The 'ARRIVE trial' and 39 Week Induction - Dr. Emiliano Chavira

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IN THIS EPISODE

One landmark study reshaped how hospitals think about inducing labor at 39 weeks. Dr. Emiliano Chavira breaks down the ARRIVE trial for Dr. Elliot Berlin, DC — its design, its conclusions, its flaws, and what it should (and shouldn't) mean for an individual birth plan.

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DR. ELLIOT BERLIN, DC: the Informed Pregnancy and Parenting Podcast. I'm your host, Dr. Elliott Berland. In this episode, we're going to discuss the design and results of a recent study about labor induction at 39 weeks in healthy pregnancies. My guest today is a unique individual and a unique OB-GYN and perinatologist. He's unique in many ways, but one of which is despite his specialty in pregnancies that require more monitoring and perhaps have more risk factors, he's in close collaboration with midwives and supports his clients' choice to have birth out of the hospital and to back them up should they need to transfer during their labor or birth. He also works to empower his patients to make informed choices regarding their pregnancy and

DR. ELLIOT BERLIN, DC: birth and supports the choices that they make. Dr. Emiliano Chavira, welcome to the podcast.

DR. EMILIANO CHAVIRA: Elliott, so good to be chatting with you again. It's been a while.

DR. ELLIOT BERLIN, DC: I should say welcome back. We have some of our most popular episodes are with you. Of course, some of our most popular episodes are with me, but anyway, let's talk about a brief background. I mean, you're one of those unique people in several different ways. First of all, just in terms of perinatology and maternal fetal medicine, my finding is that most OBs they further specialize into maternal fetal medicine. They often stop delivering and sit in the cushy office consulting with other OBs on their cases that require more monitoring or more detail, but you do both. You never really stop delivering babies. You're still out there catching

DR. EMILIANO CHAVIRA: and doing the maternal fetal medicine work. Yeah, I've always enjoyed both. So my practice is kind of a mix of the both sides. And then as you mentioned, also working a lot with midwives and really like low risk, normal, healthy pregnancy. So it's pretty wide spectrum.

DR. ELLIOT BERLIN, DC: Yeah. And then that's another thing that even traditional OBs, you don't find too many who are willing to work closely with midwifery. And then in your case, where you're oftentimes dealing with pregnancies that are quote unquote higher risk, it seems unique for you to be able to also be very open-minded to pregnancies that don't require any intervention at all.

DR. EMILIANO CHAVIRA: Yeah. You know, unfortunately there's kind of a bias in American obstetrics against midwives. Well, there may be some of this as a global, not just America, but to some degrees, midwives are more incorporated in other countries around the world than they are in the U.S. But you know, with the way my professional pathway has gone, I ended up working with a lot of midwives and I have a lot of respect for the specialty and what they do in general. So that's probably in some ways a different topic than what we're covering today.

DR. ELLIOT BERLIN, DC: Absolutely. I mean, I'm grateful because I've hit myself at several patients who felt like they were out of options and eventually were able to connect with you and you were able to give them options they didn't have before. So thanks for what you do. Let's talk about induction. Labor induction, there's a study came out called the ARRIVE trial, the ARRIVE study that we'll talk about shortly. But labor induction, you know, there seem to be very different methods of how to induce labor and reasons for why to induce labor. So before this trial or study came along, what were some of the reasons why one might induce labor and the methods by which they can do it?

DR. EMILIANO CHAVIRA: Yeah, you know, labor is induced for a whole bunch of reasons. Some that are pretty standard, solid medical indications, and then some are purely elective. So it's a very common and frequent procedure, probably something higher than 20% of pregnancies end with labor induction. Some of the standard medical indications will be things like a certain complication develops during the pregnancy. A common one would be gestational hypertension or preeclampsia, which is a disorder in pregnancy where mom is kind of starting to get sick from the pregnancy, you know, blood pressure starting to rise, other things are happening. So hypertensive disorders is a common reason. If there's concern about the well-being of

DR. EMILIANO CHAVIRA: the baby, like the baby's, you know, not growing well, we refer to that as intrauterine growth restriction. If amniotic fluid appears to be drying up and dropping below what are considered to be normal amniotic fluid levels. Sometimes if a membrane's rupture, the bag of water pops and labor has not started. That's another common reason for inducing labor. And then if a pregnancy continues beyond the due date, at some point induction of labor frequently becomes a consideration or recommendation. So those are some common examples of medical indications for induction. But then there are also elective inductions, some purely maybe because of a maternal choice that, you know, just kind of doesn't want to be pregnant anymore, wants to

