OPQIC and George Kaiser Family Foundation Present:

LOW-DOSE ASPIRIN INITIATIVE: REDUCING PREECLAMPSIA AND PRETERM BIRTHS IN OKLAHOMA

Melissa Warde, MHA







Disclosure:

Funding for this project is supported by Oklahoma's own George Kaiser Family Foundation

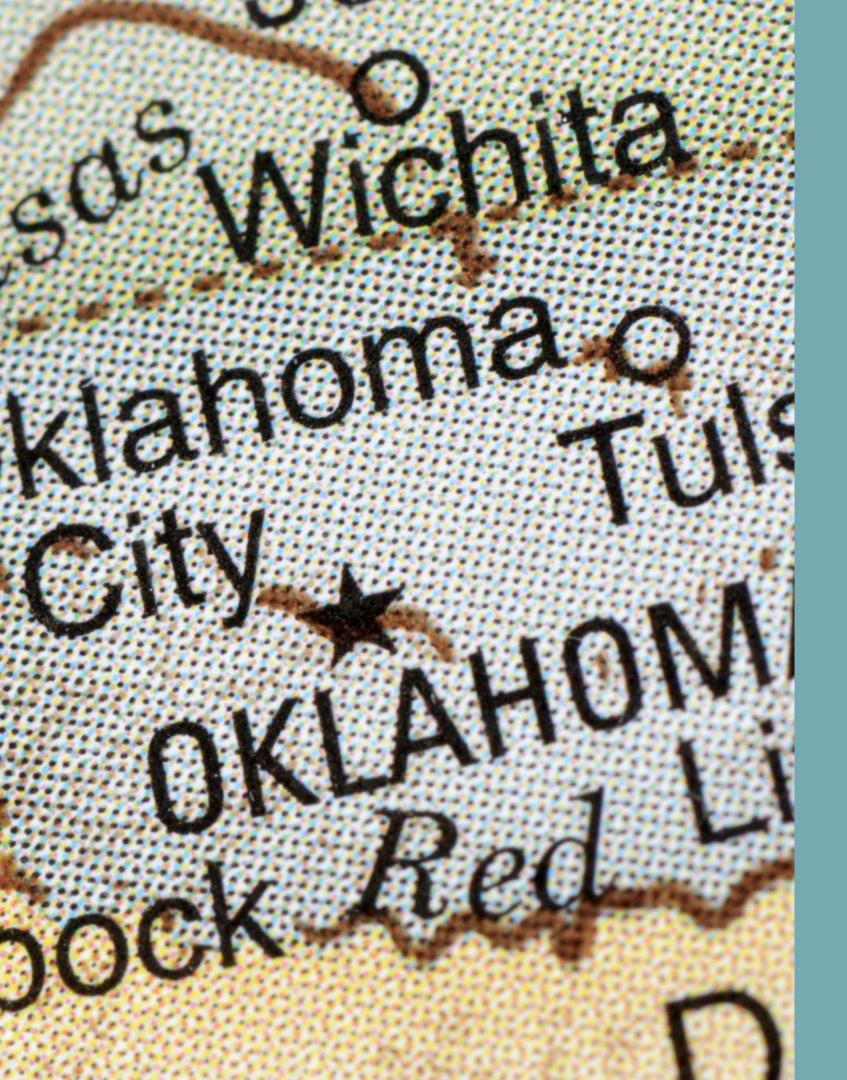
Thank You!



AGENDA

- I. Current state of Preeclampsia and Preterm Birth
- II. Defining Preeclampsia
- III. Low-Dose Aspirin and Preeclampsia Prevention
- IV. LDA Guidelines
- V. Project Goals
- VI. OBGYN Practice Considerations
- VII. OPQIC QI Clinic Toolkit
- VIII. Public Awareness Campaign
- IX. Q&A



