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!

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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

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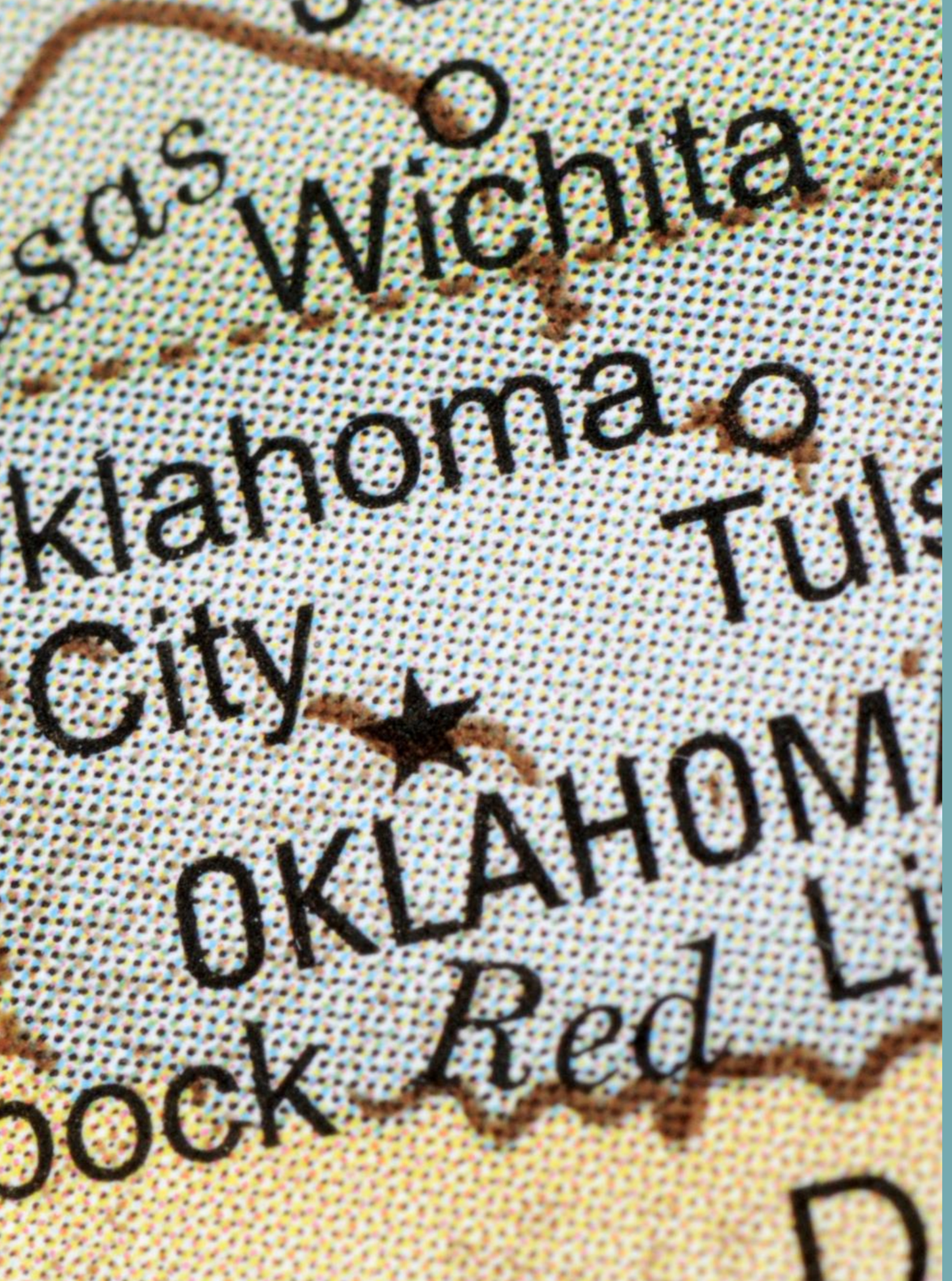

QUICK STATS

- 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.

