

Maternal Health in Indigenous Communities with Dr. Donald Warne Hosted by Amy Stiffarm, University of North Dakota

Amy: Welcome to the Maternal Health Innovation Podcast, season two. I'm your host, Amy Stiffarm. I'm a member of the A'ani White Clay Tribe of Fort Belknap, and I also descend from the Cree and Black Feet Tribes, all of Montana. I'm a mother of two daughters and I am pursuing a PhD in indigenous health through the University of North Dakota.

This podcast is created by the Maternal Health Learning and Innovation Center. Episodes are released weekly, so be sure you are subscribed. In this podcast, we listen to maternal health innovators about ways we can implement change to improve maternal health in the US.

In this episode, we'll be discussing maternal health in indigenous communities, and our guest is Dr. Donald Warren, Director of the InMed and Public Health Programs at the University of North Dakota School of Medicine. Dr. Warren is a member of the Oglala Lakota Tribe from Pine Ridge, South Dakota, and comes from a long line of traditional healers and medicine people. Thanks for joining me, Dr. Warren.

Donald: Very good to be with you Amy. Thanks for hosting this event.

Amy: Of course. So Dr. Warren, how did you become interested in this topic? Maternal health and indigenous communities?

Donald: Well, I'm, trained as a family physician, so in my medical training I work with patients and families from prenatal care all the way through geriatrics. Essentially along that entire lifeline, from prenatal through, elder care. every phase of our life has unique considerations from a healthcare perspective, but also from a traditional perspective.

We have, a lot of respect for women and mothers and the whole process of bringing life into the world, but we see terrible disparities when we look at maternal health and child health as well. So we have challenges related to maternal morbidity and mortality, so illness and death, but also with infants as well.

So I think just being a family doctor and working with tribal communities, we have to be focused on this area because it's an important concern and a significant area where we have disparities.

Amy: Right. So you mentioned that you're a family doctor. Can you share some of your experiences that you've had as a MD and how those might be different than other physicians?

Donald: Sure. Well, I actually, was exposed to medicine as a young man through traditional medicine, traditional Lakota approaches to health and healing. And I'm very fortunate to come from a family with a lot of traditional healers and medicine men. So from a very young age I was involved in ceremony and learning traditional medicine principles from my family, particularly several uncles.

So growing up, that was just normal. I didn't realize that was an unusual experience. I just thought everybody grew up that way. but as I went through my career and education and in college, I was doing very well in the sciences, and I was being encouraged by the pre-med advisor at Arizona State University where I was in college to consider becoming a pre-med and to look at medicine as a career.

And naively, my first question to the pre-med advisor was, are there any American Indian physicians? Cause I had never met one and I was probably 19 or 20 at the time. So I had been exposed to medicine and healing from a cultural perspective, and then was being encouraged to pursue medicine when I was in college.

And fortunately my mom worked for Indian Health Service at the time. She was a public health nurse and she knew of one American Indian physician. So, it's actually a physician. I think that you know as well, Dr. Kermit Smith and he was working in Arizona at the time and I was able to meet him.

And for me, that really was life changing because for the first time it seemed real that I could become a doctor and I think people from the majority society probably don't fully appreciate the value of role models,

because if all of your teachers, principals, physicians, and other professions come from your race or ethnicity, then anything seems possible.

And for me, I mean, I knew it wasn't illegal for an Indian to become a doctor, but it never seemed real until I met one. So that, that's kind of how I, I started my career toward medicine.

Amy: Right. That's such an important point of being able to see somebody who looks like you be in these roles. What about when you were, you were talking about when you were a family physician and you saw a wide range of patients. I think, a lot of times off the reservation or in non-native communities.

You know, there are different doctors for different things. And can you kind of talk a little bit about, as an MD how, how that might look different?

Donald: Yeah, in my experience I was, very fortunate. I went to Stanford for medical school and it was very good medical training. But it was very much focused on research and, specialty care, not so much on primary care. So it was an interesting start to my medical training in that the, the exposures that I had was really more towards specialty care and specialty services and sci basic sciences.

But I really wanted to become a family doctor, so I sought out opportunities to have more experiences in medical school, working with American Indians for one thing, but also working in primary care. So I set up visiting rotations on reservations, including in Arizona as well as, I volunteered at the Urban Indian Health Center in San Francisco and did a, a clinical rotation at the Urban Indian Health Center in San Jose. So I kind of carved out my own path toward, educational opportunities in this space. And then I did my residency in family medicine in Phoenix.

