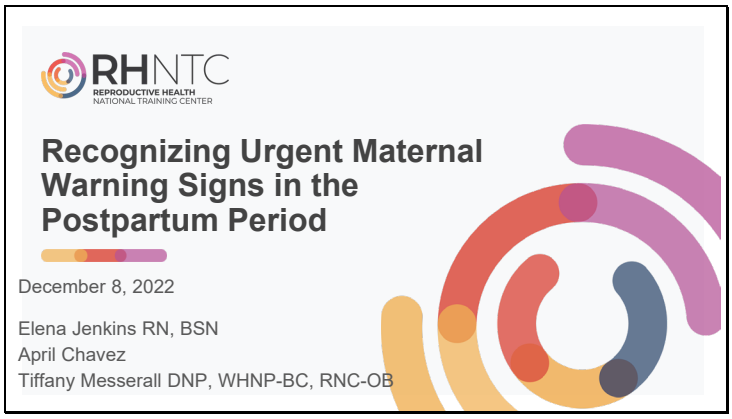
Recognizing Urgent Maternal Warning Signs in the Postpartum Period
December 8, 2022
Transcript

Slide 1



Hello everyone. This is Jennifer Kawatu with the Reproductive Health National Training Center and I'm delighted to welcome you all to today's webinar Recognizing Urgent Maternal Warning Signs in the Postpartum Period.

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I'd like to briefly introduce our speakers today. Elena Jenkins is the Nurse Manager of a high-risk Labor and Delivery Unit in St. Louis, and the team lead for a hospital based birth equity initiative striving to implement strategies to address implicit bias, maternal health disparities, and promote conditions of optimal births for all people while specifically addressing racial and social inequities. She is also an Alliance for Innovation on Maternal Health (AIM) Clinical Champion, focusing especially the implementation of the Severe Hypertension in Pregnancy and Obstetric Hemorrhage Bundles. April Chavez is a maternal sepsis survivor and patient advocate. She serves as the maternal sepsis spokeswoman for END SEPSIS, and is a member of the National Family Council on Sepsis. April's goal as a patient advocate is to help educate others about the importance of advocating for your own health or the health of those around you. She has bravely shared her story with local and national outlets, and we are grateful she is with us today. Dr. Tiffany Messerall is the Evidence-Based Practice Lead for OhioHealth where she is

responsible for system and organizational leadership of evidence-based initiatives, she is also an AIM Clinical Champion, including the implementation of the Severe Hypertension in Pregnancy and as a content expert on the development of the AIM Sepsis in Obstetrical Care Patient Safety Bundle. With that, I'd now like to turn things over to Dr. Tiffany Messerall to get us started.

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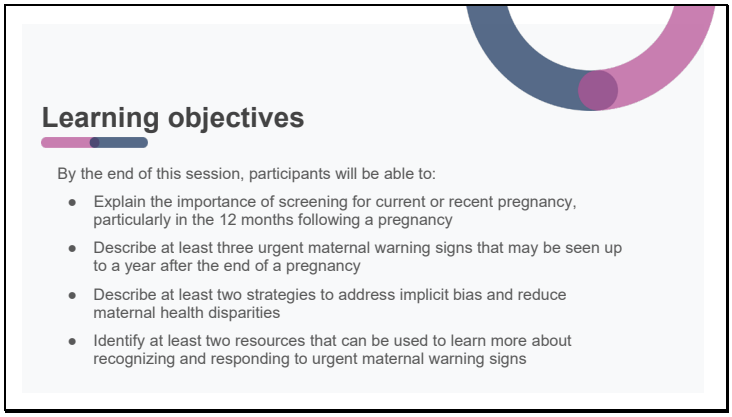

By the end of this session, participants will be able to:

- Explain the importance of screening for current or recent pregnancy, particularly in the 12 months following a pregnancy
- Describe at least three urgent maternal warning signs that may be seen up to a year after the end of a pregnancy
- Describe at least two strategies to address implicit bias and reduce maternal health disparities
- Identify at least two resources that can be used to learn more about recognizing and responding to urgent maternal warning signs

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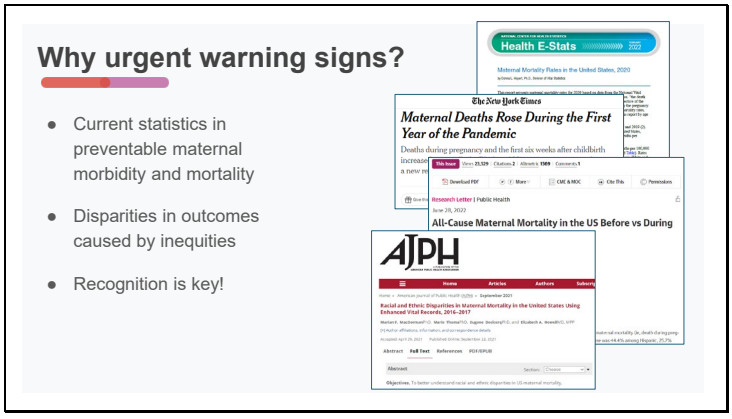

- [Tiffany] Thank you for that introduction, Jennifer. So why the focus today on urgent warning signs? Well, due to current statistics on preventable maternal morbidity and mortality, as you can see in the pictorial representations on this slide here, we have opportunities for improvement in the United States. Maternal deaths has been rising in recent years, as well as

disparities in outcomes caused by inequities. Recognition is key to preventing maternal morbidity and mortality.

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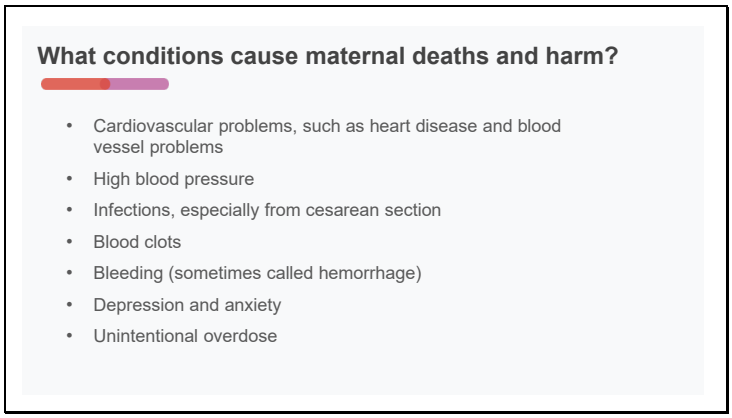

So what are some of the conditions that cause maternal deaths and harm? These include cardiovascular problems, such as heart disease and blood vessel problems, high blood pressure, infections, especially from cesarean sections, blood clots, bleeding, or sometimes referred to as hemorrhage, depression and anxiety, as well as unintentional overdose.

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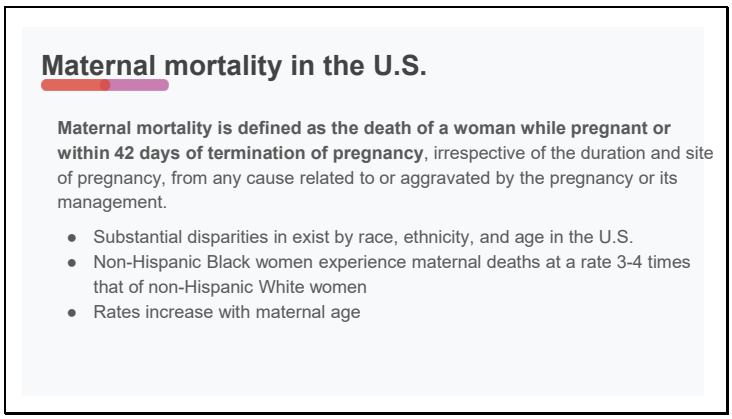

Maternal mortality is defined in the United States as the death of a woman while pregnant or within 42 days of termination of pregnancy. This is irrespective of the duration and the site of pregnancy, and this can occur from any cause related to or aggravated by the pregnancy or its management. Substantial disparities in maternal mortality rates do exist by race, ethnicity, as well as age in the United States. Non-Hispanic Black women experience maternal deaths at a rate that is three to four times that of non-Hispanic white women, and these disparities continue to increase. The increase in maternal mortality rates from 2019 to 2020 for non-Hispanic Black and Hispanic women were statistically significant year over year. In the United States, rates also increase with maternal age. The maternal mortality rates for a birthing person over the age of 40 is nearly eight times higher than the rate of individuals that are under 25. And we are also seeing an increase year over year with that as well that's statistically significant.

