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TAPE: 2019-0232 PREMATURITYSYMPOSIUM_LINDANEWGENT

Female Speaker: [00:00:02] So, now I would like to welcome our next presenter, Miss Linda Newgent. Miss Newgent is the Director of Training and Development for Optum Healthcare, women's, and children's division. Over her 28-year career with Optum, she has held various positions. Besides being a national speaker for Optum OB home care, Miss Nugent began a mentor program, developed a blended learning approach to onboard new OB AEs, and was a central contributor in the development of the current NVP program featuring the Zofran Pump.

[00:00:43] Prior to Optum, Linda was a staff nurse for the high-risk OB department in a level three hospital. She also has held roles as a hospital supervisor for the women's and children's departments, and night supervisor for the hospital as a whole. She is a certified human behavior consultant and is A1 certified in inpatient obstetrics. Please join me in welcoming Miss Newgent to present on managing high-risk pregnancies at home.

[Applause]: [00:01:16]

Linda Newgent: [00:01:20] Thank you, thank you. And which one is it?

Female Speaker: [00:01:23] This one.

Linda Newgent: [00:01:25] Yes, okay. Hello, Florida. I'm so happy to be here. I'm from Indianapolis where it was 28 degrees this morning. Just saying. So, in fact, my friend who lives in Miami said I know you're from the north because you wear hose. So, there I sit. I'm delighted to have been invited by Healthy Start and by the Aetna Group, and I'm so happy to be talking to you today about sort of an unusual topic. It's OB home care and what we do to help the women that we've been talking about all this morning. You don't need that. Nobody's paying me to be here. Objectives, you don't have to worry about it. Let's get to the money. There is not a question for anybody in this room that OB maternity is expensive. Even when things go crystal perfect, even if there's not a dot out of line and everything is lovely, it's expensive.

[00:02:33] When anything goes off the rails, if anything happens that is not quite what you expected, the money adds up. And if things go catastrophically wrong, it is your million-dollar babies and that devastates that healthcare system and the families that are involved. So, we're really, in this country, well science in general likes to measure things that are measurable. And so, we have a pretty good handle on the fact that prematurity and complications of pregnancy screw up employers and insurers like crazy. They pay a lot of money for it, you're living, eating, and breathing, that every single day. It causes loss of productivity if your employer insured and you have patients who are missing work or unable to work productively. That costs them money, and when the new baby comes, if there's complications, it's very expensive.

[00:03:31] The cost and the impact continue with community and society. All the things that you heard this morning by our, our – the other speakers, play into the fact that it's really, really expensive, and in our very last session, we heard about the measurement on the family. Now, what's really kind of sad is that we don't really – we don't really put our arms around that as much. We know that even for strong families that have all the resources, all the resilience, all the support, money, jobs, everything, that having a complication of pregnancy, can really cause quality of life issues. When you start putting those kinds of burdens on a fragile family, on people who don't have the, the resources or who are together hanging by a thread, it can bring them right to their knees and crush that family. And we don't really – I can't put a statistic up there on the board to tell you what that looks like. But we all know it, we all feel it, and we all talk to patients who are experiencing it.

[00:04:44] Of course, you all know that it's cheaper to be out of the hospital than in, and if you're in the hospital, it pays you to reduce the days. What I'm going to talk about today are the services that help people stay out of the hospital or reduce the days that they're in the hospital, and this is OB home care services, and we're looking at 17P administration. We're going to add onto some of the discussion that was this morning. We're going to talk about nausea and vomiting of pregnancy, which is always really wonderful right after you eat. Preeclampsia which has been talked about today already, and diabetes in pregnancy, which we've heard a little bit about but not an in-depth discussion. So, first of all, what I'm going to do is talk to you about why it's important to have an obstetrical specialized home care entity.