And the population that we worked with in the family medicine residency was largely impoverished both, most people were on Medicaid, and I saw just tremendous disparities and for prenatal care, what I saw in my experience in residency with the more impoverished population as compared to working at Stanford, was that the impoverished populations had more illness during pregnancy through no fault of their own.

The women had less access to healthy food, less access to safe places for exercise, lower educational attainment, generally speaking, less awareness of opportunities for preconception counseling and, and staying healthy. So it was really an amazing comparison of what I, what I went through at Stanford Medical School, and then working with more impoverished populations.

So that was my first direct exposure to the significant disparities across wealthy populations and impoverished populations. And then I went to work in Arizona after my residency as a family doctor and doing prenatal care and just tremendously high rates of diabetes during pregnancy, very high-risk pregnancies, a lot of hypertension, a lot of preeclampsia.

And one of the big challenges was the rural, remote and impoverished nature of the reservation where I was working. So I became very, not just interested in this, but recognizing that it was a healthcare crisis, that we just don't have the same types of resources in most of our tribal communities that we do in the suburbs, for example. So I just saw terrible disparities and worse outcomes for both moms and infants.

Amy: And that kind of doesn't really align with what we know as indigenous people of, you know, the value of mothering and parenting and birthing and whatnot. Thanks for sharing that. You, you mentioned going to all these different places and, and kind of seeking opportunities that kind of reminds me, sounds like you really carved your own path for this. Who were some of the other mentors as you were building your skills and your practice and, who influenced you in the communities that you were serving?

Donald: For me, it was really important to be involved with, Association of American Indian Physicians and ANAM, the Association of Native American Medical students and having that network of other indigenous people who were on this path was really valuable. So I had a multitude of mentors who were in family medicine and working with tribal nations and were indigenous peoples themselves. In addition to that, honestly, just working with my uncles who are traditional healers really had a huge impact because I knew that there was more than one way to address health issues and health concerns, and also saw the tremendous value of incorporating culture into the healing processes.

So I would say having indigenous physicians that could serve as mentors, but also having family members who are traditional healers made a big impact. And then quite honestly, having a mom who works as a public health nurse. she became a nurse before I was born, so she's been a nurse for over 60 years now, actually, seeing what she did on a daily basis was also impactful. So I was just very fortunate to grow up in a family with healers from multiple perspectives, but also being connected to those national organizations like AAIP and ANAM.

Amy: Yeah. That's awesome you brought up your mom because we had the opportunity to listen to her speak before and she's just a wonderful, woman with all these. Accomplishments. And so that's great.

So maybe we should take a little bit of a step back this is kind of broad, but I know it's your specialty, can you help educate some of our listeners in case they don't know on like what exactly a tribe is, or a tribal nation and how these different tribal authorities interact with federal and state authorities?

Donald: Yeah. So when we talk about tribes, there's a couple ways to think of this. Tribes can be considered a cultural group or a political group. So for example, Lakota is a tribal group. that's the, the tribe that I am from, and it's a cultural group from a linguistic and, cultural, ceremonial perspectives and history.

But in addition to that, we have multiple Lakota tribes, even just within South Dakota. So tribes are also political entities, and that's more of a tribal nation. So for example, I'm Oglala Lakota, which is a federally recognized tribe. But there's also Sicangu Lakota, which is Rosebud, and then Miniconjou Lakota at Cheyenne River.

Um Hunkpapa Lakota at Sandy Rock. so we're all Lakota. So culturally we're the same tribe, but there's several federally recognized tribes or tribal nations within that tribal group. So when we say the word tribe, we, we really need to be specific. Are we talking about the cultural group or the political entity?

So, tribes are basically nations within the nation, and we now have 574 federally recognized tribes. And each has its own unique relationship with the federal government and with the state governments in which

they reside. When we look at the federally recognized tribes, there's also a lot of diversity there, and mentioned there's 574, but over 220 of them are in Alaska and over a hundred of them are in California.

So the majority of federally recognized tribes are in those two states, and those tribes tend to be smaller in terms of land base and numbers of people, whereas here in the northern plains where you and I are from, there's less overall numbers of tribes, but they're much larger, bigger populations and bigger land base.