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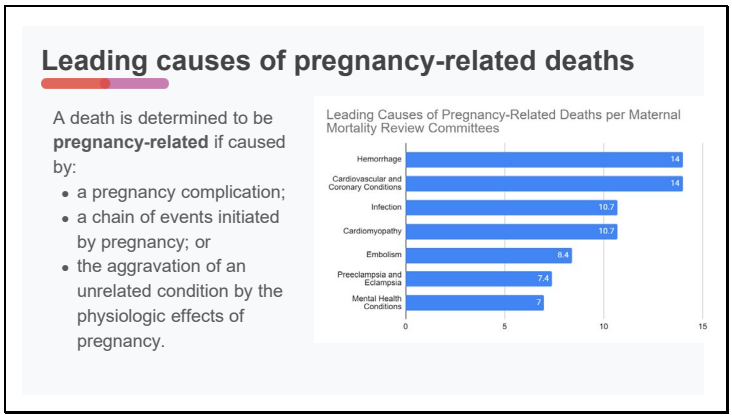

The use of vital statistics in the previous slide can tell us a lot about trends in disparities, but our state and local maternal mortality review committees are best positioned to comprehensively assess each maternal death and identify opportunities for improvement. So maternal mortality review committees use the term pregnancy-related deaths, and this is where a death is determined to be pregnancy-related if it's caused by a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy. So we can see the graph here depicted on the right of the screen in front of you, leading causes of pregnancy-related deaths as determined by maternal mortality review committees, hemorrhage and cardiovascular and coronary conditions are tied for first. So cardiovascular and coronary conditions is sort of a blanket terminology and that does include a lot of different ICD codes, including congenital heart disease, ischemic heart disease, cardiac valvular disease, hypertensive heart death, congestive heart failure. Infection and cardiomyopathy come in a close second as a leading cause of pregnancy-related death. And you'll note that cardiomyopathy is teased out separately from cardiovascular and coronary conditions, so this is a specific condition. Embolism is next as a leading cause, and this would include emboli from air, septic, or fat. This is not amniotic fluid embolisms here. Preeclampsia and eclampsia, and then mental health conditions. This again is a blanket term. So this would include deaths due to substance use disorder or unintentional overdose, as well as depression, anxiety disorder, and any other psychiatric conditions.

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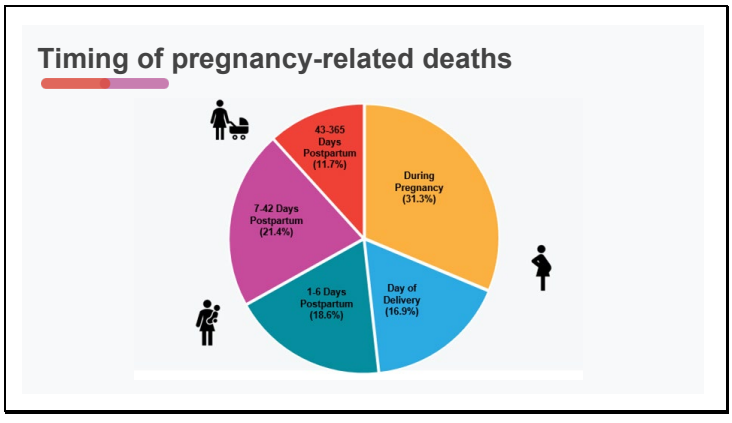

So when we look at the timing of pregnancy-related deaths, we can see that we can break them down to better refine our opportunities for improvement here. Pregnancy-related deaths that occurred during a pregnancy account for 31%, this population. Pregnancy-related deaths that occur on the day of delivery, an additional 16.9%. Deaths that occur one to six days postpartum, 18.6%. An additional 21.4% occur seven to 42 days following delivery. And then the late postpartum period, this is 43 to 365 days postpartum, 11.7%. You can see that it's clear here that the risk does not end with delivery.

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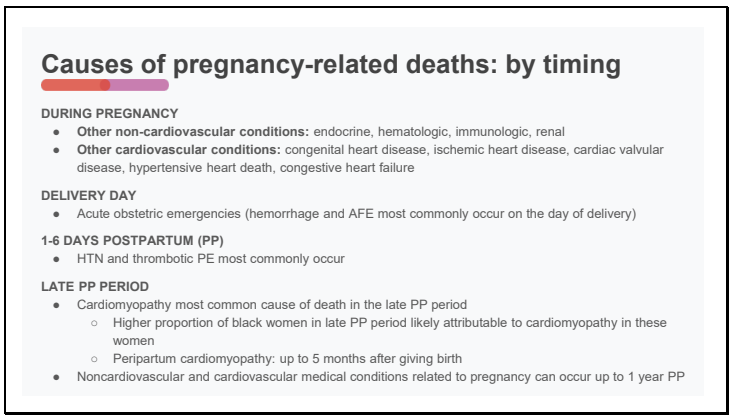

So in looking at the causes of pregnancy-related deaths by timing, what we see here is different conditions occur, have a higher prevalence depending on the timeline that they occur in relation to delivery. During pregnancy, the leading causes of death here are the other non-cardiovascular conditions. So this would include endocrine, hematologic, immunologic, and renal conditions. Other cardiovascular conditions. So this is that category we talked about before, congenital heart disease, ischemic heart disease, cardiovascular valvular disease, hypertensive heart death, as well as congestive heart failure. Infection would be the third leading cause during the pregnancy time period. On delivery day, this is where we more commonly see the occurrence of acute obstetric emergencies. So this includes hemorrhage and amniotic fluid embolism. The third most frequent cause that occurs during this time period would also be the cardiovascular condition category. During the first week postpartum, the days one through six, the leading cause of pregnancy-related death is actually hemorrhage, and it would be followed by hypertensive disorders of pregnancy, and infection would be the third. This is the time period where we are more likely to see thrombotic pulmonary embolism occurring. Seven to 42 days postpartum, the leading causes of death are due to infection as well as other cardiovascular conditions and cerebrovascular accidents. The late postpartum period, cardiomyopathy is the most common cause of death in this period. This accounts for 40% of the deaths during this time period. The higher proportion of Black women seen in pregnancy-related deaths in the late postpartum period is thought to be due to the cardiomyopathy, and this could occur up to five months after giving birth. Other non-cardiovascular and medical conditions are the second leading cause of death during this time period, and cardiovascular conditions come in third.

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The majority of pregnancy-related deaths have been determined in a review process to have been preventable. So 60%, or three out of five pregnancy-related deaths, are determined by committee review to have been preventable. Recognizing major causes allow for opportunities for intervention.

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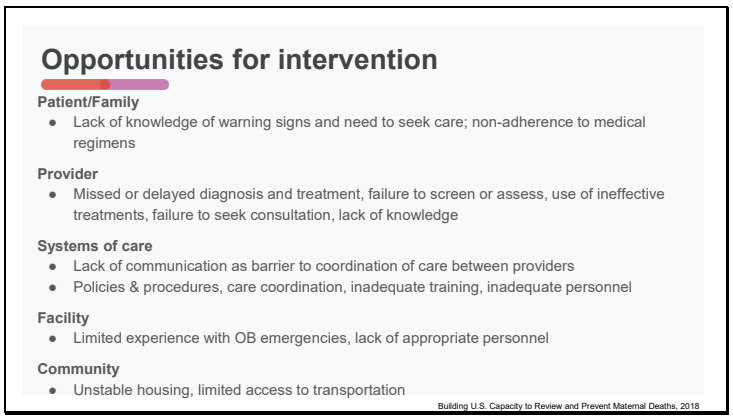

Our maternal mortality review committees categorized the contributing factors of preventable deaths in order to give us opportunities for intervention. These major categories include patient and family. Examples of this are a lack of knowledge of warning signs and the need to seek care, as well as non-adherence to medical intervention. Provider-level, this includes not only the provider as we all know it, but medical assistants, LPNs, nursing staff, certified nurse-midwife, and other APPs and physicians. So opportunities for intervention here are missed or delayed diagnosis and treatment, failure to screen and assess, the use of ineffective treatments, failure to seek consultation, and lack of knowledge. Systems of care includes the lack of communication as barriers to coordination of care among providers, policies and procedures, care coordination, inadequate training, inadequate personnel. Facility-level factors would include limited experience with OB emergencies or the lack of appropriate personnel to adequately deal with the situation. Community factors would include unstable housing and limited access to transportation. So of these categories here, patient and family, provider, and systems of care collectively are responsible for 93% of our preventable pregnancy-related deaths.

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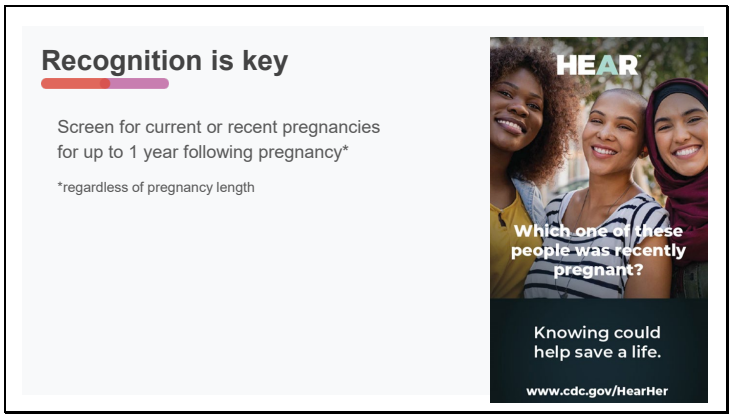

Recognition is key. Here on the screen is a picture from the HEAR HER campaign from the CDC. The graphic says, "Which one of these people was recently pregnant?" Can you visually identify from the picture which one of these individuals was recently pregnant? You can't, so it's really imperative that we screen for current or recent pregnancies for up to one year following pregnancy, regardless of pregnancy length. Here on the screen is a picture from the Hear Her campaign from CDC “Which of these people was recently pregnant? Knowing could help save a life.” You can access this at cdc.gov forward slash Hear Her (www.cdc.gov/hearHer)

