



# Low-Dose Aspirin (LDA) Campaign to Reduce Preeclampsia and Related Preterm Birth

March 1, 2023

Lindsay du Plessis, DrPH, MPH

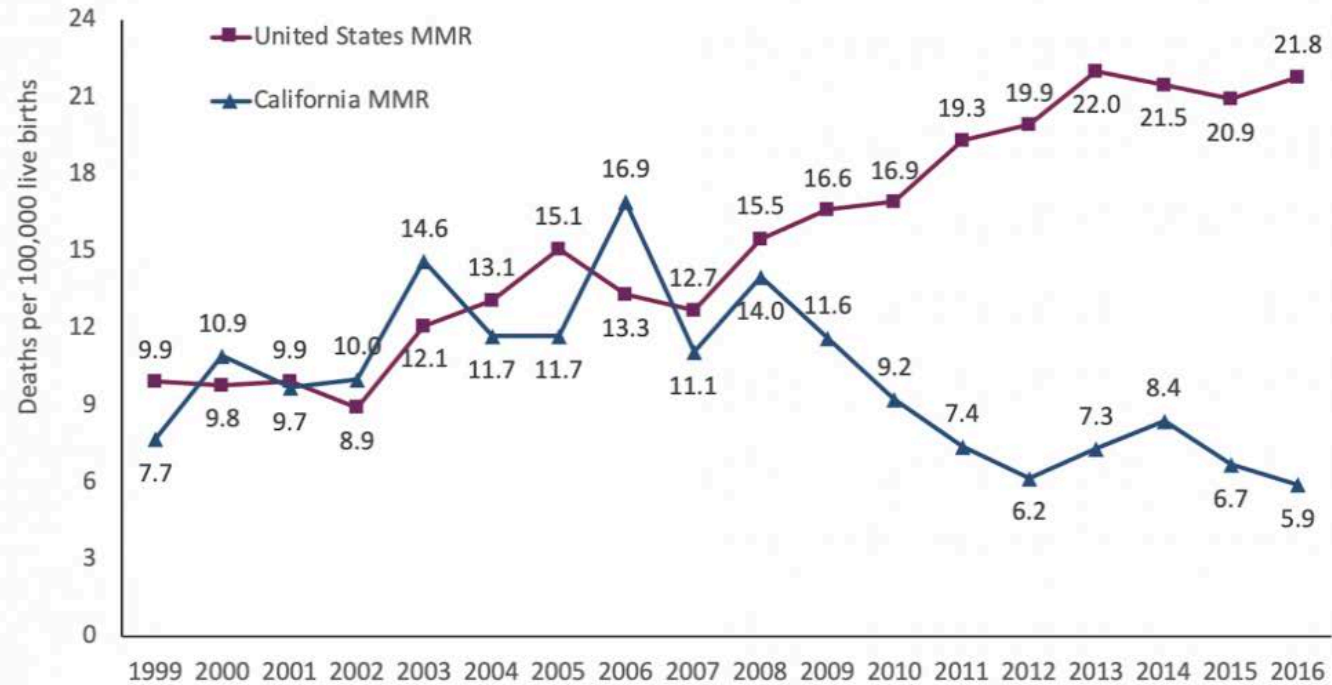
# The California Maternal Quality Care Collaborative

Mission: End preventable morbidity, mortality and racial disparities in maternity care

- Multi-stakeholder collaborative since 2006
- Launched with funding from California Department of Public Health to address rise in maternal mortality
- Committed to evidence-based and data driven quality improvement



Figure 1: Maternal Mortality Ratio in U.S. and California, 1999-2016



Maternal mortality ratio (MMR) = Number of maternal deaths per 100,000 live births, up to 42 days after the end of pregnancy. Maternal deaths in California were identified using ICD-10 cause of death classification for obstetric deaths (codes A34, O00-O95, O98-O99) from the California death certificate data (1999-2013) and the California pregnancy status errata file (2014-2016). Data on U.S. maternal deaths are published by the National Center for Health Statistics and found in the CDC WONDER Database for years 2008 or later (accessed at <http://wonder.cdc.gov> on February 25, 2020).