DR. EMILIANO CHAVIRA: have the baby. Sometimes it might be for kind of managing life issues, like she will have support in the home from a family member, but that's gonna happen on a certain date and she kind of wants to try to, you know, organize when the birth date happens. Sometimes it may happen for reasons of availability of the physician. The physician's leading town and so they

decide to, you know, the physician and the pregnant person decide to go ahead and induce labor so that it can be done before the physician leaves town. So there's some, you know, non-medical reasons why inductions happen sometimes as well.

DR. ELLIOT BERLIN, DC: I kid you not, I've had people induce because they want a specific zodiac sign or a specific date on the calendar, you know, and a whole host of other reasons that are not medical at all, but generally do not seem to have trouble getting their request for an induction granted.

DR. EMILIANO CHAVIRA: Yeah, I believe you and I know you're not once a kid.

DR. ELLIOT BERLIN, DC: I wish that wasn't true. Okay, so to what extent is there discretion among the provider for someone to just say, hey, I don't have a medical reason, but I'd like to be induced. Can we do

DR. EMILIANO CHAVIRA: that? Yeah, there used to be a lot more discretion, and what has happened in recent years is there has been a very strong push to restrict induction prior to 39 weeks, at least elective induction. If there's a medical complication, that's different. And there's been, you know, advice from the American College of OB-GYN for years against inducing, you know, prior to 39 weeks. And that's just to make sure that baby's mature enough to be born without, you know, expecting an increased risk of complications in the baby after the birth. You want to make sure the baby's mature enough to be born without problems. But despite, you know, recommendations from our professional organization, there's still a lot

DR. EMILIANO CHAVIRA: of elective inductions prior to 39 weeks. Now that's kind of tightened up a lot. Hospitals have become more strict about that. A lot of places there are policies where you're not actually even allowed to do that. In that way, discretion is tightened up a little bit. But once you pass 39 weeks, there's a lot more of a green light to go ahead and induce if that's what the pregnant mom wants to do. Okay. Are there indications of which babies are ready or if her body is in a better place to be induced? Yeah. So that's kind of a complicated question. You know, there are criteria for determining appropriate gestational age so that, you know, you want to make sure you have good dating.

DR. EMILIANO CHAVIRA: There's a lot of good studies looking at the rate of complications, depending on, you know, how many weeks you are when you give birth, the complication rates at 36 weeks, at 37, at 38, so on and so forth. And those generally show that the risk of complications decline progressively week by week until you hit 39 weeks, at which time the statistical risk of complications is at the lowest point it's ever going to get. It doesn't continue getting lower beyond 39 weeks. In fact, there's kind of a U-shaped curve where as you start passing the due date, there's certain risk to start to increase. And not by a lot, by really small amounts, but statistically detectable when you look at,

DR. EMILIANO CHAVIRA: you know, studies of very large numbers of pregnancies. But that's where the 39-week point comes from, you know, studies. I'm not sure if that's exactly what you're asking.

DR. ELLIOT BERLIN, DC: I mean, that's a big part of it. But then from an individual pregnancy, if somebody comes and says, hey, I'd like to be induced, are there things you can look for in that

particular mother? Like, for example, if it's not her first baby and she's already had a vaginal birth, if her cervix is showing signs of changing or if she's already starting to have surges or contractions, or things about the baby that you can see on ultrasound

DR. EMILIANO CHAVIRA: so this baby's mature and ready to come out? Yeah. You know, there's this game that people on obstetrics love to play about predicting when the baby's going to come. And I think we really don't have good ways of predicting that. You know, if mom is having contractions, I think that doesn't really tell us when the labor is going to be. Some women do that for, you know, weeks prior to the day of labor. The status of the cervix statistically has been shown to be, it's a factor that helps you predict the likelihood of a successful induction. So it's been observed in multiple studies that, you know, if the cervix is closed and still kind of firm, the chance that that induction is going to end up in the C-section is a little bit higher

DR. EMILIANO CHAVIRA: compared to a scenario where the cervix is soft, maybe it's a little dilated already, your odds of having a successful induction are going to be higher. And definitely women who've given birth vaginally in the past are more likely to have a successful induction than women that have never given birth vaginally. So those observations, you know, they have been made.