[00:05:30] You can't handoff complicated pregnancies to just anybody just because it's infusion company or they happen to do various things. Just like you have pregnant women see obstetricians, they don't go see a GP, they don't go see an internist. They – those people wouldn't touch a pregnant woman because pregnancy is weird. I mean, it is. Nothing translates cleanly from non-pregnant to pregnant. It throws all your numbers off, it throws all your ideas off. So, you have to somebody that has a maternal-child focus, that is exclusively that. You have to have a level of experience that is important to help you understand what you're dealing with. This organization that I'm a part of, Optum, used to be called Tocos, Health Time, Matria [ph], and Alere, anybody heard of any of those names?

[00:06:23] I was here when they built the place almost, almost. The original home care company was founded in the mid-80s. I joined them in 1991. The thing that's important with that is that if you don't deeply and thoroughly understand obstetrics, you can't manage it because it's – heart disease in one population, does not translate to heart disease in a pregnant population. You can extrapolate some of the principles but pregnancy stands alone because bodies react differently during pregnancy. When you see up there where it says disease management with protocols, with acuity-based protocols, what that means is if you're using a non-obstetrical home care company, like the VNA or somebody else, what they are going to do is they are going to stand here and wait. The doctor will give them an order. They will carry out the order, it doesn't work. They call the doctor again, and may or may not get a response immediately, because hard to get hold of those doctors, you know. They're always in surgery or delivering babies or whatever it is they're doing. It's hard to get a hold of somebody on the 4th of July at 10:55 PM. Tough.

[00:07:43] So, how do you get passed that because pregnancy can't wait, because the complications of pregnancy are usually much more of the essence, time is everything. So, what you do is you have to have protocols in place, and we've already heard the discussion about protocols once up here, twice. Protocols mean that since we've been in business since 1984, we've been researching, evolving, elevating our practice based on outcomes. We put outcomes from over – the over one million patients that we have cared for since we started. The volume of one million patients allow you to make some judgment calls and put in place protocols, so that when we work with a physician group, they give us our – the patient, they're aware of the protocol that we follow. We don't have to call him Friday at 11

o'clock at night to get orders because we already have it written in the protocol where we're going with this patient.

[00:08:46] And if we get to the end of the protocol, we don't call and say, what do you want us to do? We call and say here's what we would recommend as the next step. Doctors, nurses, nurse practitioners, midwives, they really, really appreciate that because time – they don't have a lot of time and they may be seeing 50 patients. They don't remember who Sally Smith is, what her details were, everything about her, especially if the doctor's calling you back from his kids' soccer game. He doesn't know who – or he's – maybe he's never seen her because there's ten guys in the practice and they all rotate through. Our ability to say we know the patient, we embrace the patient, we are coordinating her care, and here's what we would recommend. They almost always follow that, sometimes not, and they get to do whatever they want to do, but most of the time it expedites and makes care happen in much more, much more quickly.

[00:09:47] When you have an obstetrical home care company, you have to have OB nurses. Now, I love nurses, I'm a nurse. I love nurses but I'll tell you what, you couldn't drag me screaming into an oncology unit. I'm not going there because I don't know it. I can't – it doesn't matter if I got orders, it doesn't matter if I kind of remember it from nursing school, it doesn't matter if they – somebody will kind of tell me what to do, it doesn't matter because the essence of nursing and care coordination is that you can see the subtle thing that's happening if you pay attention. You can see the subtle problem that's developing and fulminating and you may be the only thing between that patient and disaster. That's so true in obstetrics and you guys know that as much as I do because OB has got all sorts of weird science and symptoms, that in the non-pregnant person, don't mean a thing. Who cares if you have this, this, or this when you're, when you're not pregnant? When you're pregnant, you got this, oh, boy, howdy, you might be in big trouble.

[00:10:57] So, you have to have OB experienced nurses who understand that when a preeclampsia patient says gee, I think I might be coming down something, I'm just not feeling that good today, that the answer is not well, gee, maybe you got the flu or maybe you got something. Maybe the answer is we better look you over for HELLP because that's the number one sign of HELLP syndrome, I don't feel so good, malaise. If you don't know that, you can't take care of patients appropriately or effectively. So, the things that we provide are OB, absolutely OB focused, and of course, joint commission accredited. We just had our joint

commission which I sort of feel like is a mix between the Spanish Inquisition and having your taxes audited. I – I mean, I love them, they love us but it's very stressful and I used to be younger before we, we went through all that. And you have to go through it frequently. So, God Bless anybody who's got one coming up. I feel for you.