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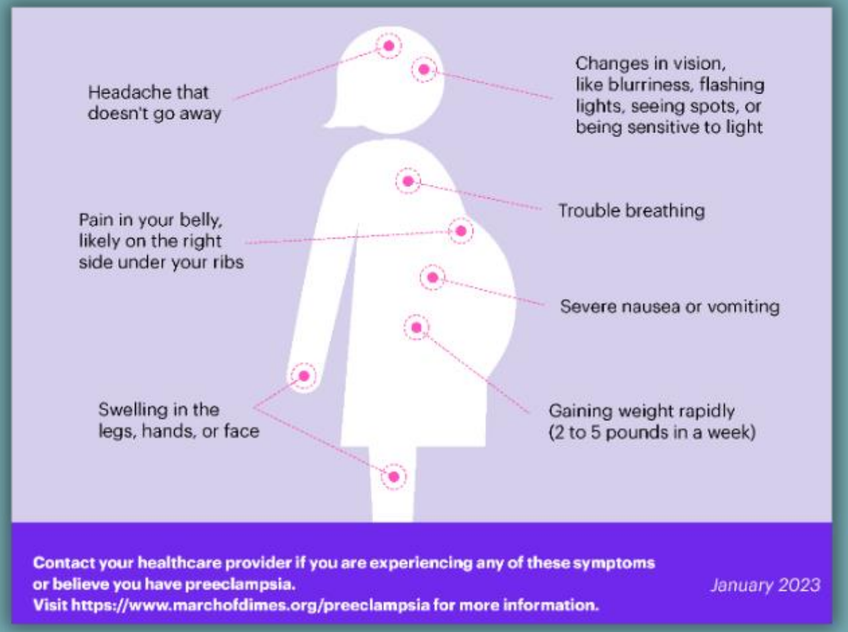
WHAT IS PREECLAMPSIA?

- 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.



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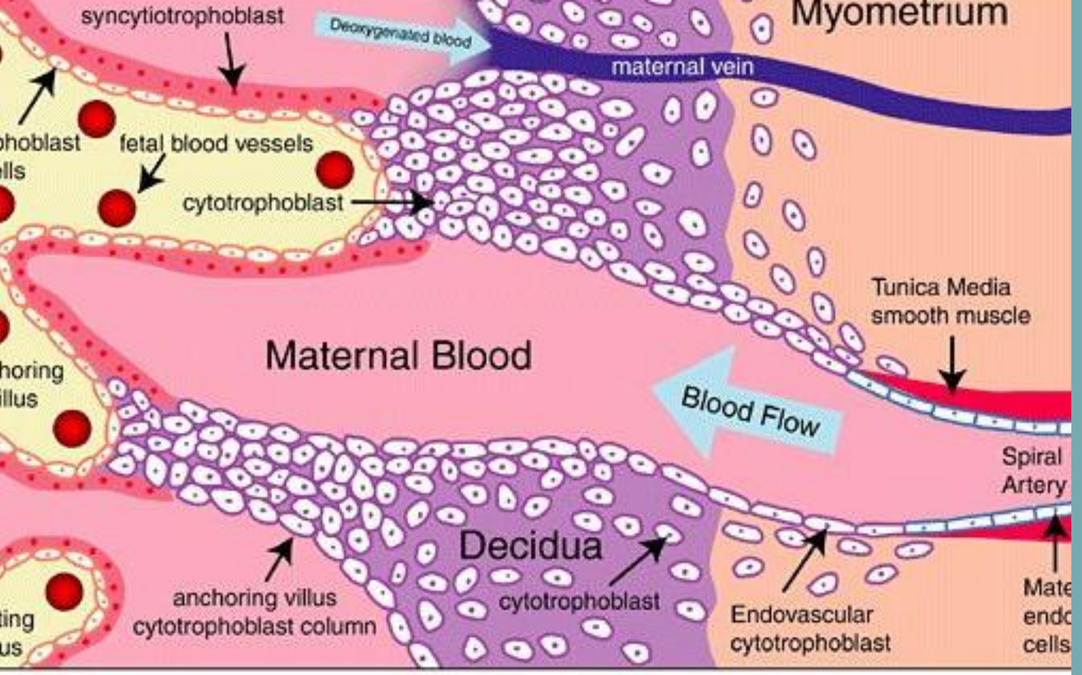
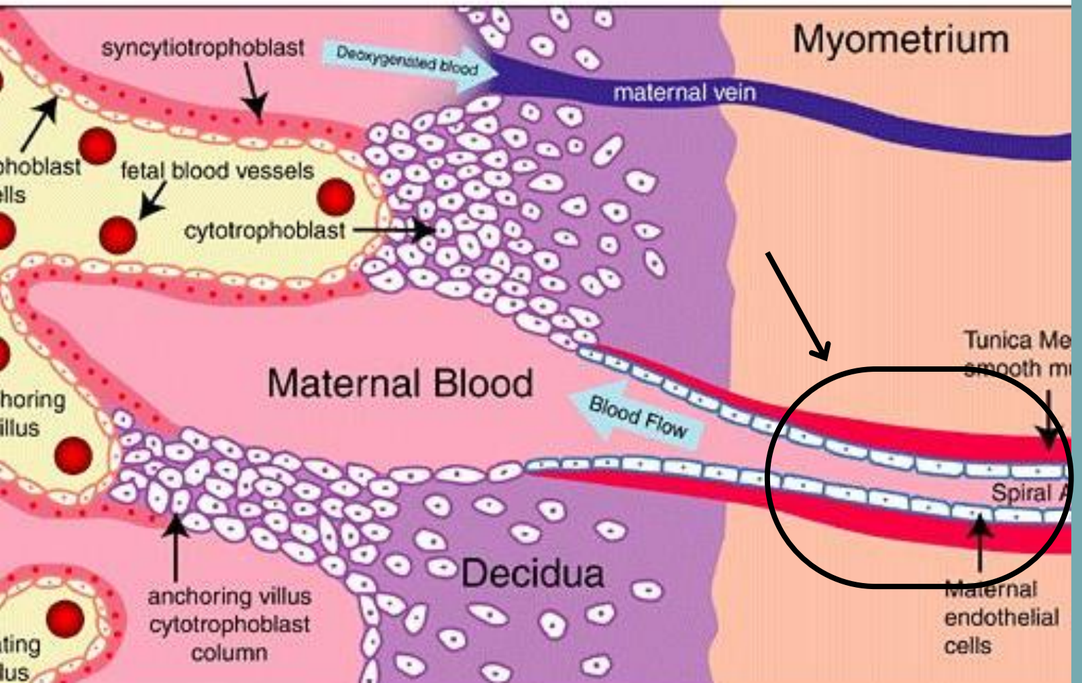