DR. ELLIOT BERLIN, DC: And so it sounds like for a non-medical induction, for an elective induction, those are some things to keep in mind.

DR. EMILIANO CHAVIRA: Yes, but it gets to a very interesting point that is extremely relevant, you know, when it comes to this arrived trial. And this actually might be a good segue into the reason this trial was done. I have a great idea. Let's take a quick break.

DR. ELLIOT BERLIN, DC: And when we come back, we're going to get into the arrived trial and see why the trial was done and what the research showed us. We'll be right back with Dr. Emiliano Shibira. Parenting podcast. We are talking to Dr. Emiliano Chavira, and we're going to jump into the ARRIVE trial. Doc, what is the study, and why was it done?

DR. EMILIANO CHAVIRA: Yeah, okay, so in obstetrics there has been a concern regarding the whole process of induction of labor and the risk that that's going to end up in a C-section as opposed to a safe vaginal birth. And the observation was made in multiple observational studies that if you compare women who are induced to women who walk into the hospital in spontaneous labor, the rate of C-section is higher among induced women and lower among women who have spontaneous labor. So that's created this notion among pregnancy care providers that you really should try to avoid induction because it's associated with a higher risk of C-section. And there's sort of a logic error in that conclusion. And the logic error is that it makes it seem like you

DR. EMILIANO CHAVIRA: have the choice between inducing versus spontaneous labor. But you in fact don't have that choice because nobody can choose spontaneous labor. That's not something that we're in control of. It either happens or it doesn't. So in fact, the actual choice that you have is to induce or not induce. And that's referred to as expected management, or in other words, you know, you don't do anything. You just kind of keep waiting around and see what happens. And so clinically, that's actually the choice that you have. And so there are some studies that are designed looking at that, where you take a group of women and you induce half of them and the other half of them, you

just kind of wait around and

DR. EMILIANO CHAVIRA: see what happens. And you might expect that by avoiding the induction, the women who are sort of allowed to await labor, that a lot of them will go into labor at some point, and then you're going to see a lower c-section rate. But as it turns out, most of those studies do not show a lower c-section rate. And some of them even show a higher c-section rate when you continue waiting. The settings for most of these studies are, you know, you've attained 41 weeks. That's a common reason why those studies are done. But they've been done in other settings, like if you have mild hypertension, there was a study done for women like this who were, you know, over age 35, looking at the question whether it's preferable to induce

DR. EMILIANO CHAVIRA: or continue waiting. And so that body of literature has sort of broken down the idea, the concept that by avoiding induction of labor, you are going to reduce the rate of c-section. That does not seem to have been borne out. So, you know, some of these studies are small, and they wanted to look at women who had an uncomplicated pregnancy, had never previously given birth, and what is the best thing to do for them? Induce labor or keep waiting for labor? And so that was the rationale for the ARRIVE study. And so they recruited about 6,000 women, and about 3,000 of them were induced, and another 3,000, they just continued waiting and delayed the induction to almost 41 weeks. And the primary outcome of the study was actually

DR. EMILIANO CHAVIRA: neonatal outcomes, what happened to the babies. And they have what's called a composite outcome measure. I mean, there were a list of complications ranging from death to a bunch of other severe neonatal complications, things like birth injuries, bone fractures, brain damage, you know, serious problems, seizure disorders, serious infections. And they wanted to see what was the difference in outcomes in the babies if you induced versus continuing to wait. So what they found was a rate of serious complications in the induction group was 4.3%. And then the expected management group is about 5.4%. So about a percentage point higher. However, that was not found to be statistically significant difference. So the ultimate

DR. EMILIANO CHAVIRA: conclusion is it didn't make a measurable difference in the outcomes of the babies. And then the secondary outcome was the C-section rate in the moms. And what they found was in women who were induced, the C-section rate was 18.6%. And in the women who were managed expectantly, the C-section rate was 22.2%. It's a little bit higher. Their observation was that inducing labor was associated actually with a little bit lower chance of ending up with a C-section.

DR. ELLIOT BERLIN, DC: So just to recap, make sure I have this right. We're talking about people who are pregnant for the first time with no significant complications in the pregnancy, no significant health issues for the mother or the baby. And somewhere in that 39th week, choosing to induce or waiting to see what happens, meaning if they go into labor on their own, would some of those people that need to be induced later on anyway?