[00:12:01] It – it all worked out just fine. And ongoing clinical competency. That seems like kind of a small thing but anybody who works in OB knows that OB is one of the highest litigious specialties that there are. People sue if they don't get a good baby. Whether, whether it's somebody's fault or not, that's the kind of society we live in, so doctors really – doctors, midwives, nurse practitioners, the kinds of – the caregivers that use our services, really like that we document competency on - every three-month basis. Our nurses have to go through studies, and, you know, it has to be documented. And if you're in court, and you can put that this is why I called these people because they know what they're doing. That's very helpful in litigation, not that we – in fact, for the most part, it just makes a lot of it just go away because if you can prove you know what you're doing, then that goes a long way to help.

[00:13:05] How service is usually rendered in-home care, it's, it's kind of weird because it's – we say OB home care but a lot of what we do is telemetry, telephonic, and touches of that nature. People don't like you in their home so much. In fact, will try to avoid care if you're coming into their home. They don't like that as much as you would think. I thought they would love it, not so much. So, we offer a variety of ways in which we interact with patients. So, we have, for the most part, home care nurses that are scattered throughout the country in most major metropolitan areas. You got a ton of them here in Florida, we do a lot of work here. There is also an area service center that has telephonic nurses that communicate with the patients frequently, sometimes daily, depending on their complication. We also have an after-hours center so that if a patient is feeling wonky and it's 3 AM, and she calls us, sometimes we can decrease a visit to the hospital because I'm count – telling you, and you know this too, you live in the real world. If you all a doctor at 3 AM, you're going into the hospital. He's not fixing you at 3 AM. He's go, and go in and let them figure out what's wrong with you.

[00:14:24] The minute you touch your little toe into the ER, the cash machine starts – I mean, minutes, doesn't matter, a band-aid, you've lived there. These people have experienced this, I can tell. So, if we can resolve, mitigate, or educate, reassure,

whatever it is we need to do, at 3 AM when there's a nurse who knows her and has her chart available can say, Sally, this is this and this. Do this, this, and this, and call me back in 30 minutes and we'll see if that works. That, that right there, that no cost telephone call is way cheaper than a visit into the ER which would happen without us. We also have dieticians who are OB focused and know a lot about nausea and vomiting and diabetes but what's – there's a lot of people that know a lot about diabetes nutrition. What there aren't is a lot of nutritionists who know, who know tons, scads, and piles of bookwork on NVP nutritional counseling because it's a different breed and that's really helpful to women who have that problem because they're, they're looking for any answer they can get anywhere.

[00:15:51] Alright, so let's talk about recurrent preterm birth and if there's anything we can do about that. Now, what really is kind of funny, I don't know about other countries, but I know in this country, that women kind of think that it's okay to deliver a little bit early because don't we have fabulous NICUs, places where miracles are done. People don't worry like they used to worry back in the '50s because they think, they think any, any age gestation can be salvaged because of the miracle work that the NICU does. And in fact, the NICU does do miracle work, we know that, but we also know as a group here collectively, that inside mom is better than outside mom in all cases. So, trying to get people to understand that delivering even a little bit early is not okay, that it's, it's expensive and it costs the baby for every week that you are early.

[00:16:56] Now, I specifically love this slide. I love it, love it, love it because I'm so old that I can remember when it was different than this. Back in the, back in the '80s, God, when I was in the hospital, this used to be different. See where this says late preterm, early term, full-term, late-term, post-term. Okay, that's where we are now. This used to be near term, term, and postdates, that's what it was. Now, back in 2006, they changed the word near term to late preterm, and do you know why? You'll laugh because it's so, it's so – but words matter. Near term was gotten rid of because isn't near term kind of pretty much okay? It's pretty close to okay. It's almost, it's almost perfect. Near term, it's really near term. So, why should we worry? That's why they changed it to late preterm because those babies in that time slot, are more likely preterm babies than they are like term babies. And that's kind of a new concept. People kind of having trouble wrapping their brain around that because well we have NICUs that do miracles, why should we worry?