Preeclampsia



WHAT CAUSES PREECLAMPSIA?

- Preeclampsia is thought 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.

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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.

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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.

ACOG | Clinical
The American College of Obstetricians and Gynecologists

U.S. Preventive Services TASK FORCE

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

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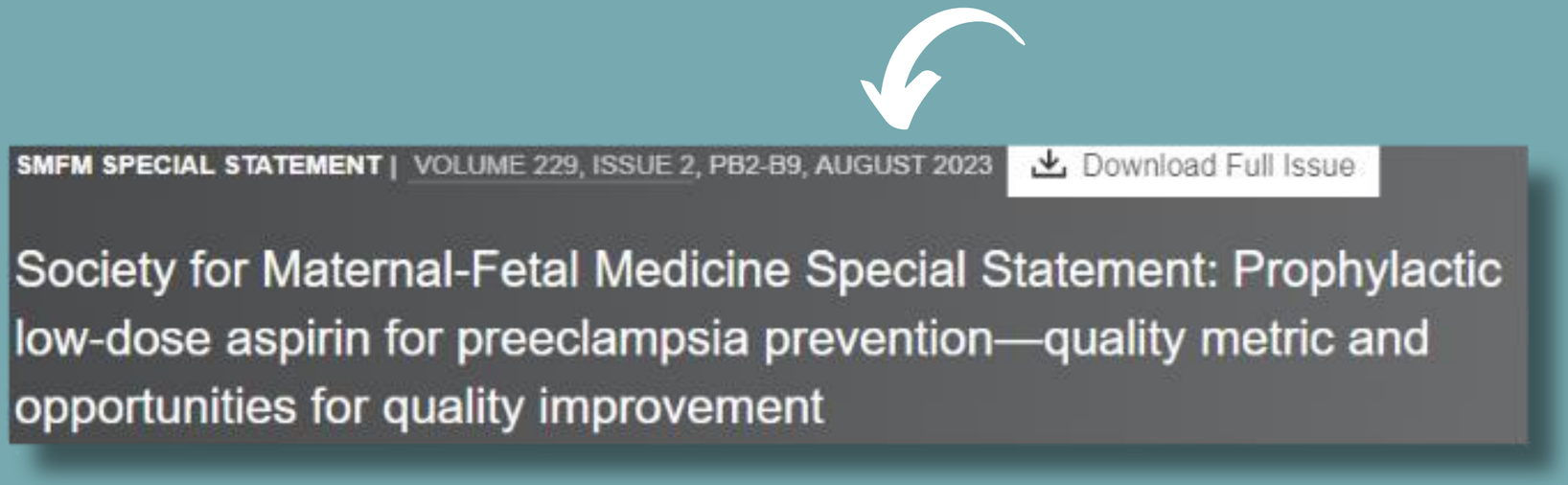

- Despite recommendations from ACOG, USPSTF and SMFM, LDA is used in <50% of high-risk and <25% of patients with >1 moderate risk factor (7).
- Patient surveys indicate only 58% of high-risk and 5% of moderate-risk patients recalled a provider recommendation to take aspirin.
- Low rates of use due to: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

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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.