DR. EMILIANO CHAVIRA: Dr. Robert P. Johnson, M.D. Yes. So they were all screened just before the 39-week mark to make sure that we're still talking about an uncomplicated pregnancy. And then they were randomized at that point. So just imagine flipping a coin. You're not in control of the decision. Your doctor's not in control of the decision. You're randomized. And if you flip the heads, you get induced. If you flip the tails, then you don't get induced. In the pregnant people who are not

induced, they could be induced later if a medical indication arises, like they develop high blood pressure or some other problem develops. So in the expected management group, you may get induced later for different reasons. Dr. Robert P. Johnson, M.D.

DR. ELLIOT BERLIN, DC: Got it. So the outcomes that you said, again, to recap are that when it comes to the health of the baby, no measurable difference whether they were induced or whether they waited to see when they would go into labor or perhaps need to be induced later on, or I suppose need to just go right into a cesarean later on. Dr. Robert P. Johnson, M.D. Yeah. Dr. Robert P. Johnson, M.D. But when it came to the cesarean rate, the group who was induced at 39 weeks seems to have had a slightly lower rate of cesarean than the group who did expected management, waited to see what would happen.

DR. EMILIANO CHAVIRA: Dr. Robert P. Johnson, M.D. Yeah. Dr. Robert P. Johnson, M.D.

DR. ELLIOT BERLIN, DC: First of all, one thing I wanted to mention is that this study, for anybody who wants to look it up, it was in the New England Journal of Medicine in 2018. And one thing I thought that was interesting is that researchers screened more than 50,000 people to see if they could meet the requirements for the study, and they found 22,500 and change who were eligible, but only about 27% of them, a little over 6,000, agreed to participate. What do you make of that?

DR. EMILIANO CHAVIRA: Dr. Robert P. Johnson, M.D. Yeah. So what you're talking about in the concept in epidemiology and interpreting studies, this is what's called the internal validity of a study. And there are various features that you look at. And so one of them is there what's called selection bias, meaning the people that you got and recruited into the study, do they reflect accurately the population at large? And therefore, are the outcomes of this study going to be generalizable to the population at large? Or was there something different about these particular study subjects that somehow they're different than the population at large? So the point that you just raised is very relevant because 27% of the people that

DR. EMILIANO CHAVIRA: were approached agreed to go into the study, meaning the large majority did not. So is there something different about that 27% where they were willing to relinquish control of the decision and say, yeah, flip a coin, tell me what to do. I don't mind. I'm willing to do that. So the pregnant people who were not willing, there may have been various different reasons why they were not willing. It could be that they just have strong preferences about their birth plan. It could be a values-based issue. It could be that there are subtle little things that happened during the pregnancy that maybe they or their providers were concerned about. They weren't like explicit reasons that excluded them from the study,

DR. EMILIANO CHAVIRA: but things that maybe their blood pressure was a little borderline or the fluid was a little borderline or they were concerned about the growth of the baby or who knows what it was. There could be reasons why those pregnancies were different than the ones that were willing to go into the study. The other thing is there are other things that are curious about this patient population and you ask the question, is this generalizable to the American pregnant population and therefore we can apply the results of these studies. There were other issues besides that. So number one, if you look at the fact that the induced women had a C-section rate under 19% and the expected management group was a little

DR. EMILIANO CHAVIRA: over 22%, well, that's lower than the United States averages. So one thing to keep in mind is this study was conducted in a series of about 41 hospitals that are part of what's called the maternal fetal medicine units network. It's a group of hospitals in the United States that work together to carry out studies where you need really big numbers. So some studies like this would be very difficult for one hospital to do because you just don't have enough pregnancies. And so when you do it across a chain of hospitals, then you can generate these types of numbers. So this MFM units network is responsible for a lot of pregnancy research and you have to ask yourself the question, the way they manage pregnancy and labor and delivery

DR. EMILIANO CHAVIRA: in a center that has affiliations with academic medical centers, they're research oriented, they're probably very evidence-based. Is it going to be the same when you're talking about your local community obstetrician and are their outcomes and practices going to be comparable? It's a very, very relevant question. So when you see this low C-section rate compared to the United States C-section rate, that stands out. The other thing is there was some demographic differences between the women in the study and the American pregnant population at large. For example, African Americans were overrepresented, women over age 35 were underrepresented. So this was a younger population compared to the population at large. So there were some