So there's also a coalition of large tribes. We have unique needs in terms of significant land base and significant numbers of people. So if we're talking about a tribal nation as a political entity, the tribes have a unique government to government relationship with the federal government, and much of that is based on the US Constitution as well as treaties.

And in the Constitution there's what's called the Commerce Clause. It's Article one, section eight of the US Constitution, and the Commerce Clause states that congress shall regulate commerce with the foreign nations and the Indian tribes. So way back to the US Constitution, tribal nations were put on par with foreign nations.

So from a federal Indian law perspective, that's seeing as, recognizing tribal sovereignty. So tribes have their own elected officials, their, in many cases, their own health systems and education systems and courts and police. They're basically their own nations. And the tribes based on treaties have a legal right to various social services like housing, education, and healthcare.

So the treaties are basically contracts between the tribal nations and the federal government. And common language in those treaties was that, in exchange for land and natural resources and friendship with the US government, the tribes would receive all proper care and protection, and that includes things like healthcare.

So that's why there is an Indian Health Service, an IHS, and that's why there's a BIA, a Bureau of Indian Affairs. and even within public health academics and then the, those circles where I operate with other health education professionals, there's really a lack of understanding that as

American Indians and Alaska natives, we're the only population that's actually born with a right to health services based on those treaties.

So we have a treaty right to public health. We have a treaty right to medical care. Unfortunately, Congress has consistently underfunded the Indian Health Service, so we tend to see a lot of disparities even in terms of access to services, even though we have a treaty right to healthcare, we just don't have the types of services that we need, and then that gets reflected in things like maternal health disparities.

Amy: Great. That's a wonderful breakdown of all of those very, you know, sometimes complicated policies and I think not a lot of people really understand that or know about that. So kind of, yeah, like you said, bringing it back to maternal health. We have all of these different layers, you know, tribal, state, and federal authorities.

So can you kind of talk about this relationship and maybe some of the barriers or challenges that you see consistently navigating these multiple entities.

Donald: Yeah, so we have really have to think our of ourselves as, as American Indians. We kind of have a tri citizenship. We are citizens of the United States. We are citizens of our tribal nations, and we are residents of the states in which we live. So we have legal rights as tribal members, residents of states, and US citizens.

So as a US citizen and an American Indian, we have rights to things like Medicare, like any other American would have. And then as residents of states, we have the right to access things like Medicaid that's operated at the state level. And then as tribal citizens, we have the right to access services through the Indian Health Service.

So we have three levels of government, but multiple silos of health systems within each of those levels of government. So it's almost like three-dimensional chess trying to ne navigate the health system for American Indians. And I think one of our challenges is that at the state level, depending on which state in which you reside, there's, there could be a good relationship with the tribal nations or honestly, a strained relationship with the tribes.

Where I'm from in South Dakota, there's all kinds of challenges and state tribal relations when it comes to health services and things like Medicaid. So sometimes a relationship is actually adversarial, which is unfortunate to see. And every year there's new employees, there's new legislators, they're new personnel.

So it's an ongoing educational process and we have to continually educate agency leaders at the state level and at the federal level. And we also have to continue to educate lawmakers. I, when I worked in South Dakota full time, it was really remarkable. I was meeting with a state legislator and he, he honestly asked me the question and he said, well, why do we even have an Indian Health Service?

We don't have a Norwegian health service. You know, just no understanding of history, no understanding of the legal precedent for American Indian Health Systems, and this is a lawmaker in the state of South Dakota, so this is just remarkable. But I'd say the same thing happens at the federal level. They have new staff members all the time, and we have to continually educate them on really basic things about American history, about American Indians and our legal right to health services.

So I think that high degree of misunderstanding and a lot of misinformation and a lot of assumptions means that we do not get access to all the resources that we're entitled to. So we have just as much right as any other state citizen to Medicaid, just as much right as any, US citizens to Medicare, and certainly Indian Health Service is underfunded and there's a lot of misunderstandings in terms of how those agencies should be working together.

So that just leads to more disparities because at the policy level and the programmatic level, there's a lot of silos. There's not enough coordination of care, and again, we see all kinds of health disparities, including maternal and child health disparities

Amy: Yeah, those are such important points. I like that you brought up that there's like this misunderstanding, and there are differences. So, you know, talking about maternal health in tribal communities with indigenous women and indigenous birthing people. can we talk a little bit

about what, what's different about maternal health in these communities?