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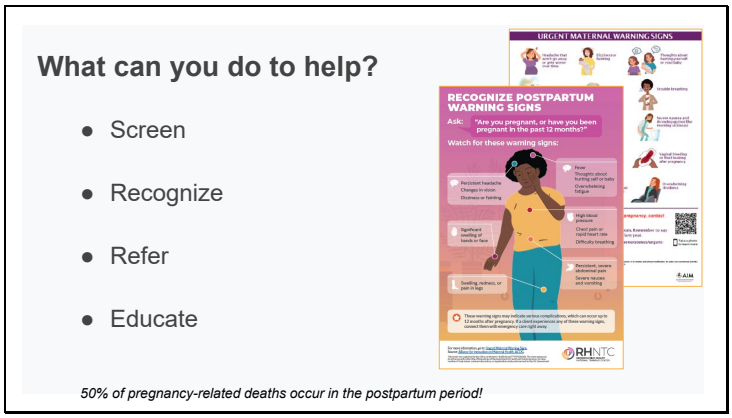

So what can you do to help? We can screen our patients. It's difficult to apply the appropriate diagnostic tools and treatment algorithms that are adjusted for obstetric-specific thresholds if we don't know if the patient is pregnant or has recently been pregnant. We can recognize. We can maintain a high threshold for suspicion of conditions for maternal harm. We can refer. We need to be aware of the risks, following a complicated pregnancy especially. We should consider preeclampsia as a risk factor for future heart disease. It's really imperative that these individuals that had preeclampsia or eclampsia during their pregnancy be referred afterwards to cardiologists or primary care because they have a significant increase in the risk of future development of elevated blood pressure, heart disease, stroke, and diabetes. And we can educate. We can ensure that our patients and their support structures know all warning signs and do not hesitate to make contact immediately. And it's important to remember that 50% of pregnancy-related deaths occur in the postpartum period. So with that, I'm going to pass the microphone over to April Chavez.

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- [April] Good afternoon, everyone. Thank you so much for letting me be here to share my story. I tend to like to keep things very casual. I just want to tell you all about my experience and I would like to just let you know that I appreciate everyone in the medical field and I think you have a huge responsibility and lots of work ahead, but I know that we can do better. And my goal is just to remind you that behind all of the statistics that Tiffany just shared, there are real people, just like myself, who, this maternal mortality rates on the rise, it affects families just like mine every day. So here's a little bit about my story and a little bit about my experience with maternal sepsis.

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So me and my husband had tried for like five or six years to get pregnant and we went and saw a fertility specialist and we were basically told, "You will probably never get pregnant on your own." So we are really big into our faith. And so as much as I wanted a baby, I decided let's just stop trying. Let's take a step back. Let's pray about it. Let's just see, like, what else is in store for us, which was really hard for me to come to terms with. But after that, one day I found out I was pregnant. So it was just about when I had given up and thought I'd never be a mom, I found out I was pregnant. I had a happy, healthy pregnancy. Everything was normal. Everything as far as my delivery was normal. I did not have a C-section. I thought everything was great. So September 2nd of 2017 was the happiest day of my life. I finally had this child that I had prayed for for so long and I thought this was the start to my fairytale, and I thought, "This is it. This is what I've always wanted." Little did I know that my fairytale would quickly turn into a nightmare.

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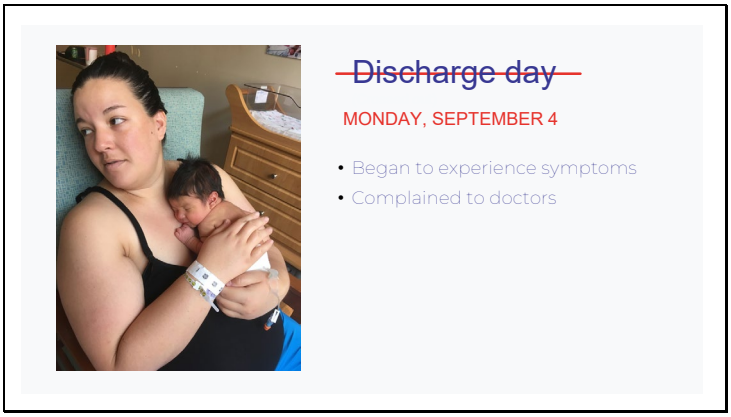

On the day that I was supposed to be discharged from the hospital, I just started to feel terrible. I started to feel like my heart was racing. I had fever. I had chills. I felt like I couldn't catch my breath. I just, I didn't feel well overall. I kept telling doctors, nurses, anyone who would listen to me that something's not right, "I don't feel well." And basically every time I would bring up a symptom, they would say, "Well, that can be normal after childbirth. It's normal to have a higher heart rate," or, "It's normal for your white blood cell count to be higher. Those are all normal things. You just need to relax, you need to breathe, you need to rest." So I had no idea what all of those signs meant. I had never heard of sepsis at all. So I thought, "Okay, I'm being crazy. You know, this is my first baby. Maybe I'm just being a wimp. Maybe this is how all new moms feel." I specifically had one doctor tell me, "You're being crazy and you need to stop." So I feel like I let those medical professionals convince me that I was crazy, that this is normal, everything is fine. No matter what issues I raised, it was just brushed off every time. There was always an excuse. They were never looking for why I was feeling that way or finding out a solution. At one point I was so cold that they told me to take a hot shower and they turned the thermostat up in my room to like 80 degrees, which is as high as it would go. Whenever I got super hot, then they were like, "Oh, well, let's bring her a fan." So at one point they even called the maintenance men to come and look at the thermostat and the heating and cooling in my room because they thought, "Oh, well maybe it's heating and cooling," instead of looking at my symptoms and trying to figure out what was wrong with me. I was told that I was just anxious, basically, or anxious about being a new mom. "You're going to be fine. It's normal." So they kept me for a few more days and then basically they said, "You're going to feel better once you get home."

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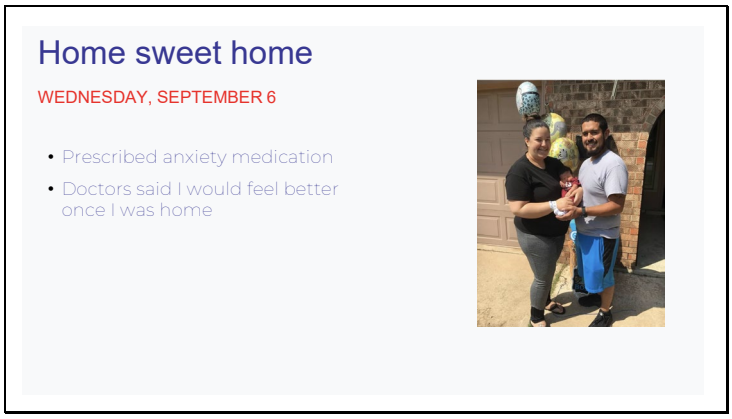

So I believed them. I had no idea what sepsis was. I had no idea what any of those symptoms meant. So I came home. They sent me home with anxiety medicine. So I came home, I started taking those meds. I don't remember a whole lot from when I was home because my body really started to, excuse me, shut down. It got so bad that I couldn't hold my son. I couldn't care for him. My husband and my mom were here and they were basically doing all the care for my son during that brief time period when I came home. I wasn't sleeping. So I was a hot mess, is what I like to say. But when it came time to, my mom kept trying to tell me, "You need to go back. You need to go back." And I kept telling her, "I don't want to go back because they've already checked me. They've already said I'm fine. They've already said this is normal. Like, they're going to just continue to tell me that I'm crazy. I don't want to go back. Like, I don't feel like they took my symptoms serious. I feel like maybe I am fine. Maybe this is normal."

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So I finally listened to my mom, and while I was home, I had been making a list because I had already had, like, a scheduled appointment for a follow-up with my doctor. So there was so much going on with me that I was starting to, like, lose track in my head. When people asked, "Well, how are you feeling?", I had so many different things going on that I said, "I'm going to make a list in my phone so that way, at my scheduled appointment, I can take this list in to my doctor and then they can check things out." So this is actually a screenshot from my phone during that time of all of the symptoms that I was experiencing, not only originally at the hospital, but whenever I got home. So you can see that basically all of the symptoms that I had were consistent with sepsis. And had I known what sepsis was then, I would have advocated for

myself, but I didn't. I didn't have that knowledge. I didn't feel empowered. There was not an environment in which I felt comfortable speaking up in. It was very much a dismissive, "You're not a doctor, you're not a professional, let us do our jobs." So I had no choice but to trust them. When I look at this list now, it is, like, mind-blowing to me. Like, shortness of breath. Yep, that's a symptom. My heart was pounding. Like, all of these things are some form or fashion of a symptom of sepsis, and still they did not take me seriously. They did not take my concern seriously and I nearly lost my life.