[00:18:26] See, how this all kind of floats around together and public perception? They made another change in 2014 which is interesting. Now, we, back in the olden days, somebody delivered at 37 weeks and it was like oh, you're term. I remember my niece who was on the phone saying and I was three weeks early and it was just – and I'm thinking three weeks early, she – wasn't she term? Well, she was 37 weeks. In her mind, that's three weeks early. People got so comfortable with 37 weeks being term, they didn't even try. And, and anybody who worked out there in the healthcare field will tell you, it was like she's close enough. Term, she's term. Because we know now more, about the ramifications on not being all the way term, they changed it to early-term because it has ramifications. It matters. So, now we know that full term is really 39 weeks to 40 and six. So, just even those subtle differences show you how far we've come just in the few years that we've been around.

[00:19:46] I'm going to mention again did you know it's expensive to have preterm babies, yeah. This one I think is going to bounce a little forward too so be prepared. Don't be surprised. Why do we worry about preterm birth? Well, all of these things right here, and all of these things we're all knowledgeable about. We've been talking about them all morning and I was delighted to hear in a couple of the conversations, especially the last presentation, is that those last two bullet points on the left, developmental delays and behavioral issues, those have been sort of off to the side, do you know why? Because they're separated by so long from the actual birth event, that if we know early delivery causes this but you can't find that out until five years later, nobody's putting those two things together. Even though we intellectually know it, nobody over here is saying let's try to keep Sally pregnant another two weeks so that we don't have developmental delays when the kid is five.

[00:20:59] People don't have those conversations. They're much more in tune with the baby who has NAC or apnea or feeding difficulties, because those are right now. You can make the correlation, you'd be stupid not to make the correlation. Birth, these problems, anything that's an outlier is a little hard to get your arms around of and a little more difficult to relate to what has happened. So, the statement from a lot of people and they've done the studies on this, is babies born a little later than – a little early are going to be fine, probably, won't they? Most of them. However, here's what we do know. We know that those babies go to the hospital more often. They're sicker, they have, they have more neurodevelopmental issues which again happen far out from delivery so nobody makes the correlation. You know, Johnny just has developmental issues. They're subtle,

nobody compares them to gee, you delivered, you know, at 35 weeks.

[00:22:14] Babies go into the ER, babies go in to be managed in the hospital, we're all about decreasing hospitalizations for mom and decreasing hospitalizations for baby. The last thing to cook in a baby is the brain. So, what we do check, we check lungs. Is this baby ready to be delivered? Lungs, we look at. Well, that's like cooking a cake and measuring the corner of the cake with your toothpick, those are the lungs. No, where do we check? The middle because that's the last thing to cook is the middle and that's the brain. And we don't have a full grip on that yet, but it's – we pay the price for it on a daily basis. Now, as, as was mentioned, the new report card has come out and it's not good news, people. It's not horrendous but we're not getting better.

[00:23:12] In 2019, the United States has a rate of 10%. So, a little incremental increase, but in the wrong direction. So, I think that puts us to a C minus, I think. So, there's a lot of opportunity for, for change to say the least, and you've heard that all throughout the day in, in the presentation. And I think somebody's already talked about that. Alright, preterm birthrate occurrence. Because there's so many people having babies preterm, we know that if these moms decide to have another baby, that they're at risk to have another preterm baby. The more preterms you have, the more likely you are to have. And there's all sorts of risk factors that play into it, that's why there's sort of a, a number discretion. Now, we heard this morning about the prolonged trial, the FDA are looking at the prolonged trial. It was, it was kind of interesting because it put, it put the whole intellectual field of 17P in sort of a quandary because you have the MEES trial which showed great efficacy. You've had lots of lesser evidence level trials done by payers and physician groups.

