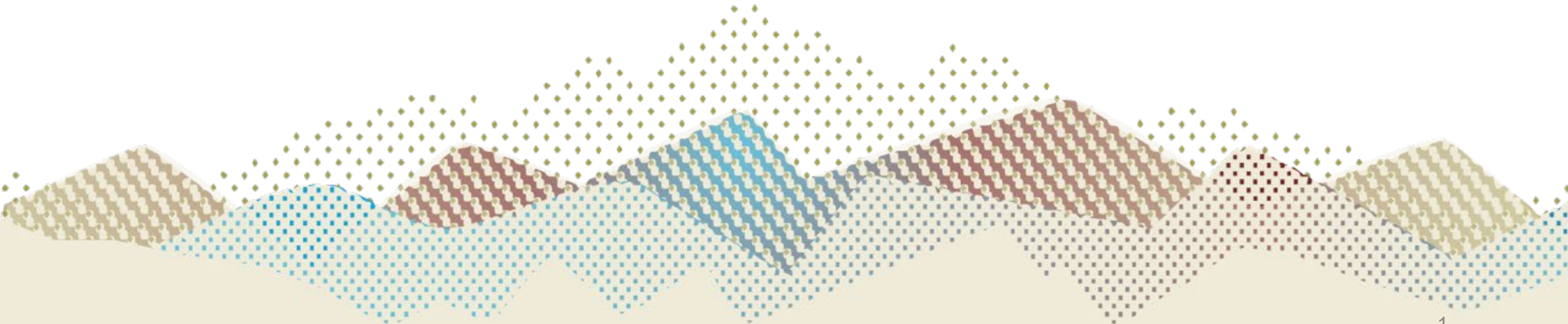


Enhancing Perinatal Support and Services

Cardiovascular and Hypertensive Diseases in Pregnancy

January 21, 2026



About Us

Regional Offices



Mission:

To help our members, and the communities we serve, be healthy.

Vision:

To be the most highly regarded managed care plan in California.

Colleen Townsend, MD, Regional Medical Director

Regional Medical Director for Napa, Solano, and Yolo counties

Colleen Townsend is a family medicine physician with over 25 years of experience in community health. She has experience in supporting patients and families across all stages, ages, and in many clinical settings. She practiced as a primary care provider at CommuniCare+OLE and works with postpartum families providing newborn care in the hospital setting.

Dr. Townsend is a regional medical director at Partnership based in Fairfield and participates in the development and implementation of policies and services related to pregnancy and postpartum.



Mary Baracco, APRN, BSN, CNM, WHNP, PHN

Mary has spent her career supporting growing families. She's delivered many babies and spent over 20 years in early childhood education. She has worked in public health maternal, child, and adolescent divisions in both Napa and Trinity counties and has worked extensively with parents experiencing perinatal mood disorders.

Mary has also had the honor of teaching and mentoring the next generation of nurses by teaching in health occupations at Napa Valley College.

She led the Napa Valley Breastfeeding Coalition as president for eight years and has more than 35 years of experience helping and supporting families with breast/chestfeeding – including 10 years as a certified lactation specialist and 20 years as an international board-certified lactation consultant.



Medical Terminology, Definitions, and Abbreviations

- **BP** – blood pressure
- **Cardiomyopathy** – several congenital and acquired heart conditions, and active heart disease
- **Congenital** – born with the condition
- **CVD** – Cardiovascular disease or diseases of the heart
- **Eclampsia** – may include all the signs and symptoms of preeclampsia and now includes seizures
- **HELLP Syndrome** – Hemolysis, elevated liver enzymes, low platelets
- **HTN** – Hypertension (in pregnancy) also known as high blood pressure, higher than acceptable level of BP in pregnancy, may have the condition prior to pregnancy
- **ICU** – Intensive care unit
- **Preeclampsia** – HTN, high BP, and may include headaches, vision changes, unusual swelling especially of the upper legs, face, and upper extremities. Protein present in the person's urine
- **PreMA Questionnaire** – a pre-pregnancy medical risk questionnaire
- **S/Sx** – signs and symptoms