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When I went back, finally, when my mom finally convinced me to get back, I took that list with them. I told them all those symptoms, and even still, I laid in the labor and delivery unit getting sicker and sicker. They did not still... I think they were at a loss for answers. I don't think that they really knew what was going on. I think that my OB team was in over their heads. At one point, I have really hard veins to find, and so they had to call somebody from the rapid response team to come and place an IV. And it wasn't until he came and he saw my condition and he started looking at my numbers and my charts and all of that, that he said, "Why is she down here in labor and delivery? She needs to be in the ICU. She is on the brink of death." So there is no doubt in my mind that if that rapid response nurse had not come, I would've died in that labor and delivery unit. I would not be here today, without him. I know that for a fact. So he took me up himself. He didn't wait for them to call the transport nurses or any of that. He got my bed and took me up to the ICU himself. And that's whenever my family started to get answers about septic shock. That's whenever they started to say, "Oh, well, it looks like she had an infection." And they started to really get the answers that they weren't getting in that labor and delivery unit. While they were getting answers, I was also just getting progressively sicker. They told my mom and my husband they needed to call my loved ones to say goodbye. So they... My sister came, and something that sticks with me is that my mom said she didn't want anyone to see me like that because she felt like she was giving up on me if she let people come and say goodbye. So the only one that my mom let come and see me was my sister and my parents and my husband. And then my priest from church came and prayed over me, and they didn't know what was going to happen. Something that I always think about is, I know what my experience was like, but I can't imagine what my husband and my family felt like. Here was this newborn baby that all of us were so excited about and my husband was thinking, I'm sure he thought about our son, but he was also thinking about his wife. "What is it going to look like if she dies?" Like, "Am I going to be a single dad? How am I going to care for this baby? Like, how am I going to raise a kid by myself?" Like, so the missteps that my medical team took not only affected me, but it affected my husband, my family. Like, to this day, I know it's a crazy thought, but I feel like my

son is closer with his dad because I missed out on basically the first month of his life because I was in the hospital, fighting for my life.

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But on the good side of things, my medical team in the ICU was wrong. Somehow I survived. I am very fortunate that I didn't have any of the complications that sepsis survivors often have. Like, I didn't lose any limbs. I didn't have some of those common complications that a lot of other survivors had. I'm very grateful to say that I survived, and I think it's really important for me now to share my story because we know that maternal sepsis is not only preventable, but it's treatable if they can identify it in a timely manner. So had my medical team taken my concerns seriously in the first place and had they explored, "Well, could this be sepsis?", I might not have ever ended up in the ICU. I might not have missed the first month of my son's life. There's so many things that could have been different if my concerns were adequately addressed by that team. I think when I hear other medical professionals, like, when I hear Tiffany say that our maternal mortality rates are on the rise, it's shocking to me. Like, we live in the United States. We have some of the best access to technology and resources, and women are dying, and it's getting worse. It's not getting better. So that's another reason that I want to do my part in sharing my story, is that behind all of these statistics, behind these numbers, it's real people and it has the potential to totally change their lives. I know that I will never be the same person that I was before my experience. I feel like kind of the last part of my story is, I live in a predominantly white community. I'm a Hispanic female. My care team, there wasn't a whole lot of people who looked like me, and I feel like that played a part in my experience as well. I had never previously had any problems with having a male doctor or a white male doctor or any of that. I never thought about it until this experience. I feel like because of my race, I was dismissed and not taken seriously. So I feel like that's something that I want people to be aware of, that it does happen. And whether you realize it or not, it makes a difference.

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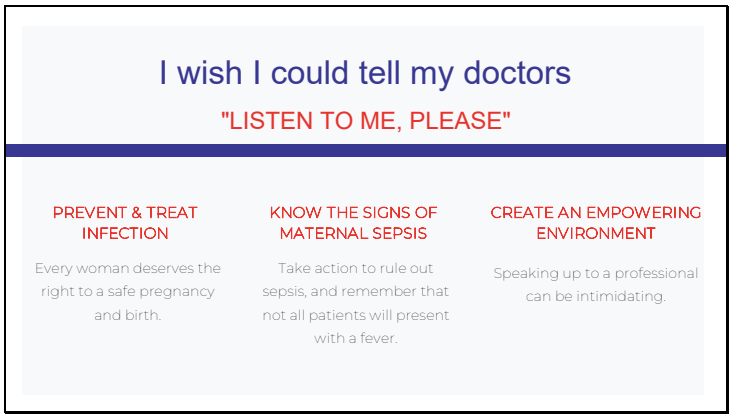

A question that I always get asked a lot, especially now that I've been involved in advocacy work, is if you could go back and talk to your doctors or if you could just have five minutes with your doctor, what would you tell him? And I think the number one thing is listen to your patients. I knew something was wrong, but I didn't know what, and I don't feel like it should be the patient's responsibility to know what is wrong with them. I feel like you have the power to explore, could it be sepsis, could it be a heart condition? Like, you have the power to ask those questions and to really get down to what the root of it is. So listen to me. That's, like, the one thing that I wish I could tell my doctors. Along with that, obviously, like Tiffany mentioned earlier, work to prevent infection and treat it. Identify early. Know the signs of sepsis. Every time I see a pregnant person now, I used to think like, "Oh, I hope they have a healthy baby." And now I see a pregnant person and I'm like, "Have you ever heard of maternal sepsis?" It's not to scare them, but it's something that, it might be rare, but it does happen, and knowing the signs could make all the difference. If I had known the signs, I would've advocated harder and I'd like to think that I wouldn't have gone through what I did. And finally, create an empowering environment. Like I mentioned throughout my talk here, I don't feel like I was ever taken seriously. I felt like every time I would bring something up, there was an excuse, I was brushed off. I was told I was crazy. Like literally, somebody said, "You're being crazy. You need to stop." Nobody should ever feel that way when they are seeking your help as a professional.

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I think I've kind of already covered this, but my goal now is to not only raise sepsis awareness, but specifically awareness about maternal sepsis. I heard a lot through my time, like, when I

started to feel better, like, "Oh, maternal sepsis is so rare." And it wasn't until I started really doing my own research that it's really not that rare and it's something that is preventable and treatable. We just have to get doctors to listen. We have to get women to know the signs so that way they feel empowered. And it's all of our responsibility to try to make things better and try to improve maternal health outcomes for all women.

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That is all that I have today. I will pass it over to Elena, and thank you all again for letting me share my story.

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- [Elena] Thank you so much, April. Your story is really moving and it's a lot of the reason why I do the work that I do, because of listening to patients like you. So let's talk about what signs that we should look for.

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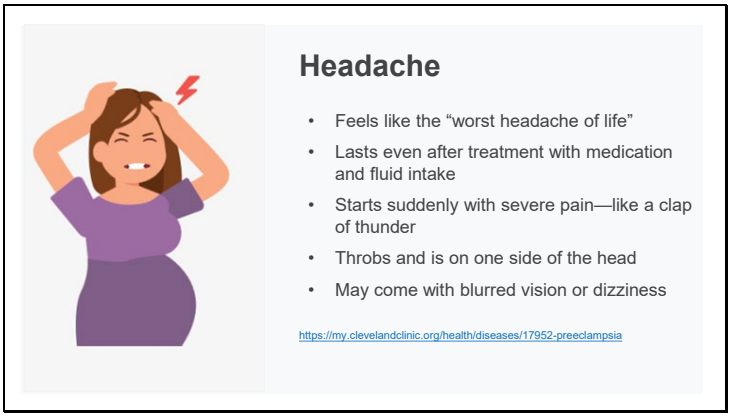

Headaches, patients describing headaches that feel like the worst of their life, that last even with medication, fluids, rest, headaches that start suddenly with severe pain, like a clap of thunder, or just continue throbbing, maybe on one side of the head. It's important to recognize these may be signs of preeclampsia, or like April said, sepsis.

Resource: https://my.clevelandclinic.org/health/diseases/17952-preeclampsia

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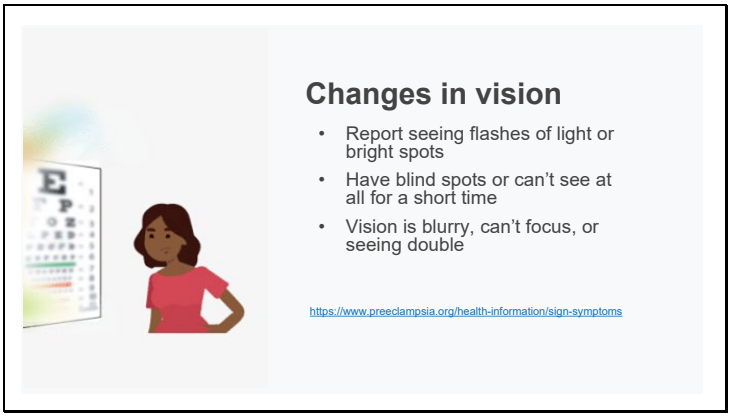
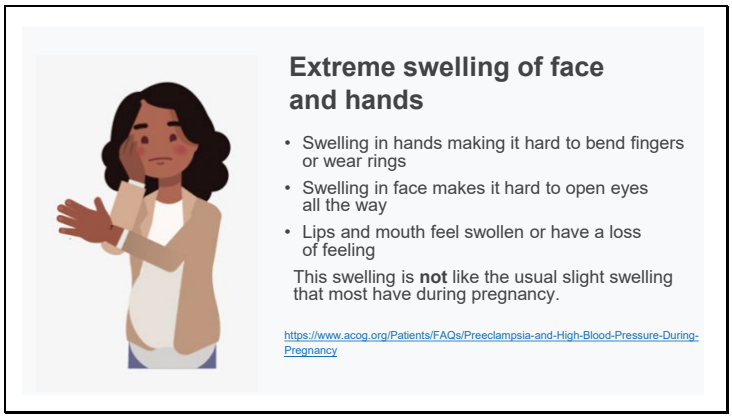


Changes in vision. Birthing people may report seeing flashes of light, bright spots, floaters, may describe blurry vision or even just the inability to focus and seeing double.

Resource: https://www.acog.org/Patients/FAQs/Preeclampsia-and-High-Blood-Pressure-During-Pregnancy

Slide 27



Extreme swelling of the face and hands. This is unlike the normal pregnancy swelling in the last couple of months of pregnancy, but rather a sudden onset and significant, where patients have a difficult time bending their fingers or wearing the rings that they're used to wearing. Swelling in the face is often noticeable by family members, and particularly when it is around the eyes and it's periorbital swelling, it may make it very difficult for patients to keep their eyes open. Or they may report lips and mouth feeling swollen and feeling a loss of sensation or tingling.