[00:24:31] It's a very popular topic that generally the vast majority of those studies show efficacy and then comes the prolonged study that showed no difference, well how does that happen? Well, it happens a lot in medicine to be sure. We think that well besides me, I listened to the FDA Advisory Committee meeting, it was an eight-hour meeting in front of the FDA and had, had all these people putting their opinions forth and one of the major things that almost everybody in the committee said that they think there's some difference because it was done in, in Eastern Europe. And they think there's something maybe to that, that they have a different healthcare system than us. It is socialized medicine and these people essentially have a nurse, kind of available a lot, all the time. They get to take a lot of time off

work. They get a lot of social support when they're pregnant. We don't necessarily have that in this country.

[00:25:34] There also was a great deal of discussion about whether some people are innately responders to 17P and some people are not responders to 17P. Why would there be this disparity otherwise? I will tell you that the committee, the advisory committee, voted nine to seven, it was such a tight race, I can't even tell you, and based on their discussion, I was kind of surprised that they came out nine to seven, but they were pretty split, almost right down the middle, so to pull the FDA approval of this drug. Not because they wanted to get rid of the drug, the statement of that full committee is that they want to pull approval until more studies can be done to figure out why do you have these two different results? Also, what was discussed in that panel, was the fact that they felt that if 17P was removed as a branded drug, that physicians would continue to use it as a compounded drug, which brings me right back around to where we started in 2003 with Doctor Mees, because we used to provide this drug in compounded form.

[00:26:51] So, we're prepared for any way that it goes and we understand the confusion and we wait as anxiously as everybody else to find out what the FDA is going to say about it. What does 17P do? I have some bullet points up here but most physicians will tell you, I don't know. We're not sure. We're not so sure. Because they're, they're not sure. They're not sure if it's – somebody has an innate, you know, not enough of it and they need more or something happens. They're not sure. But this is what 17P does. 17P relaxes the myometrial smooth muscle, your uterus. It blocks the action of oxytocin, sounds like it should be a tocolytic, doesn't it? Turns out that those actions are kind of weak, they're kind of – they're not as good as like mag sulfate or tributelene or something else that you would use as a tocolytic. They're kind of minor actions. We think maybe the secret sauce with 17P is, it's not up here but ability to decrease inflammation because inflammation is the root cause of all evil. And perhaps its inhibition of the formation of grap – gap junctions which are the wiring that cause the muscles to contract. It's the messaging, the innovation of those muscles to contract.

[00:28:19] And once those gap junctions, where they're connected to each other, their connections, once those are connected, that you can't unconnect them. So, you got to give 17P in front of it for women who form them too early and too many to slow that process down. And that's why it's a prophylactic, not a treatment. That's what we think, could be wrong. There's a lot

of reason – this is a very hot topic right now for research. I will tell you that the criteria is really easy. I mean, there's not – it's, it's black and white. Have you had a previous spontaneous preterm birth of one baby? Are you pregnant now with one baby? You should get 17P. That's the criteria. Now, when it first started in 2003-2004, we had a lot of people that said after, if you don't start between 16 and 20 weeks, like Doctor Mees did, it's useless. Too bad, you missed the bus.

[00:29:19] It turns out that it's not quite so much that way. There was a lot of studies done that says if you start a little bit later, it's okay. It just maybe not have as great an effect. Of course, you have diminishing returns as you get further on in gestation. I think it's been studied up to 26 weeks starts with benefits. So, it's – but, it's pretty clear cut who benefits. It's given either Z track in your hip via IM injection or it's a weekly sub cue auto-injector. Some people believe that the auto-injector can be given by the patient herself because look how many things are on the market that you auto inject. I mean, with zelgens [ph] or whatever. There's a million things you auto inject, so why can't they inject that one? The auto-injector is labeled to be given by a clinician because it is high velocity, high viscosity. It's castor oil and it's a lot of it. And so, people tend to do that when they get the injection in the back of the arm, it hurts. And so, you – and if you pull it out a little soon, it leaks and they call those wet injections.