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Updated

GUIDELINES

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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, antiphospholipid syndrome) • 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 gestational age, previous adverse pregnancy outcome, >10-year pregnancy interval) • In vitro conception	Recommend low-dose aspirin if the patient has ≥2 moderate-risk factors Consider low-dose aspirin if the patient has 1 of these moderate-risk factors
Low	Prior uncomplicated term delivery and absence of risk factors	Do not recommend low-dose aspirin

[a] Includes only risk factors that can be obtained from the patient medical history.

[b] Includes single risk factors that are consistently associated with the greatest risk for preeclampsia. Preeclampsia incidence would likely be at least 8% in a population of pregnant individuals having 1 of these risk factors.

[c] These 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

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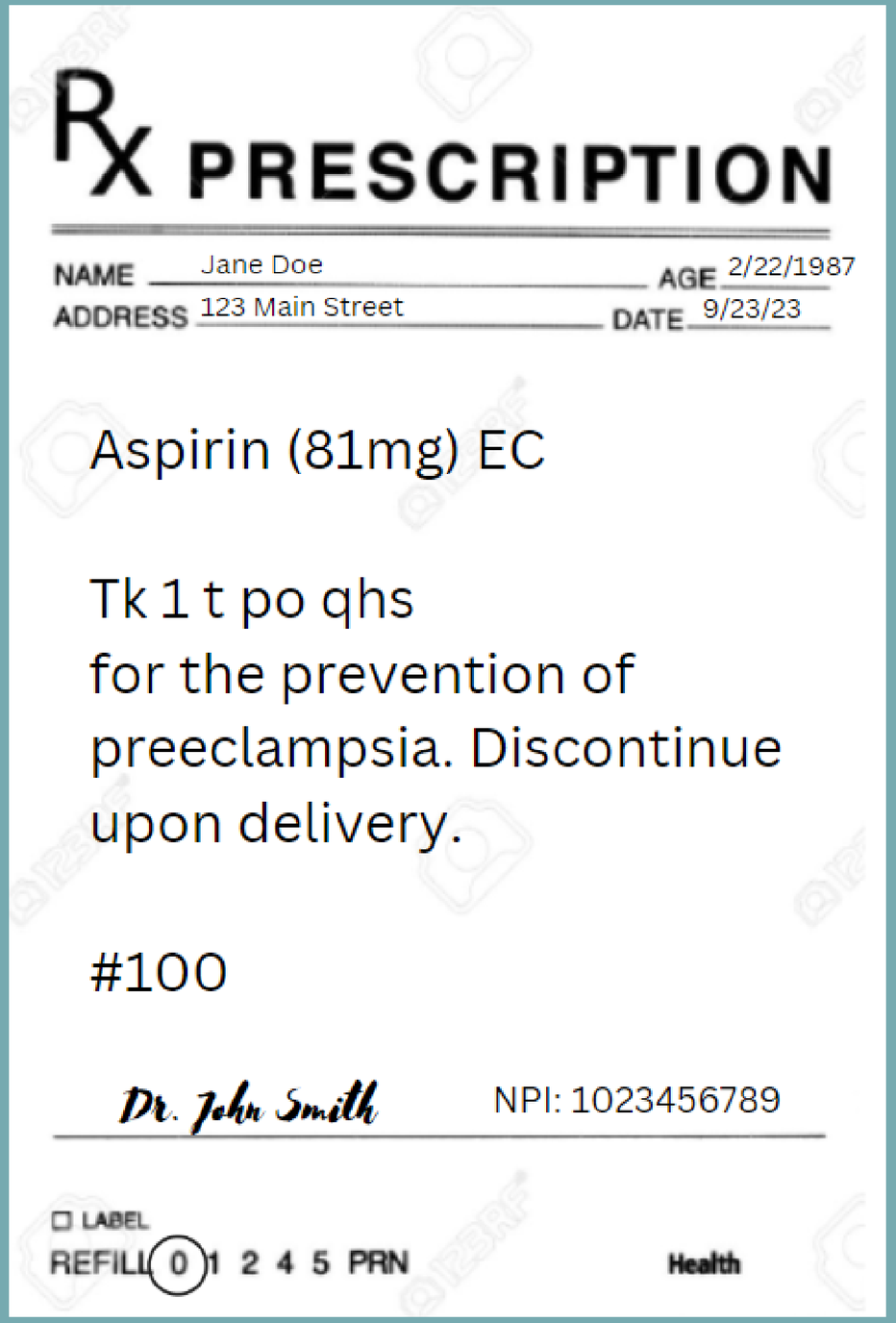

ASPIRIN ADMINISTRATION

- **Sending an electronic prescription is recommended.**
  - Improves medication reconciliation
  - Provides specific directions for use on bottle.
  - 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

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INTERNAL ANALYSIS

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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?