Cardiovascular Disease and Hypertensive Conditions in Pregnancy

The purpose of this webinar is to:

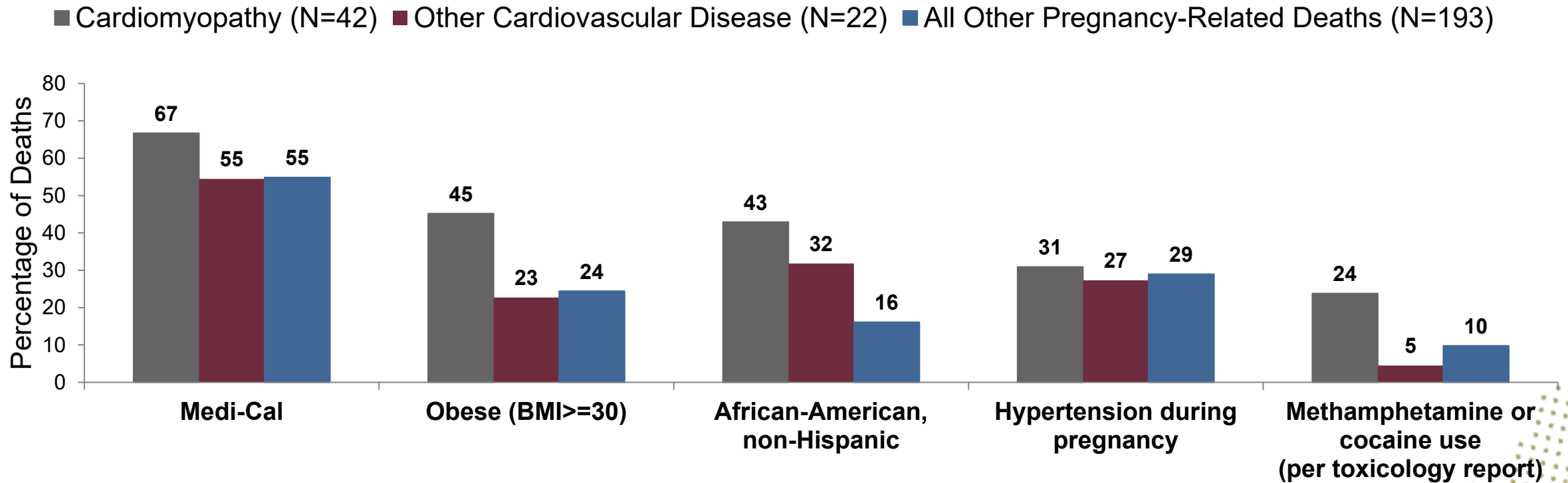
- Review statistics on pregnancy and postpartum cardiovascular disease, high blood pressure / hypertensive conditions and complications
- Discuss how cardiovascular disease and hypertensive conditions and their associated complications affect pregnancy and the postpartum period
- Identify those at risk and those with symptoms
- Review preeclampsia (one of the most common hypertensive conditions)
- The role and use of low dose aspirin
- Educate and advocate for your clients to: understand their risks, support preventive steps, and follow the advice of their medical providers.

The Statistical Perspective

- Cardiovascular disease (CVD) accounts for >33% pregnancy related deaths in the US and 25% of pregnancy related deaths in California, including hypertension (HTN) disorders such as preeclampsia and eclampsia
 - 1 out of 3 ICU admission for pregnant/ postpartum individuals is related to CVD
- Most pregnant people are unaware of their risk or a diagnosis of CVD prior to death
- Most pregnant / postpartum persons may have had symptoms during pregnancy, childbirth, or postpartum **for both HTN and CVD that may have been overlooked.**
- 25% of deaths may have been prevented if risk and conditions were diagnosed and treated earlier
- Most CVD and HTN disorder deaths occur in early postpartum period, before 6-8 weeks and can occur after 6-8 weeks and before one year.