DR. EMILIANO CHAVIRA: differences there. And then another curious finding in the study was they looked at the chances of developing hypertensive disease during the pregnancy. And so in the group that was induced at 39 weeks, the rate was something in the neighborhood about 8%. It was 9.1% actually. And in the group that was managed expectantly, it was 14.1%. So one of the observations of this study is that if you stay pregnant, your chances of developing a hypertensive disorder at some point is higher. Now that makes logical sense. On the other hand, generally when you talk about the epidemiology of these hypertensive disorders, it is lower than the numbers that were seen in this study. So generally,

DR. EMILIANO CHAVIRA: somewhere between 5% to 10% of pregnancies, you see a hypertensive disorder at some point. That's over the span of the whole entire pregnancy. So why is it that if you think about the induction of labor group, they were recruited and randomized just before 39 weeks, and then the induction happened within a couple of days of 39 weeks. So the period that they were in that study is less than a week, and yet 9% of them developed a hypertensive disorder. Something is not right about that. It's not matching the usual incidence that we would expect to see. So these kind of observations really call into question how representative is this group of pregnant patients is of the population large.

DR. EMILIANO CHAVIRA: Another thing that I haven't seen this commented on anywhere, but I noticed this, if you look in the appendix on the outcomes, they also broke the study subjects up by a bunch of factors. One being race, one being whether they were obese or not, whether they were over age 35 or under, whether they had a favorable cervix or not. And they kind of looked at whether any of these variables had an impact on outcomes. And so one thing that was interesting to me was to observe that there was no racial disparities between black women and white women, for example. Their outcomes were the same. Now that right there to me is starkly different from what you see in our maternity health care system nationwide. There are tremendous

DR. EMILIANO CHAVIRA: disparities and risk of complications and adverse outcomes are like three or four times higher among black women than compared to white women. So that was not seen in this study. So there's a long list of features why you might question whether this is really a

DR. ELLIOT BERLIN, DC: representative population. Right. And I think that both doctors and patients are kind of looking at the study saying, well, it seems like if we induce you at 39 weeks, your chance of cesarean will go down, but it's really not that simple at all. One other curious thing that I saw was that the average cesarean rate after induction among low-risk first-time mothers giving birth in 240 California hospitals was 32%, with some having rates as high as 60%. So that's from a 2018 study. That's quite a different outcome than what we're seeing here. And then one other thing that is not mentioned is that 94% of the women in the RIFE study were cared for by physicians with only 6%

DR. ELLIOT BERLIN, DC: at midwifery-led birth centers. And so hospitals generally have a higher percentage of cesarean and hospitals that have a big midwifery component where midwives attend birth tend to have lower rates of cesarean, perhaps as low as 15% in hospitals where more than 40% of their births are attended by midwives. And there's a great article on this at evidence-based birth, and Rebecca Decker who did that article has all the sources there very neatly laid out at the end of it. So it's an interesting study, and it does seem from the study that some people would benefit from having a 39-week induction, even if there are no complications or no medical reasons to induce. It's certainly not clear, and it's not black and white.

DR. ELLIOT BERLIN, DC: Let's take another quick break, and when we come back, try to find some conclusions and how we can use this data and what to make of it. We'll be right back with Dr. Emiliano Shibir. Welcome back to the Informed Parenthood Podcast. We're talking to Dr. Emiliano Shibir about the ARRIVE study and scheduled induction at 39 weeks. So, you know, once you read the study, one of the things that comes out of it is, should everybody be induced at 39 weeks

DR. EMILIANO CHAVIRA: to lower the rate of cesarean? Yeah, that would be the simplistic conclusion to draw from the study that outcomes are going to be better if we induce everyone at 39 weeks. And sadly, I think there are some L&D units that may be moving in that direction. There are some obstetricians that psychologically they're moving in that direction and just thinking that, you know, pregnancy should be ended at 39 weeks. And I have some very, very serious concerns about, you know, drawing that conclusion and, you know, what the impact of, you know, making that the standard would be. I mean, there's, you know, several reasons why I'm really concerned about that. So, one is that, and you already touched on this in the prior segment, that the way labor

DR. EMILIANO CHAVIRA: induction is carried out in an academic medical center is not necessarily the way it's carried out in your local community hospital. And as it turns out, this is more than the theoretical point. There was a study where they looked at induction of labor outcomes in the state of California. And so they looked at births that happened between 2016 and 2017. This ended up encompassing over 99,000, so almost 100,000, low risk, what are called NTSVs. That stands for Noliparis Term Singleton Vertex. So it's women who've never given birth before having their first vaginal birth, their full term, so we're not talking about preemies. It's a singleton, so we've excluded twin pregnancies or multiple gestations.