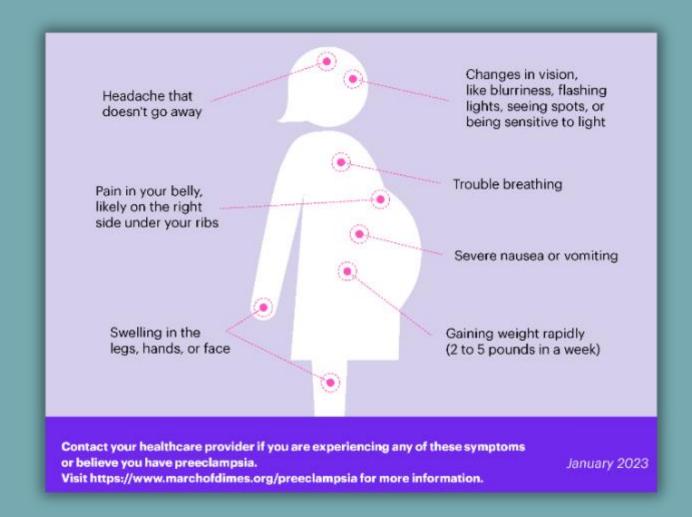


QUICK STATS

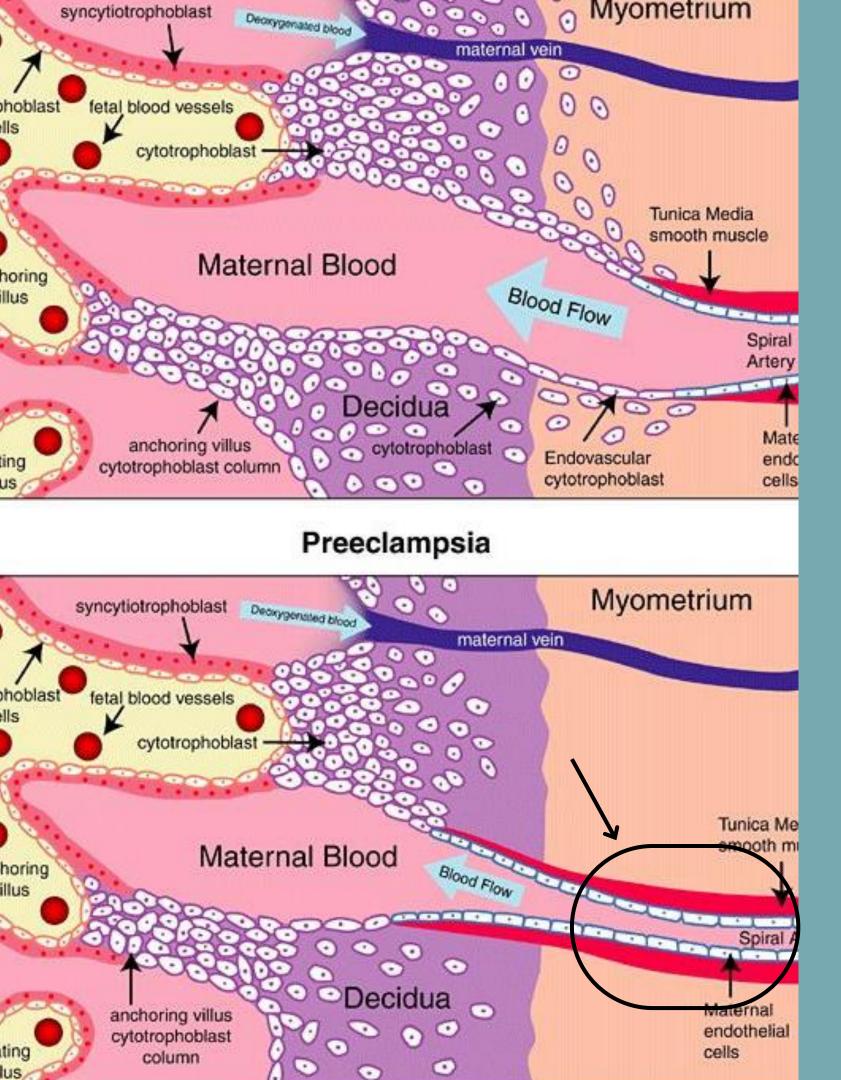
- Preeclampsia is a leading contributor to severe maternal morbidity and maternal death.
- 2022 Oklahoma birth certificate data
 - 48,314 live births, 8.8% with HPD (4,251.6), 0.5% with eclampsia (241.5) (OSDH)
 - From 7/1/22-6/30/23, there were 2,445 SoonerCare patients diagnosed with preeclampsia, and 108 cases of eclampsia.
- Preeclampsia is responsible for 6% of all medically indicated early preterm births, and 19% of preterm births.
 - Preterm birth rate in OK 11.9%
 - 45% higher in black women (2).
- 53% of OK counties are maternity care desert distance to appointment, time off work to travel, emergent care access
- High risk for cardiovascular diseases later in life after preeclampsia.
- In Oklahoma, approximately ~1 woman dies every month and ~70 more have life-threatening complications related to childbirth.