Characteristics and Risk Factors for CVD in Pregnancy 2002-2006



What is Preeclampsia?

- A type of high blood pressure that occurs in pregnancy after 20 weeks gestational age (second trimester)
- Associated with kidney disease – protein in the urine
- Can lead to liver damage and seizures
- Affects 1 out of 25 US pregnancies
- Can have serious consequences for mom and baby, including death

What are some results of preeclampsia?

- Kidney / liver damage
- Blood clots
- Eclampsia (seizures)
- Stroke
- Preterm birth
- Low birth weight
- Postpartum hemorrhage
- Placental abruption
- Death



Cardiovascular Disorders and Conditions

- Hypertensive disorders of pregnancy
 - High blood pressure (in general is very hard on your heart)
 - Preeclampsia
 - Eclampsia
 - HELLP Syndrome (not always associated with high blood pressure)
- Congenital Heart Disease
 - Often structural defects
- Acquired Heart Disease
 - Rheumatic heart disease
 - Cardiomyopathies
 - Arrhythmias

Pregnancy is hard on the heart because of the increased workload associated with the greatly expanded blood volume, changes in clotting mechanisms, and the inflammation associated with pregnancy.

Heart disease and conditions are complicated and require diagnosis and treatment by a physician who specializes in heart conditions, called a cardiologist.



Risks Associated with Cardiac Conditions

- Risks during pregnancy
 - Maternal – heart failure, arrhythmias, stroke, maternal death
 - Fetal – low birth weight, stillbirth, congenital heart defects
- How to prepare:
 - If a woman has a preexisting heart condition preconceptional counseling is critically important
 - It is important that the woman is cared for by a multidisciplinary team
 - Medication management
 - Lifestyle management – nutrition, no smoking or substance use, etc.
 - Pre pregnancy planning



Key Information

- The first presentation of cardiovascular disease and / or hypertensive disorders may be during pregnancy or early postpartum.
- The highest risk period for CVD associated to HTN disorders to worsen is between 24-28 weeks, or postpartum.
- CVD and HTN symptoms or vital sign abnormalities should not be ignored in pregnant / postpartum women.
- New onset or persistent wheezing (asthma) / cough or shortness of breath may be a sign of heart failure.

Who is at Risk?

- Individuals who have had preeclampsia in a prior pregnancy
- Pregnancy with multiples (twins, triplets)
- Chronic illnesses: high blood pressure, diabetes, kidney disease, autoimmune disease (Lupus)
- First pregnancy or more than 10 years since last pregnancy
- Prior birth with low-birth-weight baby
- Obesity (BMI > 30)
- Family history of preeclampsia (mom or sister)
- Advanced maternal age (35 years or older)
- Racial and socioeconomic factors



Hypertensive Disorders Impacting Pregnancy

- Obesity BMI > 30
- Hypertension
 - Prior to and during pregnancy
- Diabetes
 - Prior to pregnancies, during prior pregnancy or in current pregnancy
- Pre-eclampsia
 - In prior pregnancy or current pregnancy
- Substance Use
 - Stimulants such as cocaine, methamphetamine, alcohol, and tobacco



Racism and Socioeconomic Status Impacts

- Black and Indigenous populations have higher rates of dying in pregnancy.
- Pregnancy-related CVD rates for Black individuals are >8 times higher than for white individuals.
- Hypertensive disorders are more common in Black populations.
- Indigenous individuals are 50% more likely to be diagnosed with premature CVD.
- Deep-rooted structural racism and discrimination is a key driver of racial / ethnic disparities in CVD.