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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?

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TOOLKIT

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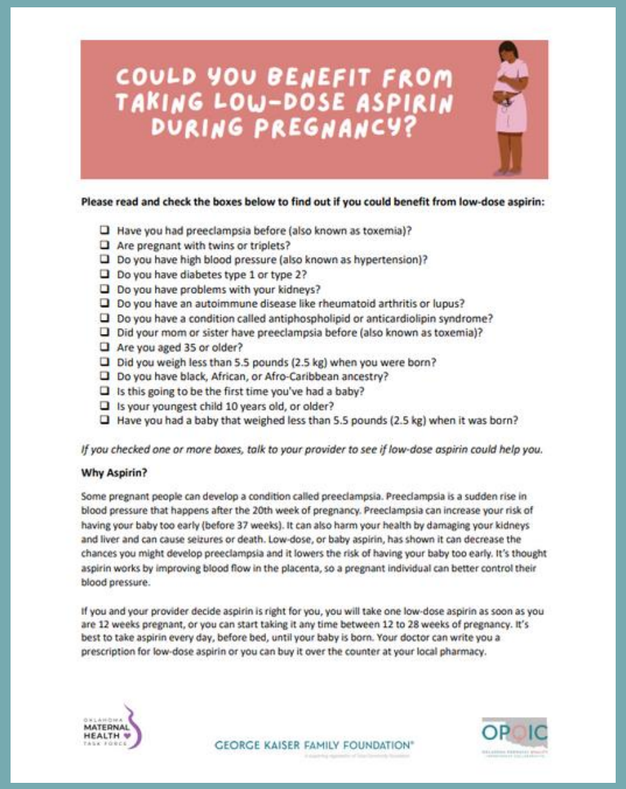
Clinical Tools



COULD YOU BENEFIT FROM TAKING LOW-DOSE ASPIRIN DURING PREGNANCY?

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

- ❑ Have you had preeclampsia before (also known as toxemia)?
- ❑ Are pregnant with twins or triplets?
- ❑ Do you have high blood pressure (also known as hypertension)?
- ❑ Do you have diabetes type 1 or type 2?
- ❑ 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 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 baby?
- ❑ 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 low-dose aspirin could help you.

Why Aspirin?

Some pregnant people can develop a condition called preeclampsia. 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). It can also harm your health by damaging your kidneys and liver and can cause seizures or death. Low-dose, or baby aspirin, has shown it can decrease the chances you might develop preeclampsia and it lowers the risk of having your baby too early. It's thought aspirin works by improving blood flow in the placenta, so a pregnant individual can better control their blood pressure.

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

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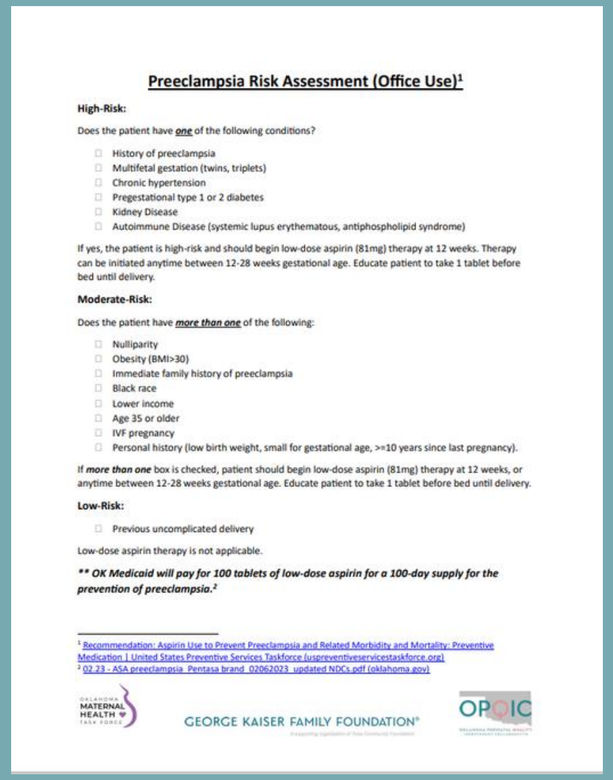
For patient use:
Complete at first prenatal visit
with intake paperwork.