Donald: Absolutely. And I think it's also important to acknowledge that there's differences in cultural perspective as well. And we look at the processes of birthing and dying really as sacred processes. And historically, these are the types of things that do not need to occur in a hospital, right? We, you know, traditionally birthing was not seen as a medical diagnosis, you know, the way it is now.

But unfortunately, we have such high degree of chronic disease and challenges related to diabetes during pregnancy, high blood pressure, in some of our communities, very high rates of smoking or other substance use, and that puts the, the mom and the baby at risk. So we do have to have more medical care around prenatal care because of those, comorbid conditions where we see a lot of illness unfortunately, among our young women who be, who become pregnant. In truth from a cultural perspective, these are not illnesses in terms of being pregnant, right? That's not a disease. You know, that's part of a natural process. It has a lot of sacred nature to it, and a lot of ceremony attached to that.

In the future, what I would love to see is a healthier population and then regaining ownership and control of birthing and dying, you know, that the, the dying process is seen as a journey to the spirit world. It's not seen as the enemy that needs to be fought, you know, like we do in, in modern medicine and all these heroic efforts and expensive interventions at the end of life, it could also be very painful for, the individual going through it, we should be facilitating our transitions in a traditional way using ceremony at the beauty of our cultures. We're not there yet, but I would love to see in the future where we have obviously, more of a healthy population where we had less diabetes and high blood pressure and cigarette smoking, for example.

But in the, the midst of a healthier population. I'd love to see us recapturing ownership of the beauty of those life transitions, bringing a spirit into the world and our own spirit transitioning on. Those things are very sacred and there's meaningful ceremony attached to that in the future, I would just love to see more tribal control of those types of services and recognizing that it's a beautiful event to bring a child into the world and that the mother during pregnancy is a very sacred vessel

and giver of life and we, we don't approach it that way like we used to. In the future, I'd love to see us embrace that.

Amy: I love that. And, you kind of brought up, you know, the disparity. So we're not really seeing that in some of the maternal health statistics. We're not seeing that level of health as same as the level that we do value this in indigenous communities. So when we're talking about different maternal health disparities, I know that, you do a great job of explaining things like historical trauma and adverse.

Childhood experiences and how, you know, instead of placing blame on indigenous women and birth givers being like you're unhealthy, kind of telling like the whole history and, and walking through truth, like, like you talk about.

Donald: Yeah. And that's one of the areas where, I think that the, the US in general has not been very comfortable with confronting the truth of its history, particularly the truth around how the, the United States has treated its indigenous people.

So obviously there was warfare, there was even intentional spread of smallpox. one of the reasons that many of the Northeastern US tribes were wiped out was through the use of smallpox as a weapon. And people could Google Amhurst and smallpox. It was Lord Jeffrey Amhurst, who is one of the colonial leaders in Massachusetts, ordered the distribution of blankets from a smallpox hospital to the regional tribes with the purpose of killing them.

So our first documented case of Bioterrorism is our own colonial government. And we don't like to think of things in those terms cuz it makes the US look bad, but it is the truth. And I think we need to confront the truth because if we are ever going to get to equity, we have to walk through truth, even when it makes us uncomfortable.

And even when it's unpleasant, it's still the truth. And for those who push back on the truth, I think that reflects their integrity more than it does ours. And it certainly is, a challenge when we have people not wanting to know the truth, but it is the truth. And we've had some very negative and harmful relationships and events between the federal government and the tribal nations.

Even the Indian Removal Act in 1830 in which many of the tribes in the southeast were removed from their homelands and put into Oklahoma, that had a huge impact Intergenerationally. And then during the time of assimilation where the US government policy was to try to assimilate American Indians and get rid of the culture, one of the main mechanisms to do that was the boarding schools, and it was forced boarding school participation for a lot of our ancestors.

And this is not ancient history. My mother is a survivor of boarding schools, so just one generation ago. But when we were placed under reservations and lost our food systems and food sovereignty, we became dependent on federal government food programs and the way that the families were compelled to put their children in boarding school was that they were told either give up your children to go to boarding school, or we will withhold your rations. So basically give up your children or starve.