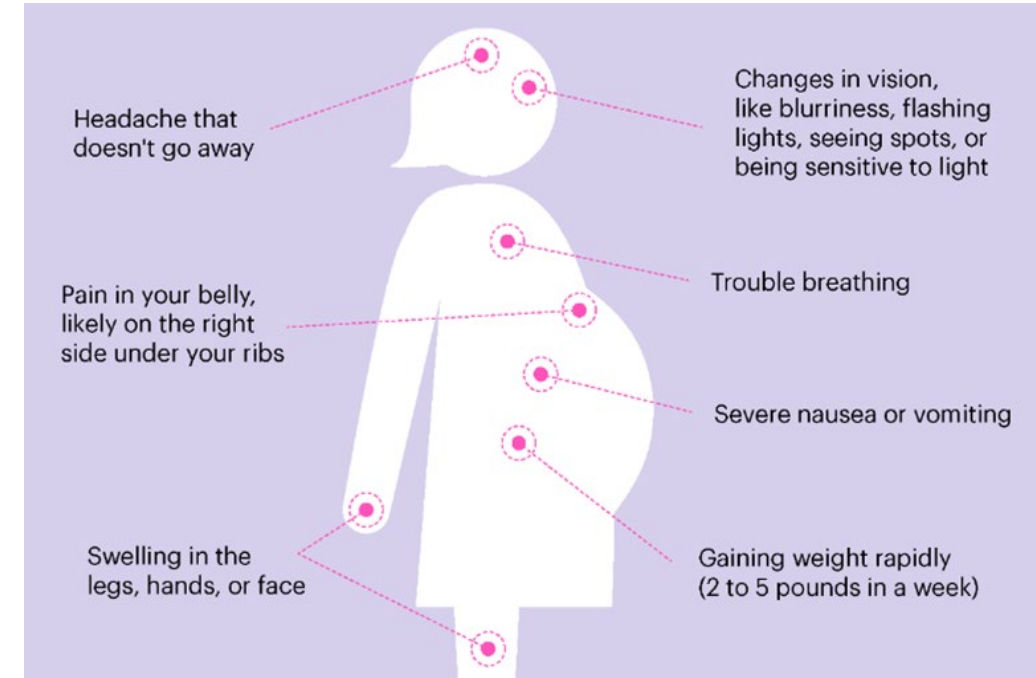
Risk Factors for Cardiovascular Conditions in Pregnancy

- Heart and lung conditions prior to pregnancy, such as asthma
- High blood pressure now or prior to pregnancy
- Family history of hypertension or pre-eclampsia
- Tobacco use / second-hand smoke and substance use
- Obesity
- Congenital heart / lung problems



What are the Signs?

- High blood pressure with or without protein in the urine. Your provider will check these during your prenatal visit.
- Changes in vision, such as blurriness, flashing lights, seeing spots or being sensitive to light.
- Headache that doesn't go away.
- [Nausea](#) (feeling sick to your stomach), vomiting, or dizziness.
- Pain in the upper right belly area or in the shoulder.
- Sudden [weight gain](#) (2 to 5 pounds in a week).
- Swelling in the legs, hands, or face.
- Trouble breathing.



An Ounce of Prevention is Worth...

- Individuals **with risk factors for preeclampsia** may be prescribed low dose aspirin daily typically starting in the first trimester
 - This can prevent the most severe effects of preeclampsia including preterm delivery
 - <https://www.marchofdimes.org/sites/default/files/2024-07/ISWM-Consumer-Education-Infographic-English.pdf>
- Individuals with preeclampsia
 - Continue close follow up with their medical provider
 - Providers can request a blood pressure monitor through Partnership and member can track their blood pressure
 - Regularly take medications as prescribed: Baby aspirin and blood pressure medications

Who to Call?

Your resource list or booklet is an important resource

- In your resource list / booklet, you should have at least two people you can call and make a referral to for when concerning signs occur
- Case managers and health educators: Identify your path for raising concerns to the clinical provider
- Doulas: Know your client's clinical provider and case manager contacts. Reach out to them to facilitate scheduling appointments
- Know how to contact the after hours on-call provider (MD, DO, CNM or prenatal care clinic)
- After hours triage or Partnership's Advice Nurse Line **(866) 778-8873**
- Uncertain, continuous, serious symptoms, call the emergency department, labor and delivery, or 911.