Resource: https://www.acog.org/Patients/FAQs/Preeclampsia-and-High-Blood-Pressure-During-Pregnancy

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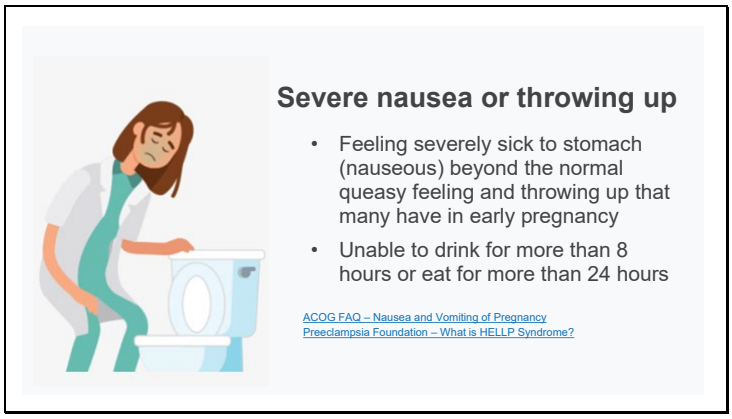

Severe nausea and/or vomiting needs to be paid attention to. If a patient is unable to hold down food or fluids for a significant period of time in a 24-hour period, this may indicate complications of preeclampsia and/or HELLP as well as sepsis.

Resources:

- ACOG FAQ – Nausea and Vomiting of Pregnancy
- Preeclampsia Foundation – What is HELLP Syndrome?

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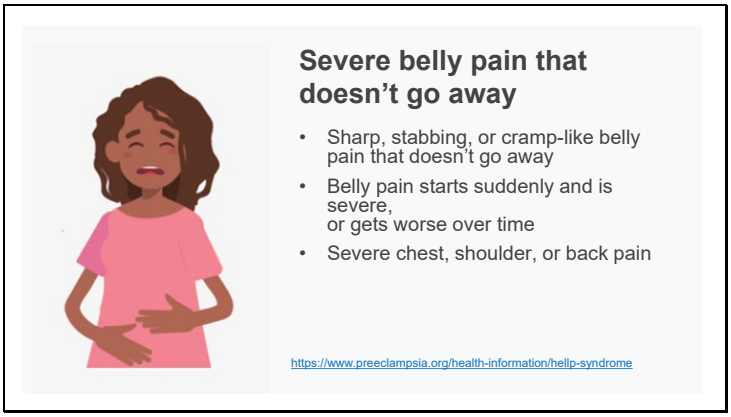

Severe belly pain that is unrelenting. Patients may report sharp, stabbing, cramping belly pain, often located on the right-upper side of the belly when it is associated with HELLP syndrome. If the pain worsens and is just not being relieved or is referred to the chest, shoulder, or back, it needs to be evaluated.

Resource: Preeclampsia Foundation – HELLP Syndrome

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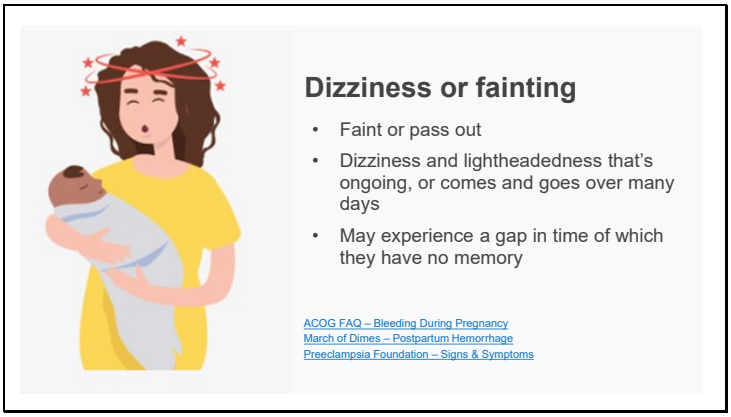

Dizziness or fainting. Patients that report that they have fainted, passed out, experienced a gap in time where they have no memory, this needs to be evaluated as well. Dizziness and lightheadedness that is ongoing or intermittent over a couple of days may indicate preeclampsia or postpartum hemorrhage if it is also associated with bleeding.

Resources:

- ACOG FAQ – Bleeding During Pregnancy
- March of Dimes – Postpartum Hemorrhage
- Preeclampsia Foundation – Signs & Symptoms

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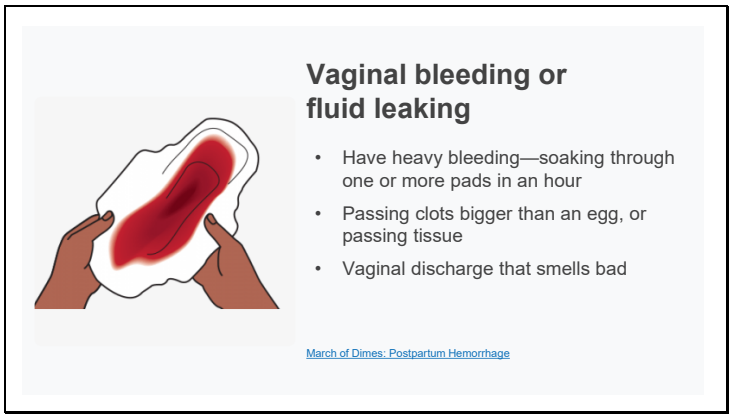

Vaginal bleeding is normal in the first couple of weeks in the postpartum period. However, if a patient comes in reporting they have significant heavy bleeding and are soaking through one or more pads an hour, or they're passing clots larger than an egg, or tissue, this may be an indicator of a postpartum hemorrhage and should be urgently evaluated. Additionally, vaginal discharge that smells bad may be an indicator of an infection.

Resource: March of Dimes: Postpartum Hemorrhage

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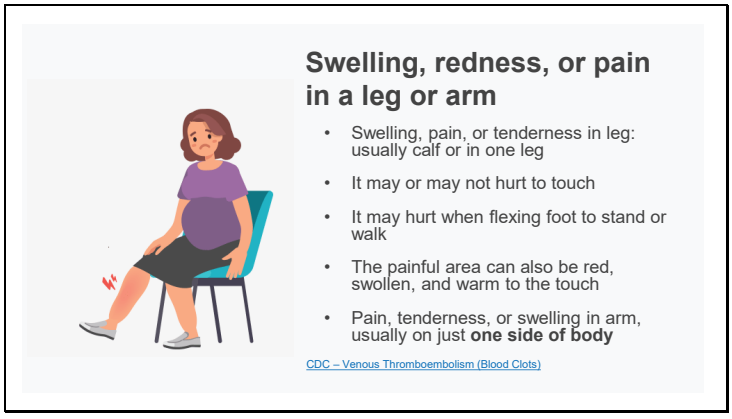

Patients in the postpartum period are at much higher risk for blood clots and may report swelling or redness or pain in a leg or an arm. It is generally just on one side of the body, may or may not hurt to touch, but often will hurt more when flexing the foot to stand or walk, and, again, in the arm, similarly, it's just painful on that one side.

Resource: CDC – Venous Thromboembolism (Blood Clots)

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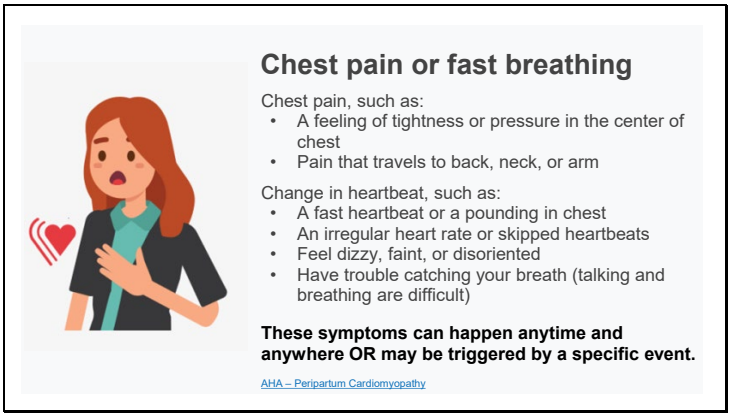

Chest pain or fast breathing. Chest pain such as reports of feeling tightness or pressure in the center of the chest, pain that travels to the back, neck, or the arm, pounding of the heart or feeling irregular or skipped heartbeats associated with dizziness, faintness, and disorientation is a red-flag urgent warning sign that needs immediate attention. These symptoms can happen any time and anywhere or they may be triggered by a specific event.