Preeclampsia Risk Assessment (Office Use)[1]

High-Risk:

Does the patient have ***one*** of the following conditions?

- ☐ History of preeclampsia
- ☐ Multifetal gestation (twins, triplets)
- ☐ Chronic hypertension
- ☐ Pregestational type 1 or 2 diabetes
- ☐ Kidney Disease
- ☐ Autoimmune Disease (systemic lupus erythematous, antiphospholipid syndrome)

If yes, the patient is high-risk and should begin low-dose aspirin (81mg) therapy at 12 weeks. Therapy can be initiated anytime between 12-28 weeks gestational age. Educate patient to take 1 tablet before bed until delivery.

Moderate-Risk:

Does the patient have ***more than one*** of the following:

- ☐ Nulliparity
- ☐ Obesity (BMI>30)
- ☐ Immediate family history of preeclampsia
- ☐ Black race
- ☐ Lower income
- ☐ Age 35 or older
- ☐ IVF pregnancy
- ☐ Personal history (low birth weight, small for gestational age, >=10 years since last pregnancy).

If ***more than one*** box is checked, patient should begin low-dose aspirin (81mg) therapy at 12 weeks, or anytime between 12-28 weeks gestational age. Educate patient to take 1 tablet before bed until delivery.

Low-Risk:

- ☐ Previous uncomplicated delivery

Low-dose aspirin therapy is not applicable.

***** OK Medicaid will pay for 100 tablets of low-dose aspirin for a 100-day supply for the prevention of preeclampsia.[2]***

[1] Recommendation: Aspirin Use to Prevent Preeclampsia and Related Morbidity and Mortality: Preventive Medication | United States Preventive Services Taskforce (uspreventiveservicestaskforce.org)
[2] 02.23 - ASA preeclampsia_Pentasa brand_02062023_updated NDCs.pdf (oklahoma.gov)

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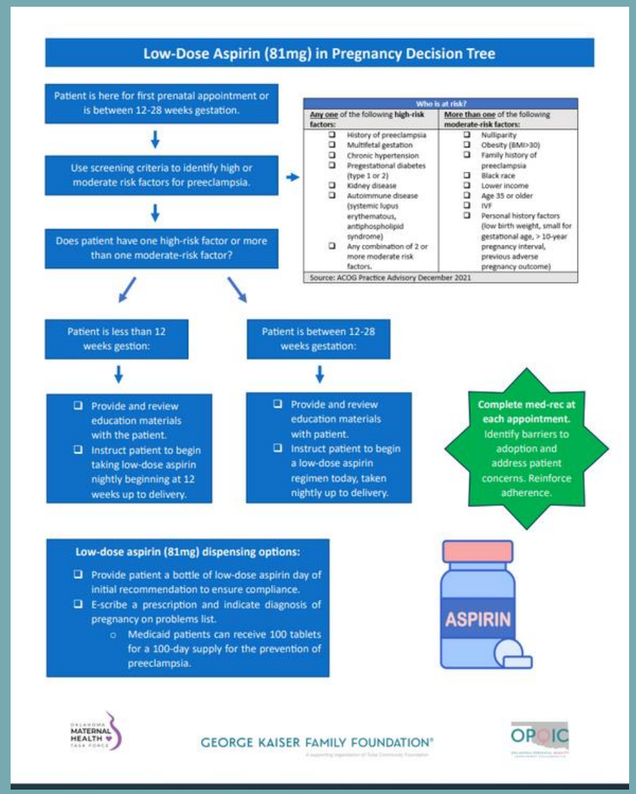
For clinician use:
Scan as media to patient's profile