WHAT IS PREECLAMPSIA?

- Referred to by many names: toxemia, gestational hypertension, preeclampsia, superimposed preeclampsia (existing chronic hypertension)
- Sometimes accompanied by HELLP Syndrome
 - H hemolysis
 - EL Elevated liver enzymes
 - LP Low platelet count
- Most commonly characterized by BP >=140/90 or greater and proteinuria (impaired kidney)
- Preeclampsia in the pregnant individual can lead to kidney, liver, or brain damage, blood clots, postpartum hemorrhage, eclampsia (seizures and/or coma), stroke, or death.
- Pregnancy complications include preterm birth, placental abruption, FGR, low birthweight.
- **Preeclampsia can also occur in the postpartum period.







WHAT CAUSES PREECLAMPSIA?

- Preeclampsia is <u>thought</u> to be caused by a problem with the placenta.
- Poor placenta formation related to multiple causes, including:
 - Chronic uteroplacental ischemia (poor blood flow to baby)
 - Immune maladaptation (mother's immune system)
 - Genetic imprinting(3).
 - Exaggerated inflammatory response to trophoblast development (facilitates exchange of nutrients/waste to placenta) (9)
 - Poor remodeling of spiral arteries: Spiral arteries do not dilate as they would in a normal pregnancy, restricting blood flow.
- Focus on prevention or delaying the onset of preeclampsia.

LONG-TERM EFFECTS OF PREECLAMPSIA



- Prevalence of chronic hypertension is >50% an average of 14 years after pregnancy.
- 2x risk of death from cardiovascular disease.
- Women with preeclampsia <34 weeks have a 4-8x higher risk of death from CD (5).
- Increased risk of metabolic syndrome and chronic or end-stage renal disease (6).
- It's unclear if preeclampsia itself is a predictor of CD or if it's the causative agent.





LOW-DOSE ASPIRIN FOR THE PREVENTION OF PREECLAMPSIA

- NSAID Anti-inflammatory, Anti-platelet
- Method of action to inhibit action by key enzymes:
 - COX-1 lines the inner surface of blood vessels and regulates 2 types of prostaglandins:
 - Prostacyclin Vasodilator
 - Thromboxane Vasoconstrictor
 - COX-2 production related to inflammatory signals from the body
- LDA inhibits COX-1 enzyme's ability to produce thromboxane but does not affect prostacyclin.
- A systematic review process revealed no maternal or fetal risks associated with LDA.





Low-dose aspirin significantly reduces rates of preeclampsia (15%), perinatal mortality (21%), preterm birth (20%), and FGR (18%) (4)

Final Recommendation Statement

Aspirin Use to Prevent Preeclampsia and Related Morbidity and Mortality: Preventive Medication

September 28, 2021



SMFM SPECIAL STATEMENT | VOLUME 229, ISSUE 2, PB2-B9, AUGUST 2023

▲ Download Full Issue

Society for Maternal-Fetal Medicine Special Statement: Prophylactic low-dose aspirin for preeclampsia prevention—quality metric and opportunities for quality improvement

- Despite recommendations from ACOG, USPSTF and SMFM, LDA is used in <50% of high-risk and <25% of patients with >1 moderate risk factor (7).
- Patient surveys indicate only 58% of high-risk and 5% of moderate-risk patients recalled a provider recommendation to take aspirin.
- Low rates of use due to:
 - Low-rates of prescribers recommending LDA
 - Patients don't remember receiving a recommendation
 - Patients may be hesitant to take even though it's recommended





AIM

Reduce rates of preeclampsia and preterm birth in Oklahoma by increasing low-dose aspirin usage during pregnancy.

PROJECT SCOPE

Ensure providers have access to the most current guidelines and are prescribing aspirin to eligible patients.

Education and informational materials that target nurses, pharmacists, doulas, and midwives.