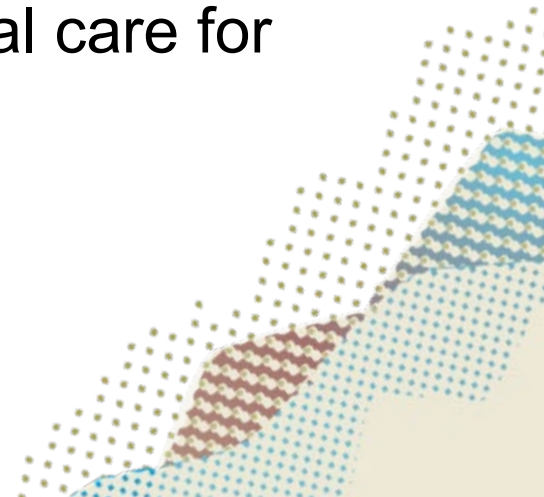
Roles and Responsibilities

- Everyone working with pregnant or postpartum families — doulas, perinatal educators, case managers, staff in public health, WIC, or any related agency — has the responsibility to provide education, to increase awareness regarding the risks related to cardiovascular disease and high blood pressure related conditions in pregnancy and postpartum.
- Be familiar with recognizing risks and early signs of problems
- Use the screening tools within your scope of practice. (PreMA)



Roles and Responsibilities

- Provide educational materials to support clients in understanding these conditions and their risks
- Connect your clients to medical providers / clinical teams for evaluation, diagnosis and treatment
- Support and assist clients as they navigate the health care system
- Assist your client to follow through with the recommended medical care for urgent or new concerning symptoms.



Case Review

CNN Editor's Note: Serena Williams is a professional tennis player, businesswoman, and UNICEF goodwill ambassador. The views expressed in this commentary are her own.

I almost died after giving birth to my daughter, Olympia. Yet I consider myself fortunate. While I had an easy pregnancy, my daughter was born by emergency C-section after her heart rate dropped dramatically during contractions. The surgery went smoothly. Before I knew it, Olympia was in my arms. It was the most amazing feeling I've ever experienced in my life. But what followed just 24 hours after giving birth were six days of uncertainty.

It began with a pulmonary embolism, which is a condition in which one or more arteries in the lungs becomes blocked by a blood clot. *Because of my medical history with this problem*, I live in fear of this situation. So, when I felt short of breath, I didn't wait a second to alert the nurses.

This sparked a slew of health complications that I am lucky to have survived. First my C-section wound popped open due to the intense coughing I endured as a result of the embolism. I returned to surgery, where the doctors found a large hematoma, a swelling of clotted blood, in my abdomen. And then I returned to the operating room for a procedure that prevents clots from traveling to my lungs. When I finally made it home to my family, I had to spend the first six weeks of motherhood in bed.

Case Review

May 2023

The unexpected death of U.S. Olympic sprinter Tori Bowie is putting a spotlight on a [pregnancy complication](#) that [disproportionally impacts Black women](#). Bowie, 32, was found dead last month in her home near Orlando, Florida. At the time of her death, Bowie was around eight months pregnant and was in labor, according to an autopsy report released this week by the office of the medical examiner in Orlando. The autopsy report, obtained by ABC News, ruled that Bowie's death was "natural," noting that possible complications included respiratory distress and eclampsia. Bowie, whose only medical condition listed on the autopsy is bipolar disorder, had no drugs or alcohol in her system, according to the report. Eclampsia is a medical emergency that happens when a pregnant woman with preeclampsia develops seizures, which can lead to coma or death. While eclampsia is more rare, preeclampsia, a condition of high blood pressure and kidney damage during pregnancy, is common, affecting as many as 1 in 25 pregnancies in the U.S., [according to the CDC](#). As a Black woman, Bowie, a three-time Olympic medalist, was among the population most affected by preeclampsia, data shows. [According to the Preeclampsia Foundation](#), a U.S.-based nonprofit organization, the rate of preeclampsia is 60% higher among Black women than white women, and Black women are more likely to develop severe preeclampsia. The [American College of Obstetricians and Gynecologists also lists](#) being Black as among the "moderate risk" factors for preeclampsia, a condition for which the exact cause is not known.