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

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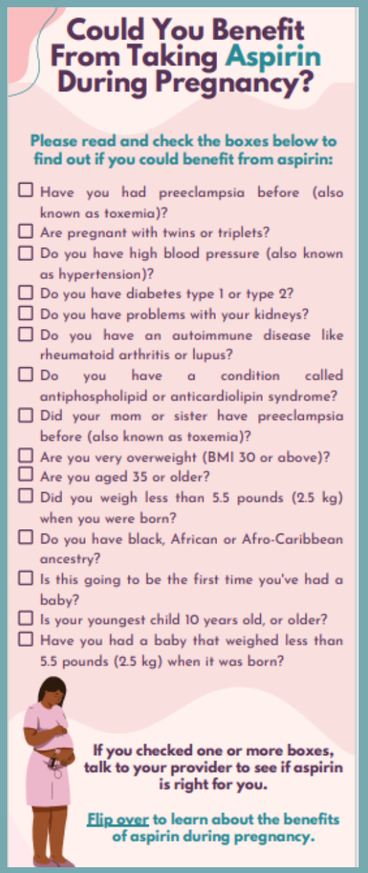
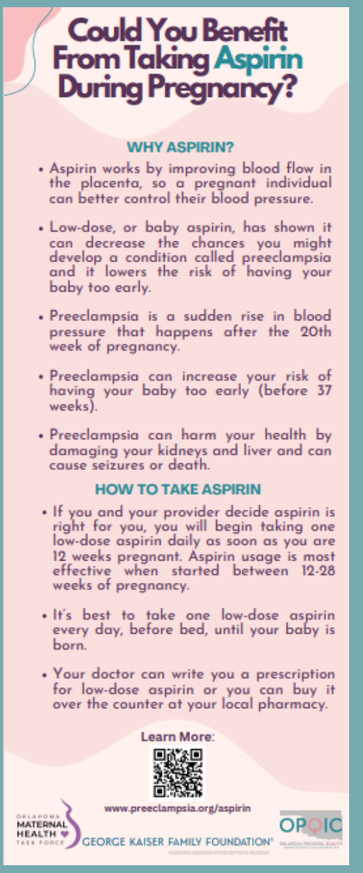
Patient Tools

Posters for office displays.

Adherence calendars.

Provide to patients who are told to take aspirin.





For patient use:
Waiting room brochures.

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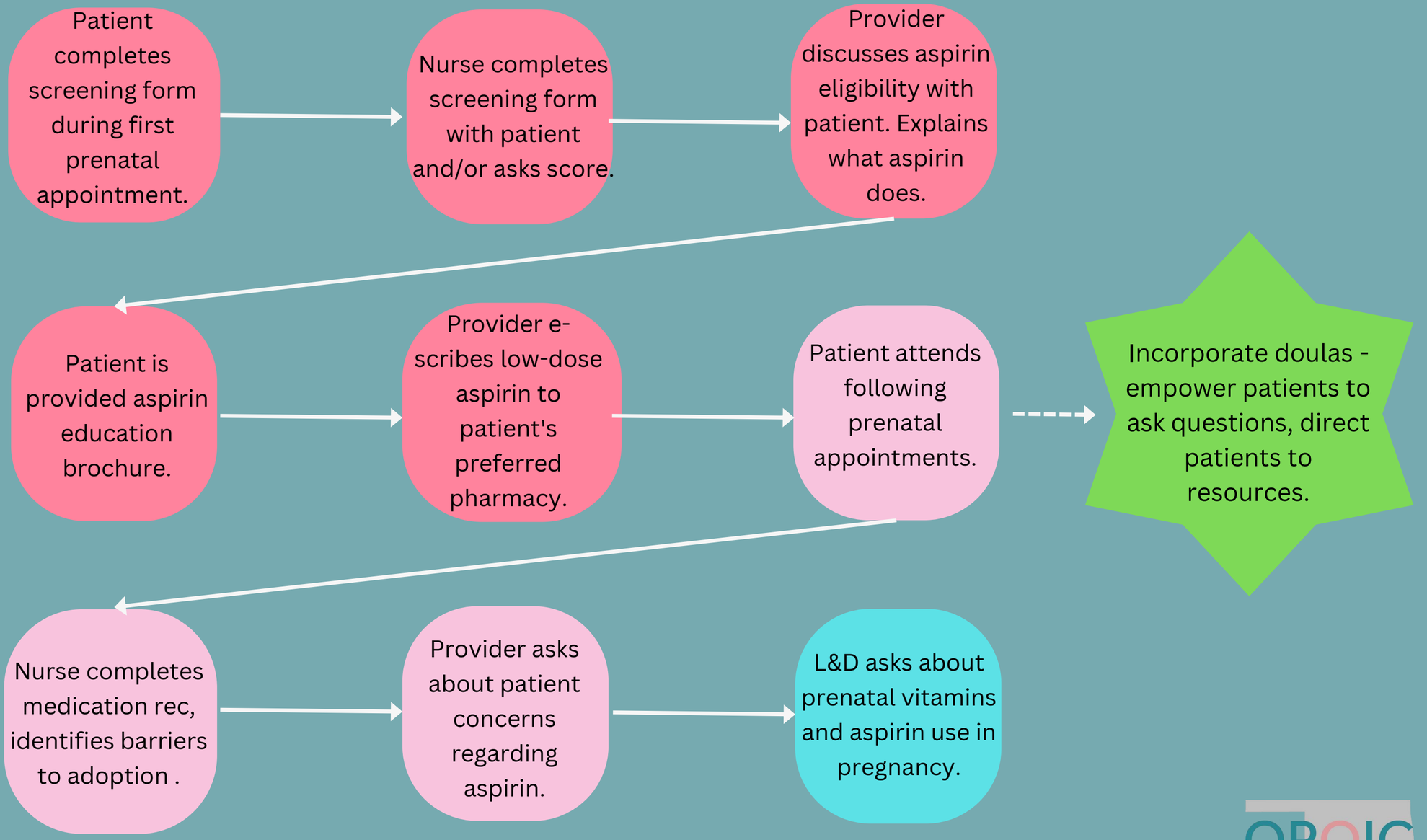
LDA Clinic Workflow