Public awareness campaign regarding the benefits of aspirin targeting the general population.



GUIDELINES



UPDATED GUIDELINES: ACOG

• More patients could benefit from aspirin therapy.



Table 1. Clinical Risk Assessment for Preeclampsia ^a		
Risk level	Risk factors	Recommendation
High ^b	 History of preeclampsia, especially when accompanied by an adverse outcome Multifetal gestation Chronic hypertension Pregestational type 1 or 2 diabetes Kidney disease Autoimmune disease (ie, systemic lupus erythematous, antiphosyndrome) Combinations of multiple moderate-risk factors 	Recommend low-dose aspirin if the patient has ≥1 of these high-risk factors
Moderate ^c	 Nulliparity Obesity (ie, body mass index >30) Family history of preeclampsia (ie, mother or sister) Black persons (due to social, rather than biological, factors)^d Lower income^d Age 35 years or older Personal history factors (eg, low birth weight or small for gest previous adverse pregnancy outcome, >10-year pregnancy into 	
Low	In vitro conception Prior uncomplicated term delivery and absence of risk factors	Do not recommend low-dose aspirin
b Includes single risk for preecle in a populatio	risk factors that can be obtained from the patient medical history. e risk factors that are consistently associated with the greatest ampsia. Preeclampsia incidence would likely be at least 8% n of pregnant individuals having 1 of these risk factors. are independently associated with moderate risk for preeclampsia,	some more consistently than others. A combination of multiple moderate-risk factors may place a pregnant person at higher risk for preeclampsia. d These factors are associated with increased risk due to environmental, social and historical inequities shaping health exposures, access to health care, and the unequal distribution of resources, not biological propensities.





ASPIRIN ADMINISTRATION

- Therapy initiated at 12 weeks gestation, or between 12-16 weeks.
 - New guidelines: 12-28 weeks gestation
 - Take 1 tablet every day at bedtime until birth.
- Aspirin must be taken >90% of the time to be most effective (8).
 - Medication reminder apps, alarms, calendar
 - Requires regular follow-up



PRESCRIPTION

Jane Doe

ADDRESS 123 Main Street

DATE 9/23/23

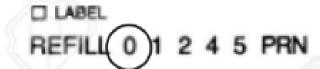
Aspirin (81mg) EC

Tk 1 t po qhs for the prevention of preeclampsia. Discontinue upon delivery.

#100

Dr. John Smith

NPI: 1023456789



ASPIRIN ADMINISTRATION

- Sending an electronic prescription is recommended.
 - Improves medication reconciliation
 - Provides specific directions for use on bottle.
 - o OHCA will pay for 100 tablets of low-dose aspirin for a 100-day supply for the prevention of preeclampsia in pregnant persons. Refills allowed.
 - Covered by most commercial plans.
- Alternative options:
 - Instruct the patient to buy low-dose aspirin OTC at the drugstore
 - Barrier: timeliness of purchase, follow-up, cost
 - Provide aspirin onsite (request from pharm rep)
 - Barrier: drug sample laws, may have to purchase, quality tracking



OBGYN Practice INTERNAL ANALYSIS



PATIENT CARE GAPS

- Differences in recommendations amongst providers.
- Need for improved access to healthcare and prescriptions (transportation barriers).
- Siloed health professionals.
- Patient not considered as part of the care team and decision-making.
- Lack of educational materials that span different educational attainment levels or languages (patient medical literacy).
- "Information" as a social determinant of health
 - How we deliver it → where we deliver it → who
 delivers it = improved patient outcomes (10)



THINGS FOR AN OBGYN PRACTICE TO CONSIDER:

- What is the current protocol for prescribing aspirin?
- What type of screening is done to identify eligibility?
- What type of patient education is being offered?
- What does patient follow up look like?
- In what way are we ensuring patients have access to aspirin?