Resource: AHA – Peripartum Cardiomyopathy

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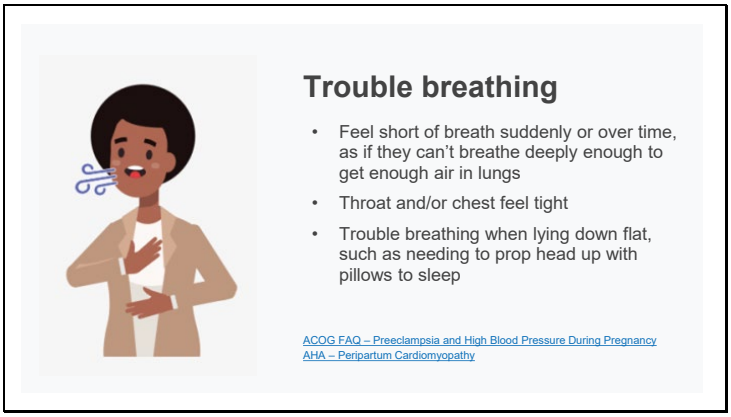

Trouble breathing. Feeling short of breath suddenly or over time, or when someone reports not being able to get enough air in their lungs, or even if they report not being able to lie down flat, needing to prop up to be able to breathe well, sitting up in a chair, you know, in order to be able to sleep. These are again, red-flag urgent symptoms that need to be evaluated immediately.

Resources:

- ACOG FAQ – Preeclampsia and High Blood Pressure During Pregnancy
- AHA – Peripartum Cardiomyopathy

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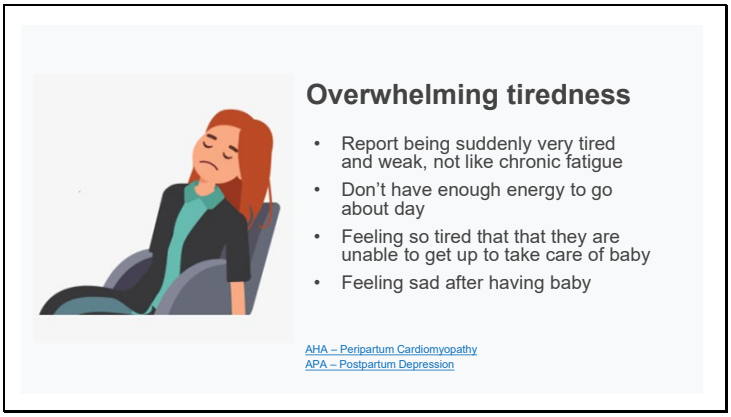

Overwhelming tiredness. We're not talking about the normal tiredness after, you know, new parents have a baby, when they're staying up all night. This is sudden, like, extreme tiredness where you don't have the energy to go about your day, take care of yourself, take care of your baby. This is important to evaluate urgently. It could be a sign of postpartum cardiomyopathy or, if a patient is feeling really sad after having the baby, also postpartum depression.

Resources:

- AHA – Peripartum Cardiomyopathy
- APA – Postpartum Depression

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So if a patient is reporting feeling very sad, hopeless, or not good enough, feeling like they don't have control over their life or have extreme anxiety that is just not going away, it's important to evaluate postpartum depression.

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If the patient is reporting thoughts of hurting themselves or their baby, or if they're seeing or hearing things that other people are not seeing, or feeling out of touch with reality, or family and friends are worried about their safety, that they might hurt themselves or others, this is an emergency that needs to be evaluated immediately. You can go to the emergency department, call 911, but evaluate it right away.

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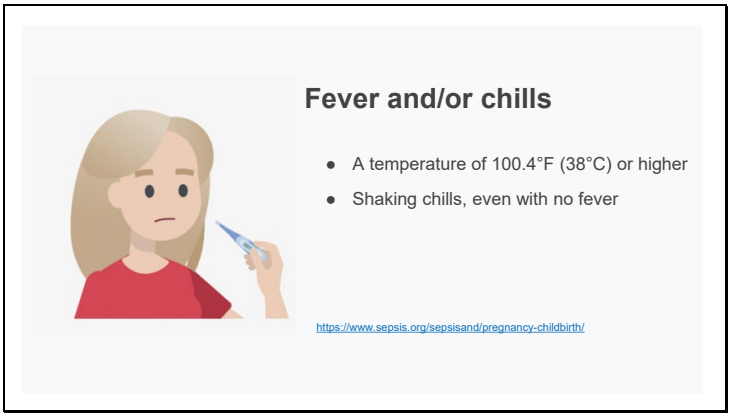

As April said, she had shaking fever and chills, feeling hot and cold. This is a sign of an infection and must be taken seriously. Not all patients with sepsis have a fever, but if they do, a temperature of greater than 100.4 may indicate an infection.

Resource: [Sepsis Alliance – Pregnancy & Childbirth]

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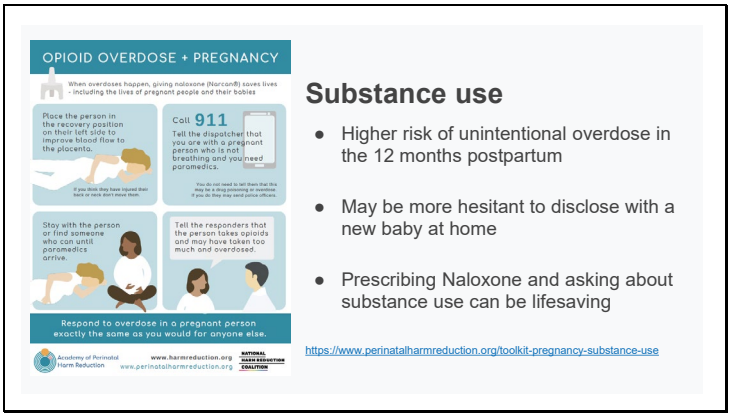

In the postpartum period, patients who have a history of substance use are at much, much higher risk of unintentional overdose. May be more hesitant to talk about substance use because of fear of law enforcement getting involved or fear of Department of Family Services. However, asking about substance abuse and prescribing Naloxone can truly save someone's life.

Resource: [Opioid Overdose & Pregnancy]

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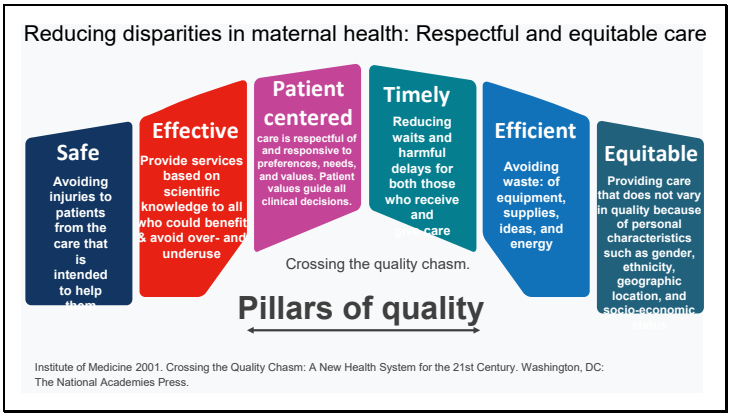

So now let's talk about how to reduce disparities in maternal health by providing respectful and equitable care. Equitable care is one of the six pillars of quality in health systems from the Institute of Medicine. And that's providing care that does not vary in the quality of care because of personal characteristics, such as gender, ethnicity, or socioeconomic status.

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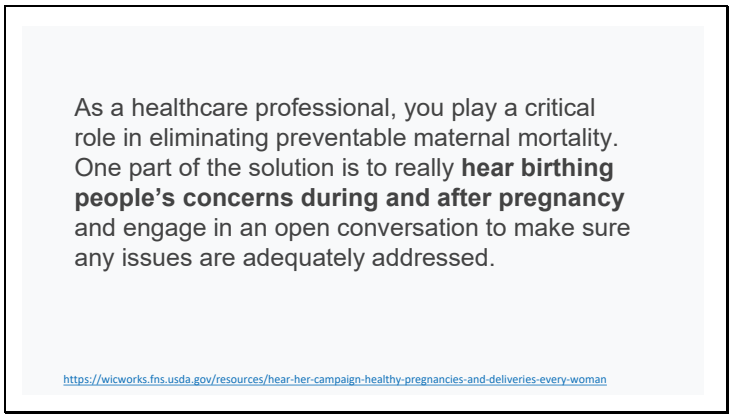

As healthcare professionals, we play a critical role in eliminating preventable maternal mortality. Like April said, part of the solution is really hearing birthing people's concerns during and after pregnancy, engaging in open conversations to make sure that all the issues are addressed. With each and every patient, we must attempt to address and understand the aspects of their care needs to understand what's going on and provide the best outcomes. This can only be done with the patient at the center of their care, as the expert in their own life and values.

Resource: Healthy Pregnancies and Deliveries for Every Woman

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How do we address implicit bias and use strategies to better hear our patients?

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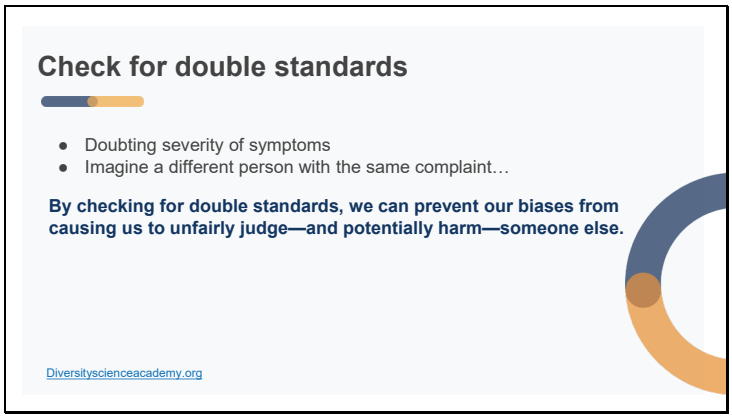

We can check for double standards. So if you find yourself doubting the severity of a patient's symptoms, take a moment and imagine how you would feel, react, decide, or behave if this was your loved one describing the same symptoms. Would your decisions change? Remember that we walk in different worlds, so we may not see what someone else is experiencing. Pain, for example, is an extremely subjective assessment. It's ripe for implicit bias. If a person is bleeding, you can quantify blood loss. It has a visual impact. However, there are significant cultural differences in how people express their pain and how healthcare team members may register that expression, whether they believe or do not believe the patient's report, which then affects how the treatment recommendations are put forward. We cannot truly know what another person's world is like or judge what someone else feels through our lens only. So each of us can only be an expert in our own world and our own lived experience, and we help our patients when we emphasize collaboration rather than assuming that we know best.