[00:30:31] We don't do that. We, we are clinicians and know how to give the injection but I wouldn't leave it in the hands of patients. So, lots and lots of interaction and busyness happening around this disease state. I think I've talked about all of these, yeah, yeah, yeah. We have pretty high compliance with our patients because I don't want to say we're stalkers but we do chase women down. We do kind of, you know, because they hide from us sometimes. Nobody wants to get a shot in the hip, are you kidding me? Nobody wants to do that. So, you know, if they say I can't, I'm grocery shopping. I'll meet you in the Kroger parking lot. I can't, I'm visiting my aunt, she lives in a box under a bridge, we'll meet you there. It's – we have really good compliance. And actually, I think that the patients really, really come to see our nurses who see these patients as friends. They spend time together, they talk, they, they really do bond, and I think that that makes a huge difference in, in care.

[00:31:42] Every week matters. I'm going to skip by that. Let's talk about throwing up, want to? Let's do that. Nausea and vomiting when you're pregnant, nausea and vomiting is really, really, really common. It is, it's 50 to 80% of people feel something, it might

be as minimal as I don't like the smell of eggs or your cologne makes me sick. Could be, could be nothing. Now here's how, how it plays out that 50 to 80%. In the U.S., there's about four million births a year, about, right around in there. And of those women, 50 to 60%, two to three million feel something. They're on the, they're on the continuum somewhere, they don't like something. The stove heating up, I hear that one a lot, oddly enough. I don't like the smell of hot metal. Pregnancy is weird.

[00:32:42] Then, above them, are women, about 17% of women have nausea and vomiting that's enough to impact their life. It's screwing things up in their life, especially working women. This didn't matter so much back in the olden, olden days, when I was like a teenager and a young woman, didn't matter because – I know it's hard for some of you to believe but there weren't that many working women. Once you got married and had babies, you stayed home. That's how old I am, people. However, as we know, women are now more than 50% of the workforce and if you have nausea and vomiting, and it's really bothersome and it's not just I don't like the smell of cologne. If you've got your head in a toilet from 6 AM until 11 o'clock in, in the morning, can you drive a school bus? No. Now those people that have activities of daily living affected but their numbers aren't really screwed up, on top of them is the 1 to 2% that have hyperemesis gravidarum, and God love those people.

[00:33:54] These people, if they don't get help could die, that's how, how overwhelmingly hideous this disease state, state is. It is unremitting. It is just horrible for these women. So, we tend to help the people at the top of the pyramid because if we don't, they'll die. So, we do help them. The ones in the persistent vomiting that impacts people's lives, we're a little less quick to help them because they haven't proven that they're sick enough. You – I, I see a nod here. Some people may have experienced this themselves. And the others that we don't need to worry about because it's transient, it's mild, and they can deal with it. So, here are the goals of intervening with nausea and vomiting and pregnancy. You want, of course, you want an optimal outcome. We want good weight gain and good baby weight. And both the hospital and a regular infusion company can do that, and we can do that, an OB home care company.

[00:34:59] If you go to the next one, reduce the cost of care, that – you can drop off the hospital, they can't do that. It's money to go to the hospital, that leaves the infusion company and what we do, an OB home care company. If you go to the third one, regain quality of life, you can't have a good quality of life when you have an IV in your arm and it's going to be long-term. You can't,

you cannot. You cannot roll around the courtroom presenting a case with an IV pole. You can't do it. You can't do a lot of things. You can't keep an IV good unless it's a PIC or a midline. So, if you have a peripheral IV in, you're living a life – it's hard enough to keep it good if you're stapled to a hospital bed, never mind trying to do laundry or give a two-year-old a bath. Those IVs go bad immediately almost. So, you don't get good quality of life with, with having that. So, that leaves surprisingly OB home care.