DR. EMILIANO CHAVIRA: And their vertex, their head down. So these are pregnancies where you would sort of expect that the outcome would be, you know, vaginal birth. So in 100,000 inductions in the state of California over these two years, the median C-section rate was 32.2%. So already that's higher than what you saw in the ARRIVE trial. So immediately you're thinking that study, there's no way that can apply to the state of California because we're already 10% higher, and that's just the median. The range of C-section rates, are you ready for this? I hope you're sitting down. Are you sitting down?

DR. ELLIOT BERLIN, DC: I am sitting.

DR. EMILIANO CHAVIRA: Okay. The range of C-section rates for induced labors range from 18.5 to 84.6%.

DR. ELLIOT BERLIN, DC: Oh my goodness. The bottom is the top.

DR. EMILIANO CHAVIRA: Yeah. And some of this was looked at by hospital and some of it was looked at by, you know, individual providers. So, you know, there are some places where the practice style in the culture is such that inducing labor, it has a very, very high chance of ending in C-section. So to me, I would assume that if everybody starts inducing labor, you are definitely not going to see the outcomes that you saw in the ARRIVE trial, but there's going to be tremendous local variation in the C-section rates. And so, you know, I think when you talk about something like induction of labor, you can't talk about it as though it's the same thing from provider A to B to C to D. It's highly dependent on the approach that individual care providers take.

DR. EMILIANO CHAVIRA: So that's something very important to keep in mind. Another concern that I have is, when you induce labor, sometimes it's a very slow, long, and arduous process. Sometimes it's 24 hours. Sometimes it's 48 hours. Sometimes it goes even longer than that. So a woman who is being induced is going to be on the labor and delivery unit for a good number of hours. And compare that to somebody who walks into the hospital already in labor, you're probably going to be seeing the birth within a matter of a few hours. So there's a much greater consumption of resources, basically filling up a bed. And what I worry about if we're all of a sudden inducing everybody is that labor and delivery units may fill up. And when it gets really

DR. EMILIANO CHAVIRA: busy and crowded, that brings safety concerns. I've been through those moments where the labor and delivery unit is busting at the seams, and there are people waiting outside in triage. And one of the things that crosses your mind is you start to worry, am I going to miss a little detail? You worry about the safety when the unit is full. So that's another concern that I have. And then the other thing that I would say is that even if all of the above concerns were not concerned, let's say everybody practiced the same way that they did in the MFM units network, and we can reduce the C-section rate from 22% down to 19% by inducing everyone, even if you grant them that. That is when pregnancy is managed within

DR. EMILIANO CHAVIRA: what I would call a medical model. Obstetricians that went to medical school and managed pregnancy the way they were trained. If you're within a medical model, maybe we can reduce the C-section rate from 22% to 19% by inducing everyone. So that ignores the fact that there are other models of care out there, and specifically what I'm getting to is a midwifery model

of care where you tend to see C-section rates under 10%, sometimes 5%, maybe even lower. So it's a different philosophy and approach to pregnancy care that yields a much lower C-section rate. So I think there are other ways of caring for pregnancy that are going to reduce the C-section rate that are different than what is done in standard medical models.

DR. ELLIOT BERLIN, DC: And that's an excellent important point. So what are some things that either individuals can do or their providers can do that can help lower cesarean outside of inducing at 39 weeks?