ENSURING PATIENT BUY-IN AND COMPLIANCE

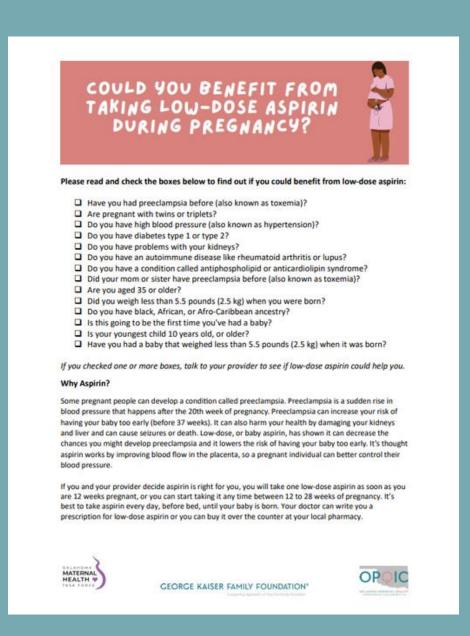
- Patient self-screens eligibility during first prenatal appointment.
- Nurse guides patient through screening process.
- Provider discusses patient's eligibility for aspirin.
- Provider issues easy-to-understand instructions on why aspirin is important. Include "teach-back" if applicable.
- Patient is given a prescription for aspirin.
- Revisit aspirin compliance each visit and identify barriers to adoption.
- Role of doula: empower patients to ask questions, are patients high risk?



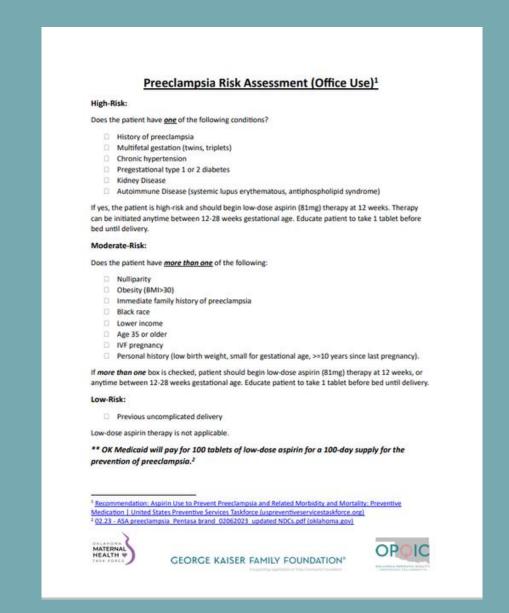
OBGYN Practice TOOLKIT



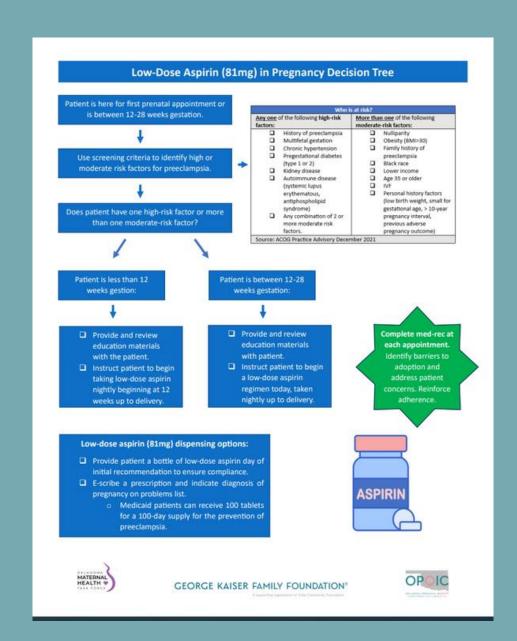
Clinical Tools



For patient use:
Complete at first prenatal visit
with intake paperwork.



For clinician use:
Scan as media to patient's profile



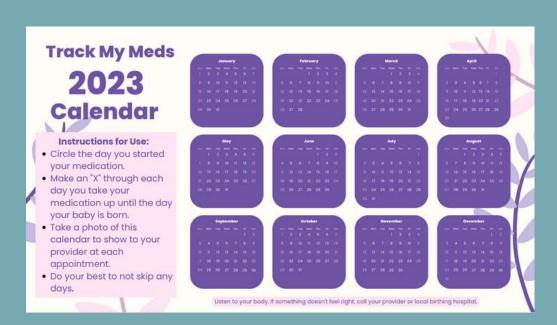
For provider use:
Clarify who is, and who is not eligible for prophylactic LDA use.



Patient Tools



Posters for office displays.



Adherence calendars.

WHY TAKE **ASPIRIN** DURING PREGNANCY?