And I've heard stories of the families who chose to starve, you know, that's not been well documented, but they didn't wanna give up their children under any circumstances that they lost their rations. That there's a whole story there that's never been told, but then those children who did go off to boarding school, many of them died at boarding school. There was a lot of abuse, there was a lot of neglect, and we have an entire generation of indigenous people in the US and Canada who'd survived boarding schools and residential schools. And then we've seen intergenerational trauma and intergenerational health disparities as a direct result.

One of the other things that we see when there is a high degree of trauma and toxic stress in a community, those communities that are at greater risk for things like perpetuation of adverse childhood experiences. So the social context and the historical context in the community has a huge impact on the experiences of children, and it's important to remember children who go through abuse eventually become parents. What have they learned about parenting? So we can trace a lot of our disparities back to the boarding school system and federal policies that were intended to essentially get rid of us.

But we're still here. We're very resilient and very strong, and I really believe that we're seeing a renaissance of indigeneity, and when we

recapture the beauty and power of our ceremonies and our culture and our language, we can overcome some of these challenges. It just needs to be scaled up to a much bigger perspective.

Amy: Right. That's such a good point that you made there at the end. And, I, you know, I'm seeing that with the indigenous health program, you know, putting more and more indigenous health scholars out there and researchers to kind of help build the evidence around some of these things that you're talking about, so that's great.

Can you talk a little bit about the existing public health infrastructure on reservations? Like how does the federal government help or maybe hinder maternal health when we're, when we're thinking about public health?

Donald: Well, the Indian Health Service is actually a part of the US Public Health Service, but ironically, there's very little public health that's being done relative to medical care because the IHS is so terribly underfunded. The vast majority of resources are used on medical care, and there's relatively little investment in primary prevention and in public health services.

In addition, there really is an intersection between public health and medicine when we look at things like immunizations or health education or even prenatal care in many ways, and because of underserved populations, we tend to see later prenatal care actually in the, the non-Indian world, first trimester prenatal care is the norm in many of our tribal communities it is rare that we have first trimester prenatal care because of lack of access to services and inadequate public health programming in public health nursing, but to actually reach the pregnant populations.

And there's so many other barriers to having adequate prenatal care for, for one, we have less insurance, so less resources, more dependence on Indian Health Service and our tribal communities, and then when we see challenges related to access to prenatal care and preconception counseling and health education, we tend to see worse outcomes. And in addition though, on top of that, higher rates of issues like diabetes, hypertension, smoking, and substance use, we just see this perfect storm of a social determinants of health that lead to poor outcomes for moms and babies.

Amy: Great. And you reminded me too that some, I think some people might not be aware of, like on my reservation, to go to a prenatal appointment or to go to labor and delivery, it is, you know, 45 minutes to an hour and a half depending on which community live in, on the reservation. Just to get there. And that's, you know, so we're talking, up to three hours on the highway, not including the time it takes for the appointment and stopping to eat and things like that that, you know, really I don't think people really understand what it takes for some communities, for some people when they're, seeking this type of care.

So we mentioned this a little bit, but are there any, maternal health statistics you wanna share about indigenous communities that might be surprising to some?

Donald: Yeah, and I think it's important to remember that we do see a lot of diversity among American Indian and Alaska native population. So some communities are doing well, some are doing terribly, when it comes to maternal health. But when we look at the national data, American Indian and Alaska native women are three to four times more likely than white women to die of complications related to pregnancy or childbirth.

Is that remarkable? Three to four times greater mortality rate. In addition, again, we have much later prenatal care, which correlates to both poor maternal outcomes and child health outcomes, and American Indian Alaskan native women are three to four times more likely than white women to begin prenatal care in the third trimester. So toward the end of pregnancy. In addition, you know, I already mentioned we have less access to services, generally speaking, but the women of reproductive age are much more likely to be uninsured if you're American Indian or Alaskan native.

And it's important to remember Indian Health Services, not health insurance. So if we do not have a, an obstetrician on the reservation, which most of our reservations don't, we don't have, obstetrical units in most IHS hospitals and clinics. so we need, you know, high risk prenatal care. That could be, like you're saying, in many cases, more than an hour away, and just less access makes it very challenging.

So we see higher rates of pre-term labor, higher rates of birthing complications and things like preeclampsia or very high blood pressure, which puts both mom and baby at risk. So we, we, we need a much more comprehensive approach to address maternal and child health, and it's not just access to the, specialty care.