DR. EMILIANO CHAVIRA: Let me answer this in kind of a roundabout way. And this is sort of expanding on the midwifery model versus medical model of care. So in the medical model, this dawned on me probably about halfway through my career in obstetrics, that when you start training as an obstetrician, you show up on day one, and they start teaching you how to solve problems. This is what you do when you have a hypertensive seizure in pregnancy. This is how you manage diabetes in pregnancy. This is how you treat postpartum hemorrhage. And you start learning how to problem solve. And the step that is skipped in your training and education is the physiology of natural labor and childbirth and bonding and attachment and

DR. EMILIANO CHAVIRA: breastfeeding. And I came to discover somewhere along the line that there's a massive scientific literature related to natural pregnancy and childbirth and bonding and breastfeeding. And I never studied that. And that's the kind of stuff that midwives study. That's what they do. They are experts in normal pregnancies. And so what happens when you're an obstetrician is you set about trying to solve problems. And I'll give an example. Let's say you have a mom that's in labor, pregnant person in labor, and she has a vomiting episode and aspirates some of the vomit into her lungs, gets a really bad pneumonia, gets admitted to the ICU, really, really sick. Eventually comes out of it, does fine. But as

DR. EMILIANO CHAVIRA: an OB, you think to yourself, that was a horrible experience for this person, for the whole family, for me, because I don't want anything bad to happen to the people that I'm caring for. How can I prevent that from happening again? Let's have when people are in labor, let's have them not eat anything. Let's keep the stomach empty to avoid this vomiting problem and this potential aspiration. And you sort of mentally, you're making people safe and you're kind of avoiding complications, right? But the part of the equation that is left out is, well, what are the consequences of having people on an empty stomach when they're in labor? And what does that do to the functioning of labor, having them maybe

DR. EMILIANO CHAVIRA: nutritionally deprived? And we don't necessarily think about the physiologic impact of that intervention on the labor. And so I think there are a lot of things done in obstetrics that are done in the interest of creating safety and creating good outcomes. But in the absence of understanding physiology, we sort of step on and disrupt some of the natural mechanisms that have been evolving over millions of years that are designed to protect the person and the infant. So we disrupt and mess up the natural mechanisms that are there. So one of the thoughts I have about advancing the field of obstetrics is that in modern society, there's the real strong orientation, you know, may psychologically towards

DR. EMILIANO CHAVIRA: technology, that technology is always going to improve things and make things better. And, you know, we can make ourselves safer and our lives longer and healthy by more and more technology. And in a way, this idea of inducing labors in line with that kind of general philosophy towards life, you know, more technology, more medical interventions, it's going to make things better. I think what we need to do is understand the physiology that is so incredibly detailed and complex and has been evolving over millions of years and figure out ways to augment that to not disturb it and design our interventions to sort of work together with the physiology so that we're sort of working in concert with,

DR. EMILIANO CHAVIRA: you know, natural mechanisms instead of undermining them and disrupting them. So I think, you know, a meeting of minds between the way midwives view and manage pregnancies and the way obstetricians solve problems is going to make things better. So, you know, I think in low risk pregnancies, we need to move more towards a physiologic approach. And for, you know, all the reasons that we've kind of outlined this going in this direction of more interventions, ultimately, I don't think it's going to result in, you know, massive improvements in outcomes in American obstetrics. And, you know, my concern because of the variation of practice is going to make things a lot worse overall.

DR. ELLIOT BERLIN, DC: I mean, the model you described sounds super ideal. I always find that when we take different components of the healthcare team, what should be a healthcare team, and give our mutual clients the strengths of each of the different providers and modalities and thought processes, then our clients end up with the best well-rounded care. And generally speaking, we all have the same goals. We want them to have great experiences and healthy experiences. And so I've seen small pockets where like your pocket where those kind of collaborations are happening, and the outcomes look fantastic. So hopefully, it'll be a model that can be nurtured and grow and available to anybody who wants it down the road. Dr. Shavira, I'm super grateful for you for

DR. ELLIOT BERLIN, DC: being here and kind of breaking down the study with me. And for our audience, you always have a wonderful way of expressing your thoughts and really breaking down a lot of people understand the science, but can't break it down as well for us simpletons to understand it. So I really appreciate you doing that for me and for others who listen. Dr. Shavira, where can we find you

DR. EMILIANO CHAVIRA: online? I have a very small social media footprint. But one place you can find me is I have a Facebook page, and it's my first and last name, Emiliano Shavira, comma, and then my various titles MD, MPH, which is Master of Public Health and FACOG, which is fellow of American College of OBGYN. All right. I'll be following you on Facebook

DR. ELLIOT BERLIN, DC: because I just love when you post and you provide this type of information for us. It's really pertinent and important and much appreciated. At home, thanks for listening to the Informed Pregnancy Podcast. To visit us online, go to Instagram and visit Dr. Berlain, that's D-O-C-T-O-R-B-E-R-L-I-N. Here's something worth your time. Every day,

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