[00:36:09] And there's an example of somebody trying to have a life with their IV thing sticking out the door, or trying, trying to go to work. Alright, so what do we do for these women. What we do for these women is we provide individually dosed antiemetic therapy with either metoclopramide which is Reglan or ondansetron which is Zofran, either one. We have studies that show us if you start with Zofran you'll have less likely the need to flip over to the other one, but I will tell you if one doesn't work, the other one will likely work because they work in different ways, different mechanisms. We often, we – if the patient comes to us dehydrated, and sometimes they do, they will get an initial IV hydration, usually only takes three, four bags really to get them into a hydration status again. And provide, provide holistic support for these women because it's not just about the medicine. These women come to us profoundly depressed, not clinically depressed, situationally depressed because I've been sick for a couple of days. I've had the flu, one time I had too much champagne, whatever it is, I've been nauseated for a day or two or thrown up for a day or two, we all have.

[00:37:34] Can you imagine doing that for weeks, days, months? I would be out the window, I think. I – and a lot of people can't tolerate it, cannot tolerate it. So, how can we tell which women need our help here? It's – well, if you can't stop throwing up, well there's an indicator right there. What if you can't keep down the oral medications that the doctor has asked for you? We look at dehydration and ketones in the urine because we like to measure things that we can measure. Weight loss, we love to measure things that we can measure. Failed agents that just aren't working very good for you, can't keep down your medications, you're in and out of the hospital. I propose to you this that we need a different criteria and that is we handle it like pain, trust the woman and say, how you doing? Is that working for you? Do you need more help? That's what we do with pain, is it not? We don't wait until their blood pressure and pulse go sky, skyward and the patient can't stand up straight. We say that medicine that I gave you, how's that working? Is that doing

good? You getting enough relief from that? Talk to me honestly, we're friends here.

[00:38:55] That's what we need to do with nausea and vomiting. Are you getting enough relief? Because they're already getting B-rated maybe for all we know by their friends and families saying you know, I had that and I never took any medicine. I've heard it, you've heard it, making – punishing people for the need for them not having the same kind of morning sickness that you had. All morning sickness and all NVP is different and a different experience and entirely subjective. So, the benefits of in-home treatment are this, that it's ongoing assessment and early intervention for symptoms. That we eliminate the peaks and troughs of taking an oral medication. That's not just fancy stuff with anti-emetic medication. That's any medication that you take via a subcutaneous continuous pump is going to eliminate the up and down.

[00:39:48] Let's talk about hypertension. This is a big explosive topic right now. Hypertension is one of the most common medical complications in pregnancy and it, it talks about 8, 6 to 8% of women have this problem. Let's talk about what some of those problems are. You can have these problems during pregnancy. You can have preeclampsia, eclampsia. This one's the killer, this is the one that keeps doctors up at night, gives nurse practitioners sweaty palms, and midwives want to cry because this can kill you. You can have chronic hypertension, many of us do. I do. I take medication for it so you either have it or you know somebody who has it. We're not worried about chronic hypertension in and of itself, we know how to handle that. What we're worried about is that 13 to 40% of women who have chronic hypertension are going to develop preeclampsia and preeclampsia can kill you. Hypertension superimposed with preeclampsia that tells you that those are two different animals. And we're going to talk about that in a minute, and gest, gestational hypertension, the old PIH, gestational hypertension, we're worried about that because 50% of women with diagnosed gestational hypertension, especially if it's before 30 weeks can develop preeclampsia, and preeclampsia can kill you.

[00:41:15] So, what is preeclampsia? Hopefully, that's most of you over there, the normal blood vessel that can expand, it's big, it's juicy, it's stick an IV in, and it's great. We all love really good veins. Me, I got a little more vasoconstriction. I got maybe some plaque, who knows, I haven't looked. But it's a narrower lumen, grandpa's hypertension. Preeclampsia is a different animal. Preeclampsia is neither of those. Preeclampsia is acute vascular spasming and I'm talking about everywhere you have a vein.

