreassuring fetal testing
- If < 34 0/7 weeks with preeclampsia with severe features or HELLP syndrome and stable maternal and fetal condition, administer corticosteroids and await 24-48 hours (consider cervical ripening in this interval) with:
    - ≥ 33 5/7 weeks' gestation
    - Persistent maternal symptoms
    - PPROM
    - Labor (do not augment spontaneous labor)
    - Platelet count < 100,000/microliter
    - Persistently abnormal hepatic enzyme concentration (twice or more times the upper limit of normal)
    - Fetal growth restriction (EFW at < 5th percentile)
    - Severe oligohydramnios (MVP< 2 cm)
    - Reversed end diastolic flow of umbilical artery Doppler study
    - New onset renal dysfunction (creatinine 1.1 mg/dl or doubling of serum creatinine in the absence of other renal disease) or increasing renal dysfunction.
- If < 33 5/7 weeks with preeclampsia with severe features and an otherwise stable maternal and fetal condition exists, continued expectant management in hospital can be considered.
    - Adequate maternal and neonatal intensive care resources should be available.
    - Magnesium should be discontinued after 48 hours.
    - Oral antihypertensive medications may be utilized if indicated.
- Prior to fetal viability: Delivery soon after maternal stabilization is recommended for women with severe preeclampsia or HELLP syndrome. Expectant management is not recommended.

- Late preterm corticosteroids may be administered between 34 and 36 5/7 weeks if induction of labor is being undertaken and delivery is not anticipated within 12 hours, but delivery should not be delayed for corticosteroid administration at this gestational age.

Postpartum (Appendix 2)

- After delivery, all women with hypertensive disorders of pregnancy should have blood pressure monitoring in the hospital, or by visiting nurse or equivalent outpatient setting:
    - For 72 hours after delivery
    - At 7-10 days after delivery
    - At any time after discharge if symptoms of preeclampsia develop (Appendix 3)
- Anti-hypertensive therapy is recommended for
    - Persistent blood pressure ≥ 150 mmHg systolic or ≥ 100 mmHg diastolic on two occasions at least 4-6 hours apart.
    - Persistent blood pressure ≥ 160 mmHg systolic or ≥ 110 mmHg diastolic should be treated within one hour.
- Hospitalize women for parenteral magnesium sulfate administration who present postpartum with hypertension associated with:
    - Headaches, visual changes, altered mental status, epigastric pain or shortness of breath
    - Severe features of preeclampsia
    - Magnesium sulfate should be given for at least 24 hours in this setting

Chronic hypertension and chronic hypertension with superimposed preeclampsia

Prevention of preeclampsia in women with chronic hypertension

- For women with chronic hypertension, recommend low dose aspirin (81 mg/day), initiated in the late first trimester, (between 12 and 28 weeks gestation ideally before 16 weeks), until delivery for the prevention of preeclampsia.

Antihypertensive therapy

- Pregnant women with persistent chronic hypertension of ≥ 160 mmHg systolic or ≥ 110 mmHg diastolic, medical antihypertensive therapy is indicated.
- Antihypertensive therapy is not indicated for chronic hypertension < 160 mmHg systolic or < 110 mmHg diastolic and no evidence of end-organ damage
- The target blood pressure for chronic hypertension treated with medication is between 120 mmHg systolic/ 80 mmHg diastolic and 160 mmHg systolic/ 110 mmHg diastolic
- For the initial pharmacologic treatment of pregnant women with uncomplicated chronic hypertension, labetalol (avoid in women with asthma unless it is well-controlled and mild intermittent), nifedipine, or methyldopa is recommended. ACE inhibitors, angiotensin receptor blockers, renin inhibitors, and mineralocorticoid receptor antagonists should not be used unless there is a compelling reason.