SOURCE: CA-PMSS Surveillance Report: Pregnancy-Related Deaths in California, 2008-2016. Sacramento: California Department of Public Health, Maternal, Child and Adolescent Health Division. 2021.



This work is generously funded by the March of Dimes

CMQCC, in partnership with March of Dimes, select hospitals statewide, and community partners are collaborating to promote the use of daily low-dose aspirin for pregnant individuals at risk for preeclampsia. Low-dose aspirin, as recommended by a healthcare provider, is the only known effective solution to prevent preeclampsia.

# Prevent Harms to Mothers and Infants From Preeclampsia

- Our goal is to reduce maternal and infant harms from preeclampsia by identifying mothers at risk of preeclampsia early in gestation and encouraging use of daily Low-Dose Aspirin (LDA) for the duration of the pregnancy
- The reduction of harms can be substantial, decreased by 20 to 60%

## What is Preeclampsia?

- Preeclampsia is a multi system inflammatory disorder involving new or worsening hypertension in pregnancy often accompanied by injury to other organs, including the kidney, liver, heart, brain, and placenta.
  - Can lead to severe maternal complications such as seizure, stroke, and death, as well as lifelong elevated cardiovascular risk.
  - Risks to fetus include preterm delivery and NICU stays, poor growth, stillbirth, and lifelong elevated cardiovascular risk.

# How can we prevent preeclampsia?



## Many attempts to prevent preeclampsia have not worked

~~Vitamin  
C~~

~~Vitamin  
E~~

~~Co-  
Enzyme  
Q~~

~~Folic  
Acid~~

~~Relaxation  
Therapy~~

~~Calcium~~

~~Selenium~~



Low-dose aspirin (LDA) is the **only** known way to reduce preeclampsia and mother/infant harms.

## LDA given to those at risk for preeclampsia

Reduces:

- Preeclampsia by 15%
- Preterm birth by 20%
- Fetal growth restriction by almost 20%
- Perinatal mortality by more than 20%

This translates to healthier moms and healthier babies

LDA in pregnancy can support healthy placenta development, preventing changes that can lead to high blood pressure

Those taking aspirin are more likely to deliver at full term and less likely to have preeclampsia

...but these recommendations have been slow to become widely used!

- Multiple studies find that less than 15% of eligible women are offered or take LDA
- Women with chronic hypertension are the highest utilizing group but among them only ~40% take LDA

## Medical information and prescribing are not enough: barriers to adherence present additional challenges

- Information overload, confusion about pre-eclampsia
- Difficulty obtaining prescription
- Difficulty with pill-taking (“pregnancy fog”, health and personal challenges)
- Fear of medication in pregnancy
- Perception of mixed messages among health care providers about aspirin safety
- Perception of stigma about risk categories eg obesity

Let's start with background information....

Who is at increased risk of preeclampsia  
and should receive  
low-dose aspirin?

## Risk factors for preeclampsia

Those with one high-risk factor should receive LDA:

- preeclampsia in a prior pregnancy
- multifetal gestation (twins plus)
- chronic hypertension
- type 1 or 2 diabetes mellitus
- renal disease
- autoimmune disease (lupus, etc.)