Your provider told you that lowdose aspirin could help you during your pregnancy. You've never heard of someone taking low-dose aspirin while pregnant before Let's find out why!

Learn More

(f) www.preeclampsia.org

GEORGE KAISER FAMILY FOUNDATION

MATERNAL HEALTH

OPOIC

What is Preeclampsia?

Preeclampsia (pre-eclamp-sia) is a high blood pressure disorder of pregnancy and postpartum that can affect multiple organ systems within your body. In severe cases, preeclampsia can lead to seizures

In addition to high blood pressure a urine test may show too much protein in a pregnant person's urine. Too much protein means your kidneys may be damaged. If you get preeclampsia, you risk having your baby too early.

What is Eclampsia?

Eclampsia (e-clamp-sia) is when a person with preeclampsia develops seizures. Eclampsia is a serious medical emergency that can cause strokes or death. Eclampsia only occurs in 3% of people with

How Does

Aspirin Help?

What are the symptoms of preeclampsia?

- · High blood pressure (greater than 140/90)
- · Increased swelling in hands and feet and/or rapid weight gain
- · A severe headache that doesn't resolve with Tylenol
- Nausea or vomiting · Abdominal and/or shoulder pain
- Changes in vision
- · Shortness of breath or anxiety (feeling of doom)
- · Changes in reflexes.
- · Some people do not notice

How To Take

It is unclear what causes preeclampsia, but one theory is its caused by problem with the blood the baby grows, blood flow to the placenta increases. If the placenta does not have enough blood flow, the pregnant person's blood pressure will increase and, the baby's growth may

Low-dose aspirin works to improve blood flow through the blood vessels that supply the placenta. Studies have reduce the risk of developing preeclampsia and having your baby too early (before 37 weeks) by as much as 25%.

If a provider told you to begin taking low-dose aspirin, it's because you have risk factors that increase your likelihood of developing preeclampsia

Aspirin

Its best to start taking low-dose aspirin between 12 - 28 weeks of pregnancy. You will take one lowdose aspirin (81mg) once a day before bed, up until the day you have your baby. Set an alarm or use a pill reminder app so you

Be sure to attend all your prenatal visits so your provider can monitor your well-being.



Provide to patients who are told to take aspirin.

Could You Benefit From Taking Aspirin **During Pregnancy?**

Please read and check the boxes below to find out if you could benefit from aspirin:

- ☐ Have you had preeclampsia before (also known as toxemia)?
- Are pregnant with twins or triplets? Do you have high blood pressure (also known
- Do you have diabetes type 1 or type 2?

as hypertension)?

- ☐ Do you have problems with your kidneys?
- Do you have an autoimmune disease like rheumatoid arthritis or lupus?
- Do you have a condition called antiphospholipid or anticardiolipin syndrome?
- Did your mom or sister have preeclampsia before (also known as toxemia)?
- Are you very overweight (BMI 30 or above)?
- □ Are you aged 35 or older?
- Did you weigh less than 5.5 pounds (2.5 kg) when you were born?
- Do you have black, African or Afro-Caribbean ancestry?
- ☐ Is this going to be the first time you've had a
- ☐ Is your youngest child 10 years old, or older?
- ☐ Have you had a baby that weighed less than 5.5 pounds (2.5 kg) when it was born?



If you checked one or more boxes, talk to your provider to see if aspirin is right for you.

Flip over to learn about the benefits of aspirin during pregnancy.

Could You Benefit From Taking Aspirin **During Pregnancy?**

WHY ASPIRIN?

- · Aspirin works by improving blood flow in the placenta, so a pregnant individual can better control their blood pressure.
- · Low-dose, or baby aspirin, has shown it can decrease the chances you might develop a condition called preeclampsia and it lowers the risk of having your baby too early.
- Preeclampsia is a sudden rise in blood pressure that happens after the 20th week of pregnancy.
- Preeclampsia can increase your risk of having your baby too early (before 37 weeks).
- Preeclampsia can harm your health by damaging your kidneys and liver and can cause seizures or death.