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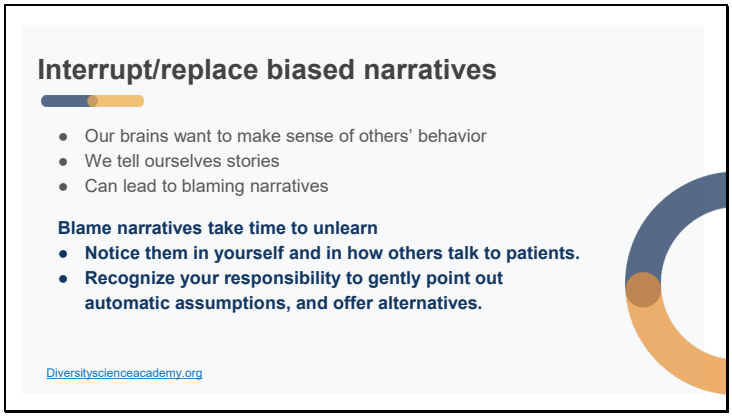

Interrupt and replace biased narratives. Whether we are aware of it or not, we tell ourselves stories about other people because our brains want to make sense of other people's behavior. Structural racism and implicit bias can lead to explanations that blame the patient, implying that negative outcomes are unpreventable. For example, blaming non-compliance with a postpartum followup visit for severe complications in the postpartum course dismisses potential factors that prevent a patient from actually accessing needed care. These blame narratives take time to unlearn. So listen for them in yourself and notice them in the way that others talk about patients.

And since you now know how harmful this is to patients, you can recognize your responsibility to gently point out assumptions and offer alternatives.

Resource: Diversity Science Academy

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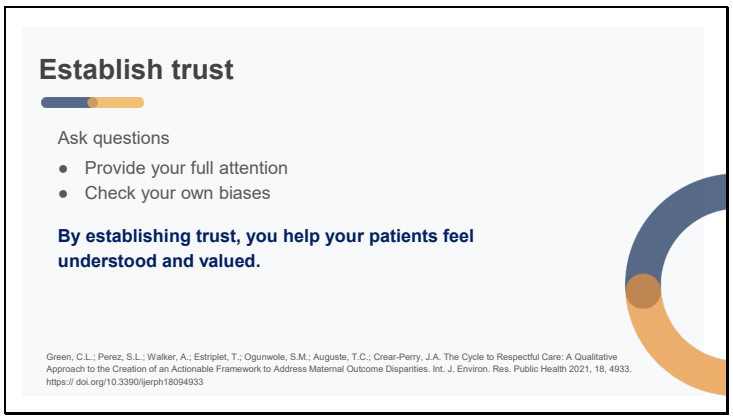

Establish trust. Ask questions to help you better understand your patient and the things that may be affecting their lives, because curiosity about the impact of different factors in patients' lives can help us as providers to build empathy and understand our patients better. Small shifts in behavior, like showing with your eye contact and your body language that your patient has your full attention, can really help your patient feel understood and valued. And make a conscious effort to listen to your patient while checking your own biases. It's socialized in the provider community to build trust with the patient so that the patient adheres to clinical guidance, but it is not socialized in the provider community to be responsive to the knowledge, words, needs, and priorities of the patient as autonomous decision-makers in their experience.

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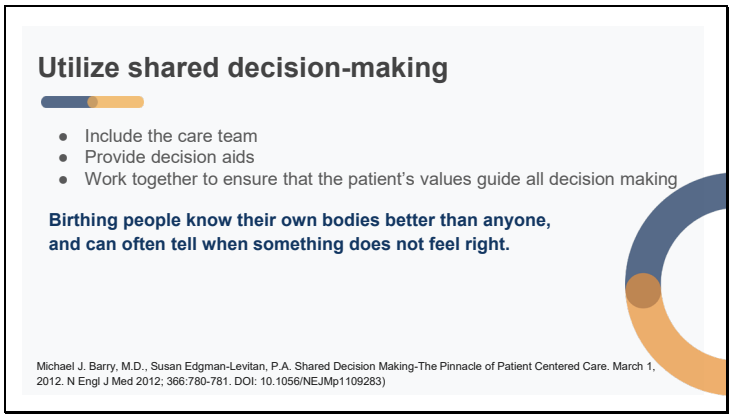

And utilize shared decision-making. Consider the patient's knowledge of their own body in recognizing symptoms and in medical decision-making. Again, in April's case, she kept a diary of her symptoms. She paid close attention to her body. She knew her symptoms were concerning. Birthing people know their own bodies better than anyone and can often tell when something doesn't feel right, so listen to them. Include the entire care team. For example, in April's case, many of the nurses knew something was wrong and one actually even said, "I

knew you would be back." But the way many care settings are run, nurses don't always have a voice due to the chain of command. In each encounter, including the postpartum person and their identified support network as respected members and contributors to the team is important. Provide decision aids that increase the patient and their support network's understanding of symptoms and treatment options, because through shared decision-making, we can help our patients understand the importance of their values and preferences in making decisions that are really, truly best for them. Experience has shown that when patients know that they have the best options for treatment, screening tests, or diagnostic procedures, most of them will want to participate with clinicians in making that choice.

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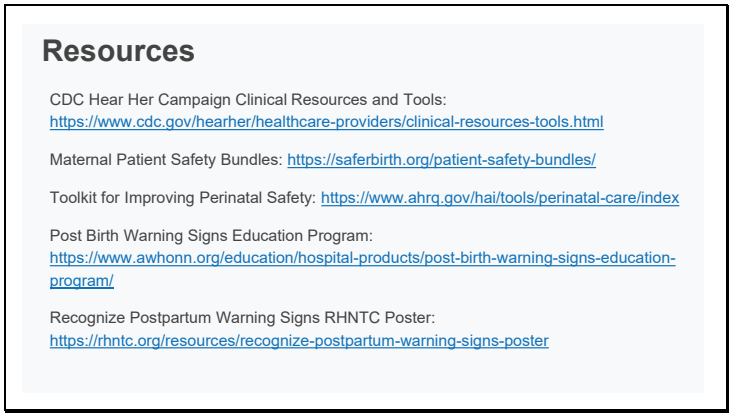

Resources:

- CDC Hear Her Campaign Clinical Resources and Tools: https://www.cdc.gov/hearher/healthcare-providers/clinical-resources-tools.html
- Maternal Patient Safety Bundles: https://saferbirth.org/patient-safety-bundles/
- Toolkit for Improving Perinatal Safety: https://www.ahrq.gov/hai/tools/perinatal-care/index
- Post Birth Warning Signs Education Program: https://www.awhonn.org/education/hospital-products/post-birth-warning-signs-education-program/
- Recognize Postpartum Warning Signs RHNTC Poster: https://rhntc.org/resources/recognize-postpartum-warning-signs-poster

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- [Jennifer] Thank you so very much to everyone for sharing today. This was really particularly powerful. Especially, thank you to April for sharing your incredible, powerful story. But to all three of you, you're all inspiring and this was really great, thank you. We do have several questions that have come in, so, and folks can put additional questions in the chat if there are any additional questions, and we'll get to as many of them as we can. The first couple of questions that we got are for April. So one of the questions was, "Did you experience any anxiety during your pregnancy or anything kind of in advance, and think that maybe your symptoms might have been dismissed because you were labeled anxious or something else?" And also, this was a a two-part question, "Did you have any interventions that might have increased your risk of infection?"
- [April] So I didn't have any anxiety, anything throughout my pregnancy. It was normal, nothing that would have labeled me as, "Oh, that's the anxious lady," or, "That's the lady who ask too many questions." Nothing like that. Everything was normal and fine up to this point. I did have stitches when I had my son, so I think that increased my chances for infection, but that was it.
- [Jennifer] And then the other question, April, for you was, "Were you able to resolve any issues by confronting your labor and delivery team?"
- [April] After I was taken up to the ICU, my labor and delivery team was like, I felt like they were hiding from me. I did have a couple of them come up to talk to me, but I wasn't, at that point, when I woke up, like, I was in a coma for seven days, maybe a little bit more, I didn't know what was going on. So my OB did come up, but it was like the day after I woke up from the coma and I was like, "What is sepsis? What happened?" Like, I didn't realize at that time that I had literally just escaped death. I didn't know that I had been intubated. I had no idea. So I never really got that opportunity to address my labor and delivery OB, any of that. And after my experience, I made the decision to not go back to that particular hospital again.
- [Jennifer] And the next question is, I guess probably for any of you, really, and I'm going to combine two questions because they really ask the same thing. So one person in particular said that she had to actually pause after your story, April, because it was so powerful, and just thank you for sharing. And she says that, "We're told to listen to our body, but that doesn't mean anyone's listening, anyone else is listening. So how can we get them to listen?" Or another person put it this way, "What options does a patient have when they see or feel that they're not being listened to or cared for in a manner that makes them feel respected? What can patients do?"
- [Tiffany] I'll go ahead and get started with that and then I'd be happy to see if anybody else has anything to add to it. I think it's very difficult. I think, you know, it sounds like with that question, we're putting a lot of assumptions that the patient's really aware of what, you know, is to come and what can harm her. And I think especially, it's very common for individuals who are at the