Pregnancy surveillance

- In women with chronic hypertension, ultrasound is suggested to screen for fetal growth restriction in the third trimester.
- If fetal growth restriction is identified, umbilical artery Doppler studies should be included with antenatal testing
- Antenatal testing is recommended in the following settings:
    - Women requiring treatment with antihypertensive medications
    - Fetal growth restriction
    - Women with co-morbid medical conditions that can affect fetal outcome (diabetes, renal disease)
    - Superimposed preeclampsia
- For women with chronic hypertension with no additional maternal or fetal complications, delivery before 38 0/7 weeks is not recommended. Expectant management beyond 39 0/7 weeks should only be done after careful consideration of the risks and benefits and with appropriate surveillance.
- If prescribed maintenance antihypertensive medication, delivery before 37 0/7 weeks' gestation is not recommended.
- For women with chronic hypertension who develop superimposed preeclampsia, management is determined according to the recommendations for patients with preeclampsia.
- Women with superimposed preeclampsia with worsening disease, severe features or concern for fetal well-being should be monitored as inpatients.

Appendix 1: Assessment Checklist for Preeclampsia

- If BP systolic ≥ 140 mmHg or diastolic ≥ 90 mmHg, minimal BP frequency is every 4 hours.

- If BP systolic ≥ 160 mmHg or diastolic ≥ 110 mmHg, repeat BP in 15 minutes. Minimal BP frequency is every 30 minutes until consistently below threshold for severe hypertension.

- If severe hypertension is persistent (>15 min), urgent medical treatment is administered per algorithm, with frequency of vital signs depending on response.

- If BP systolic ≥ 140 mmHg or diastolic ≥ 90 mmHg, assess for preeclampsia:
    - Vital signs including oxygen saturation and urine output
    - Unremitting headache, vision changes
    - Epigastric or RUQ pain
    - Vaginal bleeding
    - Fetal movement
    - CBC, creatinine, LFTs
    - Proteinuria
    - Nonstress test

- If gestational hypertension or preeclampsia without severe features is present at ≥ 37 weeks, anticipate delivery. Anticipate potential complications and/or clinical escalation:
    - CNS: Unremitting headache, visual changes, seizure
    - Respiratory: Tachypnea, cyanosis, pulmonary edema

- GI: Epigastric or RUQ pain, impaired liver function
- Coagulopathy, thrombocytopenia, hemolysis
- Renal: Oliguria of <30 cc/hr. in 2 consecutive hours
- Non-reassuring fetal status

- If preeclampsia with severe features is present, anticipate:
  - Treatment of BP with IV medications, per algorithm
  - Initiation of magnesium sulfate prophylaxis
  - Immediate delivery regardless of gestational age if: eclampsia, unresponsive severe hypertension, pulmonary edema, abruption, DIC, nonreassuring fetal status
  - Delivery if ≥ 34 weeks
  - Corticosteroids and observation if < 34 weeks.

Appendix 2: Assessment Checklist for Postpartum Hypertension

- For postpartum women with hypertension, the minimal frequency of BP assessment is every 4 hours, until stable.

- If BP systolic ≥ 150 mmHg or diastolic ≥ 100 mmHg on two occasions 4 hours apart, initiate antihypertensive therapy.

- If BP systolic ≥ 160 mmHg or diastolic ≥ 110 mmHg, treatment should be initiated within one hour.

- Magnesium sulfate should be continued until 24 hours postpartum, and then may be discontinued if the patient is in stable condition.

- The patient should not be discharged until the BP is well controlled (systolic < 150 mmHg and diastolic < 100 mmHg) for at least 12-24 hours.

- BP should be monitored in the hospital, or by VNA or equivalent outpatient setting for 72 hours after delivery, at 7-10 days after delivery, and if preeclampsia symptoms develop.

- Women with new onset of hypertension postpartum associated with headache, visual symptoms or other findings consistent with preeclampsia with severe features should be hospitalized and treated with parenteral magnesium sulfate.

Appendix 3: Discharge Instructions for Patients with Hypertension

Your Medications include the following:

1) _____ to be taken every ____ hours.
2) _____ to be taken every ____ hours.
3) _____ to be taken every ____ hours.