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Public Awarenss

CAMPAIGN

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OSDH Public Awareness Campaign

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#AskAboutAspirin
Social media, media
spots.

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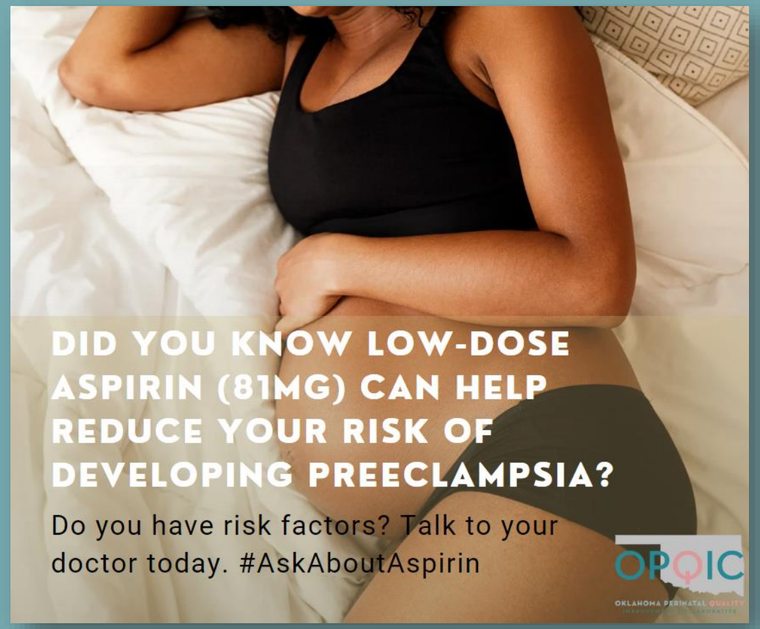
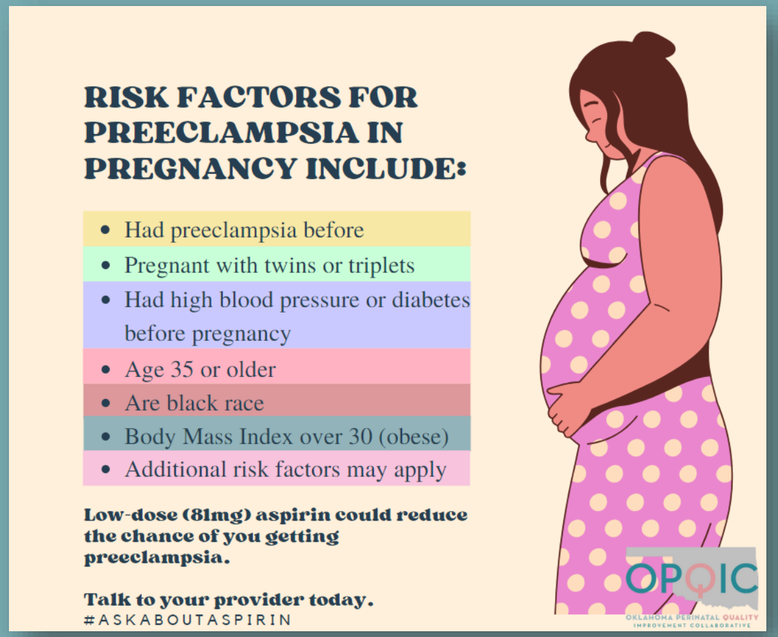
OPQIC Social Media Campaign





#AskAboutAspirin

English and Spanish

Link to preeclampsia.org/aspirin

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Low-Dose Aspirin Clinic & Patient Education Tools

Print More:

SUPPORTS LDA QI INITIATIVES

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QUESTIONS?

Learn more:
www.opqic.org/lda

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For more information on this initiative or to schedule a presentation, contact Melissa-Warde@ouhsc.edu.

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