childbearing age to really think that childbirth is just a very happy occurrence. You know, typically it's one of the healthiest areas of the hospital system. So I think that there's just kind of a lot of misconceptions out there of, really, how high-risk it is. And, you know, while we do have certain conditions like hypertensive disorders of pregnancy that can sort of signal a special need for a higher level of look for that patient, there's a lot of conditions like, you know, for instance April's story, that really can just happen to anyone, happen to any individual, you know, during the pregnancy, shortly after delivery, during that year postpartum. So I think it is, you know, I feel like when I heard those questions, it really kind of puts the responsibility back on us to ensure that our patients, and especially the family members as well, 'cause oftentimes, you know, new moms are sleep-deprived and, you know, maybe don't feel as well, can't think very clearly, we need to know that they are aware of the warning signs to look for.
- [April] I kind of just wanted to chime in. Going off of what Tiffany said, like, even though I knew that I wasn't feeling well, I didn't ever think, like, "I'm going to die." Like, I knew I was not feeling good, but I thought, "Surely if there was something seriously wrong, like, they would run more tests, they would keep me here longer. There's no way they're going to send me home and just, that's it." But had I not gone back, like, I literally would've died at home. Like, they would've sent me home and I didn't know, I didn't know the risk. I'd never heard of maternal sepsis before. So, and I see some things, like, in the chat, asking about how could I have, like, gotten them to take me more seriously? And something that I didn't go into great detail was, I didn't just talk to one doctor or two doctors. Like, I feel like I knew the whole OB team. Like, there was doctors in and out, and, like, I told everyone that came into my room, like, all of my symptoms. And I feel like, especially when I went back, they were in over their heads. They didn't know at that point and I don't feel like they were thinking like, "Oh, we need to send her up to ICU." It was just like they were looking at each other and like, "Oh, I don't know. Well, what do you know?" "I don't know either." So even though, yes, I agree that you can ask for a different doctor or ask for someone else, there's no guarantee that that someone else is also going to be on your side. I actually felt like all of the doctors that I talked to, like, I'm sure this isn't true, but I felt like they all talked and were like, "Yeah, she's crazy. Let's get her out of here," is how I felt. And I know that's not true, but there's no guarantee that the next person also isn't going to take you serious, because that's what I experienced.
- [Jennifer] Another question is, "Is there any national perinatal survey that collects annual data on the incidence of sepsis during pregnancy or postpartum?"
- [Tiffany] I don't know the correct answer about survey, but I do know that, you know, we kind of breezed over in the beginning, or I did in my section here, the difference between the definitions of maternal mortality rates versus pregnancy-related deaths. So pregnancy-related deaths are able to incorporate more than vital statistics. So, you know, typically these are our state-level communities and they're able to have a lot of inputs to where they can thoroughly investigate each and every case. And so this wouldn't be a survey, but this is sort of, you know, backdoor through electronic medical records. And, you know, sepsis is something that we're really trying to focus better on the identification of, and a lot of that is difficult if the case has not been identified properly or coded properly. So we have kind of cast a wide net and that's something that, you know, the Alliance for Innovation on Maternal Health just recently put out, just several months ago, our Sepsis in Obstetrical Care bundle and it's, you know, some of these resources to help the care teams be able to properly code so that we can identify these cases properly. But as far as a survey, I am not familiar with something like that.
- [Jennifer] Another important question that's been asked is, "Which urgent maternal warning signs should be addressed immediately and which can we wait for normal business hours?"
- [Elena] I can go through some of those. I think that the changes in the heart rate or difficulty breathing are some extremely urgent warning signs that need emergent attention, as well as thoughts of hurting oneself or others. Those really bear extreme caution and need to be evaluated immediately.

- [Jennifer] Another thing that, I'm going to take the chance to ask a question myself, because our main audience for the Reproductive Health National Training Center is sexual and reproductive health providers, family planning providers. So they are likely to see things that come in the later postpartum period. So can you just talk about what is more likely to be seen and anything that they should really be taking a look for, that they should be watching out for, especially in the later postpartum period?
- [Tiffany] Yeah, sure, I'll start off with this one. Really, that late postpartum period, some of the things that I would really recommend narrowing in on are, you know, anything related to our cardiac conditions and our hypertensive disorders of pregnancy. So these are really all leading causes of preventable death. You know, something that's, you know, if some of the centers or the clinics might be, you know, new in their journey for working on improvement efforts for maternal mortality, oftentimes what I do see is people can get a little bit wrapped up into the specific definitions, "Is this preeclampsia? Is this, you know, pregnancy-related hypertension?" You know, so some of the nomenclature is what we previously did used to focus on. But, you know, overall what we have been identifying through work nationwide is that any of these disorders increase the risk for maternal harm. So rather than stopping and waiting and drawing diagnostics and doing laboratory, what we need to start doing is treating the immediate emergency. So that's something that we've really been working strongly with, with the support of the AIM national team. So hypertensive disorders of pregnancy are a huge one, as well as the fact that, you know, pregnancy is a stress on our body. So this is sort of like a window into what future healthcare events could be occurring later on in life for birthing individuals. So this is something that, you know, we know with preeclampsia now, we know now that this is something, that we should be doing an immediate referral outpatient. So whether that patient has the ability to go to a specialist, so a cardiologist, or just primary care, because we know that there's a much, much higher risk. The other thing here is cardiomyopathy. And so we do have a recent AIM bundle that came out earlier this year for cardiac conditions in pregnancy, and cardiomyopathy in that late postpartum period is responsible for 40% of maternal pregnancy-related deaths in that category. So that's something that, you know, I think those of us that just strictly work in the world of obstetrics are very unfamiliar with. I mean, it's kind of out of our wheelhouse a little bit. So cardiomyopathy is something that's separate, and that's essentially just, like, disease of the heart muscle. So those would be some conditions that I would focus in on in the postpartum period.
- [Jennifer] Elena, would you add anything in terms of what to keep an eye out for, what you would prioritize?
- [Elena] I agree with everything that Tiffany was saying, but also, I think hemorrhage is a big one. People often don't know, you know, when bleeding is too much bleeding, but it is one of the number one causes of maternal mortality. So paying attention that when you really start having that, when your patient is really having a significant amount of bleeding and it's increasing, you know, sometimes it can be, you know, a couple of weeks out in the postpartum period and still just as life-threatening.

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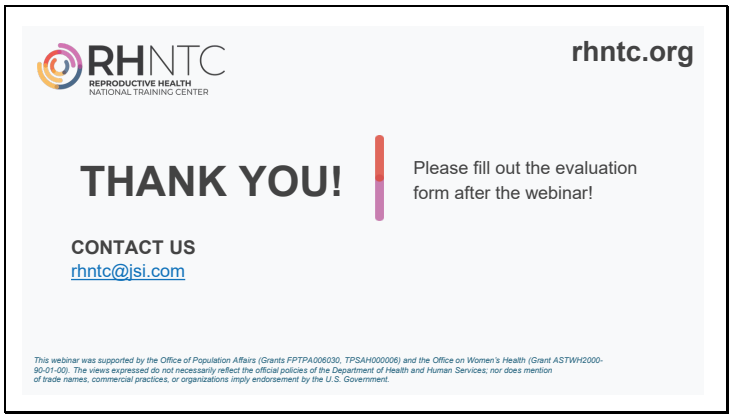

- [Jennifer] Great. Thank you so very much. Thank you all for joining us today. Thank you so much. And I hope you'll all thank me, sorry, I hope you'll all join me in thanking all of our speakers today. As a reminder, we will have today's materials available within the few days. They'll be both emailed to you and they will be posted to the RHNTC. If you have any additional questions for RHNTC, please don't hesitate to email us at rhntc@jsi.com. And our final ask to you is that you please complete the evaluation today. As we said, we really do value your feedback and we use it to inform future sessions. It's a new, shorter form, so we hope that you'll take just a moment to fill it out and let us know what you think. And in order to obtain a certificate of completion for attending the webinar, you must be logged in. And if you're seeking seeking CNEs, you must complete the evaluation to receive your certificate.

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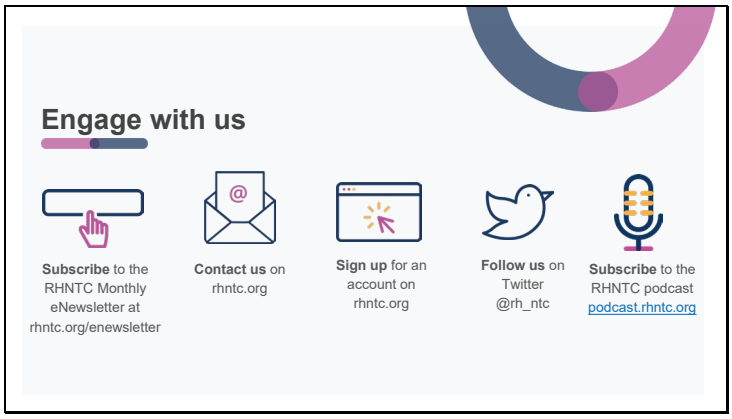

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