Your entire vascular system spasms and that causes a cascade of events. So, these are the services that we provide for preeclampsia. We provide three service lines for preeclampsia. One for women at risk of developing preeclampsia because you have to watch these women because once they develop preeclampsia, you really have to keep an eagle eye on them. So, we keep a light touch on these folks. They're not seeing their doctor that frequently and we're asking for BP and a question set that I'm going to show you in a minute.

[00:42:28] We also have a preeclampsia program for those women who have preeclampsia. Those women get three times a day telemetry. Those people get talked to every day unless we're driving them nuts, we'll let them go down to three times a week if they want, but some people want to talk to us every day. But we're getting telemetry from them real-time, three times a day, looking at their, their BP and a question set. We also, I, I cringed when I heard them say well, you know, there's, there's a little problem with removal of the placenta is not the cure for preeclampsia, it's the beginning of the cure but it's not the cure. So, we also have a program for preeclampsia that's discovered at the time of delivery, or the physician is worried about it. So, we follow up with the woman for 14 days postpartum. This is the – this is the equipment we use. It is a telemetry set. It's a little a tablet size and it speaks to the patient in Spanish or English.

[00:43:36] And it can send real-time data to us as soon as the patient says go. This is the question set that is asked because you – it's not just about blood pressure. It's about all those other things because blood pressure may be the very last thing that shows up before you're in a lot of trouble. If you're not paying attention to these other items, you're in a lot of trouble. We don't fix preeclampsia, we can't cure it. We don't prolong pregnancy. What we do is offer the patient a safer, less germy environment, cheaper, to wait while somebody with expertise is doing surveillance on her to make sure that she gets the care she needs when she needs it. Now, we're going to talk a little bit about diabetes. I certainly believe that that is a good documentation of diabetes because those people have to juggle. We slice and dice diabetes in a lot of different ways. Pregestational diabetes, diabetes that you have before you get pregnant, and diabetes that you develop during pregnancy.

[00:44:46] It's expensive. The straight line you see across there is women who are not pregnant, that's their insulin requirements. When you get pregnant, all the wheels come off and you have dynamic needs during diabetes. That's why you need to be

talked to and dealt with more frequently. Maternal effects, I'm not even worried about maternal effects, I'm worried about baby effects. Big fat baby babies who have pancreatic stress and need help because they're going to have problems in the long run and the short run if we don't fix it. Non-pregnant diabetics have a chronic disease. Pregnant diabetes patients have an acute disease and it's about the fetus and not about the mom.

[00:45:40] It's hard for doctors to manage because it, it takes a lot of work, it takes a lot of resources and people have a lot of questions. It's not that easy to have somebody available. Most of the really good practices that we see trying to work through this can manage only once a week visits with the patient, and that's going away. They need more help than once a week. This is our insulin-requiring service that we provide for patients and it is almost daily discussions with the patients. Sometimes, more than daily discussions, if that's what she needs to get herself – sometimes, you want to know what bologna is, is it meat, is it a fat, what is it? And you can call a nurse at ten o'clock on Thursday night and find out. Someone will help you with that and you'd be reluctant to call your doctor other, otherwise.

[00:46:32] So, here's what we know about diabetes. It's complicated. It's different in pregnancy than it is in the non-pregnant person. They have no time cushion to get it right, and generally, in pregnancy, because of that rollercoaster ride, women need activity, meal, or medication adjustment about every three days. And even running a little bit sweet, we now know through the literature that that causes problems for baby. I just thought you'd like to see the old insulin pump.

[00:47:07] And here's our outcomes an then I am finished. I told you we pull outcomes for our patients because it is important that we know what we're doing and that we're going in the right direction. When I say that we make a difference, I mean we make a difference. Whenever you put an OB nurse into the life of a patient, you make a difference. Whenever you put support, resources, and coordination of care, into the life of a patient, it makes a difference. So, I think that's – yeah, that's, that's me. I'm done. Is there any questions? Does anybody have any questions? No. Alright, well, if you think of one later contact Mariah Killman [ph] over there because she can, she knows all things. Thank you.

[Applause]: [00:47:58]

[00:48:04] [End of tape]