Other Cases

1. Patient presents to ER not feeling well and with a headache at one week postpartum and seizes while waiting for care. No known history of preeclampsia while pregnant.
2. Patient in active labor. Known preeclamptic, protein in urine, high BP, hyperactive reflexes, tremulous throughout labor. SVD. Recovers postpartum.
3. Patient presents early and severe preeclampsia at 26 weeks of pregnancy. Abnormal labs, bedrest in hospital for two weeks. Delivers by C-section and develops severe heart condition and passes away, at approximately six years after giving birth.

Wrap-up, Take-aways, Questions, and Survey

Please scan the QR code below for the post survey feedback.

Enhancing Perinatal Support and Services Webinar Survey



Next Webinar Session

Enhancing Perinatal Support and Services Webinar Series

Date: Wednesday, February 25, 2026

Time: Noon – 1:30 p.m.

Topic: Substance Use Disorder (SUD)

Resources

- Prema Questionnaire
 - https://journals.lww.com/greenjournal/abstract/2025/06001/prema_preconception_medical_assessment_a.232.aspx
 - https://osg.ca.gov/wp-content/uploads/sites/266/2025/01/PreMA_Quiz_web.pdf
- March of Dimes
 - https://www.marchofdimes.org/sites/default/files/2024-07/ISWM_Consumer_Education_Handout_v1.pdf (great information, different handout)
- CDPH - California Department of Public Health
 - Pregnancy and Reproductive Health - <https://www.cdph.ca.gov/>
- CVD Risk Infographic - https://www.cmqcc.org/files/CVD_Risk_Infographic.pdf



References

Hameed AB, Morton CH, and A Moore. Improving Health Care Response to Cardiovascular Disease in Pregnancy and Postpartum Developed under contract #11-10006 with the California Department of Public Health, Maternal, Child and Adolescent Health Division. Published by the California Department of Public Health, 2017.

Creanga AA, Berg CJ, Syverson C, Seed K, Bruce FC, Callaghan WM. Pregnancy-related mortality in the United States, 2006-2010. *Obstetrics and Gynecology*. 2015;125:5-12.

Hameed A, Lawton E, McCain C, et al. Pregnancy-Related Cardiovascular Deaths in California: Beyond Peripartum Cardiomyopathy. *American Journal of Obstetrics and Gynecology*. 2015; DOI: 10.1016/j.ajog.2015.05.008.

Trends and Racial and Ethnic Disparities in Maternal Cardiovascular Health in CA *Journal of Am Heart Assoc* 2025 Oct 7; 14 (19) doi: 10.1161/JAHA. 124.039295

Enhancing Perinatal Support and Services Webinar Series Sessions

The recordings to all sessions can be found online at:

<https://www.partnershiphp.org/Providers/Medi-Cal/Pages/ProviderEducationTrainingMaterials.aspx>

PROVIDER LEARNING PORTAL

Enhancing Perinatal Support and Services
Webinar Series

Session 1 - Basics of Prenatal Support
Survey | PowerPoint Presentation

(86 Minutes)

Session 2 - Basics of Postpartum Support
Survey | PowerPoint Presentation

(90 Minutes)

Session 3 - Early Lactation Challenges
Survey | PowerPoint Presentation

(87 minutes)



To receive a certificate of completion, please fill out the survey after reviewing the recording.