We need healthier populations and we need more, education around staying healthy through the childbearing years, before people get pregnant. I mean, this is something that, this needs a much more comprehensive approach and it needs to be done through a cultural lens as well. But the, the data just really our stark.

And there was a CDC maternal morbidity and mortality weekly report that did focus on these. Disparities and that one was published in 2017, or sorry, 2019, looking at data up to the year 2017. It really outlines a lot of those disparities.

Amy: Yeah, and that's really alarming, especially when we know that in general, maternal health in the United States isn't great for the general communities. And then when you have, like you said, those stark differences for, indigenous women and birthing people. It's, it's scary. But having said that, what are some things that you see changing within the next five to 10 years? What, what are, what are your hopes and, and some things that you're working on?

Donald: Well, I do see some exciting things in terms of the numbers of our own people who are going into health services and like yourself, getting a PhD in indigenous health. We need to grow our own and that that is not just for the medical providers, but all aspects of the health professions. You know, it's remarkable.

You could go to a reservation like where I am from, and you can see that the unemployment rates are maybe 80% in some cases. Yet we have 25 to 40% of our IHS positions unfilled in the exact same community. So there's a huge disconnect between the understanding of the need for education and workforce development, not just from a financial perspective, but actually from a health services delivery perspective.

We have, we have so many people who could be going into health professions, and there are so many local jobs available. It's just inexcusable that we have circumstances in which our unemployment rates are ridiculously high, but then our vacancy rates in health systems are ridiculously low, high as well.

So we're just not pulling, putting those things together. So we need to grow our own. And I think one of the things that we have enough empirical data to prove is that the existing system is not working for us. What we need is to, to convert Indian Health Service hospitals into teaching hospitals. We need an American Indian School of Health Sciences.

You know, when you look at, for example, the historically Black colleges and universities, the HBCUs, they have five medical schools. We have zero tribal medical schools, and I think we're well beyond the time that we start moving in that direction and recognizing that we need medical training, nursing training, public health training, research training, therapies and psychology and all of these, important health professions, but we need to do it ourselves.

because the existing systems are simply not designed to meet our needs. So I, I'm excited to see a lot of movement in that space and recognizing that indigenous health is its own academic discipline, but we also need to recognize that indigenous medicine is its own clinical science, and its high time that we move into the direction of developing our own schools of medicine and health sciences.

We have enough people who are well trained in these areas. We need to come together and start building those institutions and building the infrastructure around growing our own healers.

Amy: Right. That's exciting stuff. I know, as being a PhD student and just with my cohort and some of the other indigenous health researchers we've got to listen to and whatnot, it is, it's exciting and, Yeah, it's, it's definitely, you know, we're all ready to kind of take on these different systems and create changes at that level. So, just to wrap up, how, how can our listeners connect with you?

Donald: Well, I'm, taking on a, a new role, so I'm still connected to University of North Dakota, through our indigenous health, PhD program and our Department of Indigenous Health and the Indians into Medicine

program. But I'm also now working with Johns Hopkins University. They've had a center for American Indian Health for quite a number of years.

And it's expanding its role to indigenous health internationally. So the codirector of that center at the Bloomberg School of Public Health, at Johns Hopkins, but also working more centrally at the university and the provost office. I'm the new provost fellow in indigenous health policy. So, either through UND or through John Hopkins, I can get connected to people.

But I'm just excited about the next steps that we're going to be taking and recognizing that indigenous health is an academic discipline, but it also requires more indigenous people to really take the lead at addressing our inequities and developing solutions that are going to be effective and culturally relevant.

So I think moving forward with new programming and existing programming through universities like UND and Johns Hopkins and others, I think we really have the opportunity to expand our workforce and expand our opportunities to make improvements.

Amy: And what better place to start than with prenatal care and birth right.

Donald: Absolutely, yes.

Amy: Well, thank you Dr. Warren, and thank you all for taking the time to join us today to share your experiences, and thank you all for listening. For more podcast videos, blogs and maternal health content, visit the Maternal Health Learning Initiative Center website at maternalhealthlearning.org.

We wanna hear from you. Tell us what you wanna hear more of, review our podcast and share with like-minded innovators. We've got some great episodes recording now. Be sure you are subscribed. Let's keep talking. Tag us in your post use #maternalhealthinnovation. again, I'm Amy Stiffarm, and we'll see you again next week on the Maternal Health Innovation Podcast. Thank you.