HOW TO TAKE ASPIRIN

- If you and your provider decide aspirin is right for you, you will begin taking one low-dose aspirin daily as soon as you are 12 weeks pregnant. Aspirin usage is most effective when started between 12-28 weeks of pregnancy.
- It's best to take one low-dose aspirin every day, before bed, until your baby is
- · Your doctor can write you a prescription for low-dose aspirin or you can buy it over the counter at your local pharmacy.

Learn More:



www.preeclampsia.org/aspirin



For patient use: Waiting room brochures.

MATERNAL HEALTH



LDA Clinic Workflow

Patient
completes
screening form
during first
prenatal
appointment.

Nurse completes screening form with patient and/or asks score.

Provider
discusses aspirin
eligibility with
patient. Explains
what aspirin
does.

Patient is provided aspirin education brochure.

Provider escribes low-dose aspirin to patient's preferred pharmacy.

Patient attends following prenatal appointments.

Incorporate doulas empower patients to
ask questions, direct
patients to
resources.

Nurse completes medication rec, identifies barriers to adoption . Provider asks about patient concerns regarding aspirin.

L&D asks about prenatal vitamins and aspirin use in pregnancy.







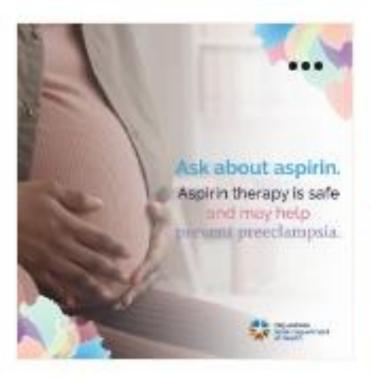
OSDH Public Awareness Campaign



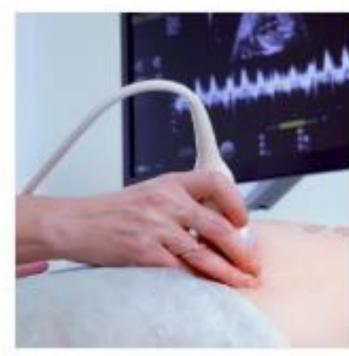
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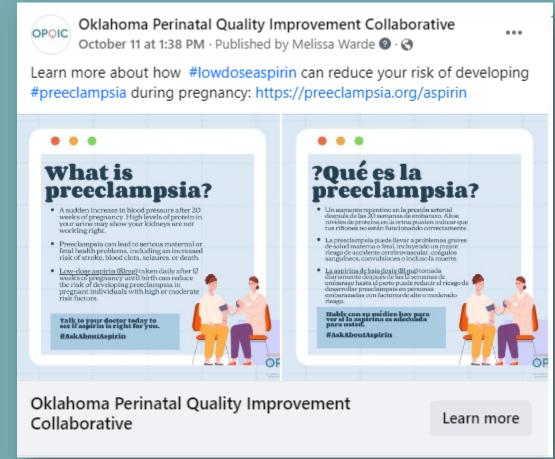
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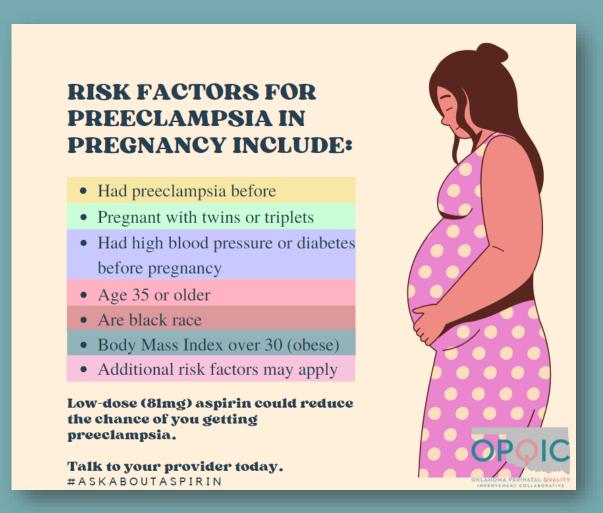
#AskAboutAspirin
Social media, media
spots.



OPQIC Social Media Campaign







#AskAboutAspirin
English and Spanish
Link to preeclampsia.org/aspirin







QUESTIONS?

Learn more: www.opqic.org/lda



For more information on this initiative or to

schedule a presentation, contact

Melissa-Warde@ouhsc.edu.



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