Your postpartum follow-up appointment has been made with Dr._____

On Date: _____ Time: _____

You have been instructed to check your blood pressure at home daily: Yes____ No____

Call your healthcare provider: _____ Phone Number:_____

If your blood pressure is greater than _____ systolic (top number)

and/or

If your blood pressure is greater than _____ diastolic (bottom number)

Call your healthcare provider if:

- Your temperature is greater than 100.4.
- Your bleeding is greater than a heavy menses.
- You have any headache that is not relieved with Tylenol or ibuprofen (e.g., Advil, Motrin).
- You have pain in your belly, especially the upper area below your ribs.
- You have blurry or double vision, see spots or flashing lights.
- Your swelling is worse.
- You gain more than 3 pounds in 3 days.
- You have serious difficulty catching your breath.
- You have any new or unusual symptoms.
- You have any questions or concerns.

Modified from the California Quality Care Collaborative Toolkit, 2014

Appendix 4:
First Line Management of Severe Hypertension with IV Labetalol

- Notify physician if systolic blood pressure (BP) measurement is greater than or equal to 160 mm Hg or if diastolic BP measurement is greater than or equal to 110 mm Hg.
- Institute fetal surveillance if undelivered and fetus is viable.
- If severe BP elevations persist for 15 minutes or more, administer labetalol (20 mg intravenously [IV] over 2 minutes).
- Repeat BP measurement in 10 minutes and record results.
- If either BP threshold is still exceeded, administer labetalol (40 mg IV over 2 minutes). If BP is below threshold, continue to monitor BP closely.
- Repeat BP measurement in 10 minutes and record results.
- If either BP threshold is still exceeded, administer labetalol (80 mg IV over 2 minutes). If BP is below threshold, continue to monitor BP closely.
- Repeat BP measurement in 10 minutes and record results.
- If either BP threshold is still exceeded, administer hydralazine (10 mg IV over 2 minutes). If BP is below threshold, continue to monitor BP closely.
- Repeat BP measurement in 20 minutes and record results.
- If either BP threshold is still exceeded, obtain emergency consultation from maternal–fetal medicine, internal medicine, anesthesia, or critical care subspecialists.
- Give additional antihypertensive medication per specific order.
- Once the aforementioned BP thresholds are achieved, repeat BP measurement every 10 minutes for 1 hour, then every 15 minutes for 1 hour, then every 30 minutes for 1 hour, and then every hour for 4 hours.
- Institute additional BP timing per specific order.

*Please note there may be adverse effects and contraindications.

Data from National Heart, Lung, and Blood Institute. The seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. NIH Publication No. 04-5230. Bethesda (MD): NHLBI; 2004. Available at: http://www.nhlbi.nih.gov/files/docs/guidelines/jnc7full.pdf. Retrieved October 14, 2014.

Appendix 5:
First-Line Management of Severe Hypertension with IV Hydralazine

- Notify physician if systolic blood pressure (BP) is greater than or equal to 160 mm Hg or if diastolic BP is greater than or equal to 110 mm Hg.
- Institute fetal surveillance if undelivered and fetus is viable.
- If severe BP elevations persist for 15 minutes or more, administer hydralazine (5 mg or 10 mg intravenously [IV] over 2 minutes).
- Repeat BP measurement in 20 minutes and record results.
- If either BP threshold is still exceeded, administer hydralazine (10 mg IV over 2 minutes). If BP is below threshold, continue to monitor BP closely.
- Repeat BP measurement in 20 minutes and record results.
- If either BP threshold is still exceeded, administer labetalol (20 mg IV over 2 minutes). If BP is below threshold, continue to monitor BP closely.
- Repeat BP measurement in 10 minutes and record results.
- If either BP threshold is still exceeded, administer labetalol (40 mg IV over 2 minutes) and obtain emergency consultation from maternal–fetal medicine, internal medicine, anesthesia, or critical care subspecialists.
- Give additional antihypertensive medication per specific order.
- Once the aforementioned BP thresholds are achieved, repeat BP measurement every 10 minutes for 1 hour, then every 15 minutes for 1 hour, then every 30 minutes for 1 hour, and then every hour for 4 hours.
- Institute additional BP timing per specific order.