## Risk factors for preeclampsia

Those with two or more moderate-risk factors should receive LDA:

- nulliparity (first birth)
- obesity (BMI > 30 kg/m<sup>2</sup>)
- mother or sister with history of preeclampsia
- exposure to anti-Black racism
- financial hardship
- 35+ years old
- prior low birthweight or small-for-gestational age baby
- previous adverse pregnancy outcome
- 10+ years since last delivery



## Let's Do Aspirin Campaign

- **Pilot Hospital Sites:**
  - Loma Linda University Children's Hospital
  - Riverside University Medical Center
  - UC San Diego
  - Scripps Chula Vista
  - Mercy San Juan Sacramento
- **Partners:**
  - Kaiser Northern California



## Materials

- Patient Education Materials (English & Spanish)
  - Information Sheet
  - Poster
  - Patient Risk Assessment Scorecard
  
- Press Release
 

Sent drafts to hospital sites, which they tailored to fit needs/graphics

TO KEEP BABY AND YOU SAFE FROM PREECLAMPSIA

### Let's Do Aspirin!

**What is preeclampsia?**  
Preeclampsia is a serious disease during pregnancy where high blood pressure and other complications can put baby and you at risk.

**How can I prevent preeclampsia?**  
Low-dose aspirin, as recommended by your healthcare provider, is the only known effective solution to prevent preeclampsia.

**How can low-dose aspirin keep baby safe?**  
Studies have shown that taking low-dose aspirin during pregnancy may help reduce your risk for serious problems, like preeclampsia and premature birth.

Ask your healthcare provider, "Am I at risk for preeclampsia?"  
#LETSDOASPIRIN




Scan the QR Code to access the **MARCH OF DIMES** Health Action Sheet to prevent preeclampsia and premature birth.

### Prevent Preeclampsia with Low-Dose Aspirin

Am I at risk for preeclampsia?

Ask your healthcare provider if aspirin is right for you.

#LETSDOASPIRIN

For more information, scan the QR Code with the camera on your smart phone.

\*\* The patient education materials feature a QR code that takes patients to the March of Dimes website to learn more about the importance of low-dose aspirin.

## Education & Resources

- Patient and Provider Surveys
  - Used to identify the barriers and facilitators to aspirin uptake (i.e., patient education, access, prescribing practices).
  
- Monthly QI Collaborative Meetings
  - Meets last Friday of the month
  - Includes hospital site leads, community-based organizations (CBOs) and patients from Patient Advisory Committee.

## Education & Resources

- Patient Advisory Committee (recruited to inform the project & hospitals)
  - Patients with lived experience who delivered at or near pilot hospitals.
  - Meet with pilot hospital leads to collaborate and truly enhance the importance of patient and community voices.
  - Currently, 11 patients serve on the committee and the goal is to grow the roster to 15-18 patients from around the state.

## Education & Resources: Coming Soon!

- Webinars for providers & staff
  - Support hospitals in conducting medical staff professional education on LDA.
  - Tailored to address the educational needs of providers, pharmacists, MAs, CBOs, and patients.
  - Clinic-to-Clinic (March 23, 2023)
  - Community-to-Community (April 2023)
  
- Videos
  - Produce educational videos showing different provider and patient interaction scenarios, including discussions on maternal health disparities and how to best model the conversations.

# ARE YOU PREGNANT AND AT RISK FOR PREECLAMPSIA?

All pregnancies are at risk and the best defense is to ensure patients understand how to prevent and appropriately respond to the warning signs of preeclampsia. Help us educate patients by taking this survey. Eligible participants who complete the survey will receive a \$15 gift card.

**SURVEY LINK:**  
<https://bit.ly/cmqccpreeclampsia>



## Who can participate?

- Currently pregnant
- Living in California
- 18 years and older
- Can read in English or Spanish

## QUESTIONS RELATED TO THE STUDY??

Contact: Susan Perez, PhD, MPH  
(916) 827-1213 [slperez@stanford.edu](mailto:slperez@stanford.edu)

CMQCC  
California Maternal  
Quality Care Collaborative



For questions about your rights as a participant, contact 1-866-680-2906  
Protocol Director: Elliott Main, MD

# Provider Survey



[https://stanforduniversity.qualtrics.com/jfe/form/SV\\_8ktXdIVZTSsWI5I](https://stanforduniversity.qualtrics.com/jfe/form/SV_8ktXdIVZTSsWI5I)

Thank you!

[lduplessis@stanford.edu](mailto:lduplessis@stanford.edu)