*Please note there may be adverse effects and contraindications.

Data from National Heart, Lung, and Blood Institute. The seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. NIH Publication No. 04-5230. Bethesda (MD): NHLBI; 2004. Available at: http://www.nhlbi.nih.gov/files/docs/guidelines/jnc7full.pdf. Retrieved October 14, 2014.

* Appendix 6:

First-Line Treatment of Severe Hypertension initiated with oral nifedipine

- Notify physician if systolic blood pressure (BP) is greater than or equal to 160 mm Hg or if diastolic BP is greater than or equal to 110 mm Hg.
- Institute fetal surveillance if undelivered and fetus is viable.
- If severe BP elevations persist for 15 minutes or more, administer nifedipine[1] (10 mg orally).
- Repeat BP measurement in 20 minutes and record results.
- If either BP threshold is still exceeded, administer nifedipine capsules (20 mg orally). If BP is below threshold, continue to monitor BP closely.
- Repeat BP measurement in 20 minutes and record results.
- If either BP threshold is still exceeded, administer nifedipine capsule (20 mg orally). If BP is below threshold, continue to monitor BP closely.
- Repeat BP measurement in 20 minutes and record results.
- If either BP threshold is still exceeded, administer labetalol (40 mg intravenously over 2 minutes) and obtain emergency consultation from maternal–fetal medicine, internal medicine, anesthesia, or critical care subspecialists.
- Give additional antihypertensive medication per specific order.
- Once the aforementioned BP thresholds are achieved, repeat BP measurement every 10 minutes for 1 hour, then every 15 minutes for 1 hour, then every 30 minutes for 1 hour, and then every hour for 4 hours.
- Institute additional BP timing per specific order.

*Please note there may be adverse effects and contraindications.

[1]Capsules should be administered orally and not punctured or otherwise administered sublingually.

Data from National Heart, Lung, and Blood Institute. The seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. NIH Publication No. 04-5230. Bethesda (MD): NHLBI; 2004. Available at: http://www.nhlbi.nih.gov/files/docs/guidelines/jnc7full.pdf. Retrieved October 14, 2014.

References

1. American College of Obstetricians and Gynecologists. Hypertension in pregnancy. Washington, DC: American College of Obstetricians and Gynecologists; 2013. Available at: http://www.acog.org/Resources-And-Publications/Task-Force-and-Work-Group-Reports/Hypertension-in-Pregnancy.
2. American College of Obstetricians and Gynecologists. Gestational Hypertension and Preeclampsia. Practice Bulletin No 202. 2019
3. American College of Obstetricians and Gynecologists. Chronic Hypertension in Pregnancy. Practice Bulletin No 203. 2019
4. Executive Summary in Obstet Gynecol 2013;122:1122ACOG Committee Opinion No. 514, December 2011
5. LeFevre ML. Low-dose aspirin use for the prevention of morbidity and mortality from preeclampsia: U.S. Preventive Services Task Force recommendation statement. U.S. Preventive Services Task Force. Annals of internal medicine 2014; 161:819-26.
6. Duley L, Meher S, Jones L, Drugs for treatment of very high blood pressure during pregnancy. Chochrane Database of Systematic Reviews 2013, July 31;7:CD001449
7. American College of Obstetricians and Gynecologists. Medically indicated late-preterm and early-term delivery. Committee Opinion No 560 April 2013. Reaffirmed 2017)
8. American College of Obstetricians and Gynecologists. Emergency therapy for acute-onset, severe hypertension during pregnancy and the postpartum period. Committee Opinion No 692, April 2017