

Breastfeeding: An Early Life Intervention for Diabetes Risk Reduction

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Ann Bullock, MD:

Thank you, Jan. This is Ann Bullock. As Jan said, I'm the Acting Director for the IHS Division of Diabetes. I'm also its Clinical Consultant. I've been with Indian Health Service for 23 years. All of them are based here at the Eastern Band of Cherokee Indians in Cherokee, North Carolina.

I'm also an enrolled member of the Minnesota Chippewa Tribe, Fond du Lac Band. It is a great pleasure and honor to be part of this conversation. I'm not an expert in the Baby-Friendly Initiative or in breastfeeding, but as we're trying to understand more about how we early life interventions work, this is certainly one that applies to diabetes as well as to others. So, I'm delighted to have Dr. Merewood and Jana Towne speaking with us today. Please forgive my croaky voice here. Don't think you can catch my cold through the Adobe Connect lines here, so it shouldn't be infectious but it might be a little raspy.

So, I want to just start up by talking a bit about breastfeeding and the Baby-Friendly Hospital Initiative in general and then, you'll hear a lot more detailed information from the folks that really know how this is working here in just a couple of minutes.

So, today's webinar as I said is part of our exploration of the science showing how important in utero and early life risks and interventions are for lifelong health and mental health. Those of you who are with us a couple of months ago for the discussion about the Family Spirit home visiting intervention and a number of other programs we have done. We know that we are starting to understand this complex web of causation that sets the trajectory toward many adverse outcomes or good outcomes; we hope more of the latter, in life including risk for obesity and diabetes. But we know that if the right things happen early, we won't prevent one thing, we're going to prevent or at least, reduce the risk for a lot of things. And that's an exciting way of looking at all of this.

So, I've shown this slide a number of times because I'm trying to see what would be the components of given the science we understand what would really help in the in utero and early life to make a difference in many life outcomes. So, we talked about home visiting a few months ago, Family Spirit. Nutrition is a huge issue and they had in utero and first three years of life in particular, and all kinds of things around parenting.

Of course today, we're going to -- and the Baby-Friendly Hospital Initiative is talking not just about bonding and parenting, but also nutrition. So, it actually crosses both of these -- all of these are things that can help in early life to improve outcomes and learning, physical and mental health.

So, this is one component we want to talk about it today. We know that breastfeeding will help with a lot of things particularly pediatric diseases. This is the study from the General Pediatrics a couple of years ago that shows that breastfeeding has been by the Agency for Healthcare Research and Quality. Their research shows that there are favorable risk ratios for breastfeeding for all of these pediatric



diseases, necrotizing enterocolitis, otitis media, gastroenteritis, lower respiratory tract infection, hospitalizations, and so on.

If 90 percent of the U.S. families could breastfeed exclusively for six months, U.S. would save \$13 billion a year and prevent an excess of 911 deaths per year primarily in infants. So, even in the childhood diseases, breastfeeding does make a huge difference in things. It could make a larger difference if more people are able to do it.

We also know that adult diseases are affected by what happens early. I've shown this quotation from Pediatrics from just last year that many adult diseases should be viewed as developmental disorders beginning early in life and that persist in health disparities associated with poverty, discrimination, and maltreatment can be reduced by the alleviation of toxic stress in childhood. Toxic stress has a lot to do with early life parenting and other stressors.

I'm seeing some notices popping up that the sound is breaking up. I'll do what I can. Part of it is probably the cold I'm dealing with, so sorry about that if you're having trouble hearing.

We know that breastfeeding and diabetes has been actually looked at in our population in Pima Indians. Odds ratio among the Pima from 1997, this Lancet article that -- of course, we used to call type 2 diabetes, noninsulin-dependent diabetes mellitus. Compared to those who were exclusively breastfed for the first two months of life versus those who weren't -- the risk for later development of diabetes by early adulthood was less than half in the people who had been breastfed for the first two months. And these were adjusted for a number of variables, which would otherwise affect diabetes risk. This doesn't prove that breastfeeding prevents in and of itself, but this association is pretty darn strong.

So, we know that there are things that we can do to make a difference here. We know that sound maternal and fetal nutrition combined with positive social, emotional support of children to their family and community environments will reduce the likelihood of negative epigenetic modifications that increase the risk of later physical and mental health impairments. We've talked in this Advancements webinars series about epigenetics and how environmental stressors can affect the genes that are expressed through epigenetic mechanisms.

So if we can improve nutrition and social emotional support, then we are going to be able to reduce the likelihood that gene expression changes will happen, that will make it more likely for that person to have physical and mental health problems.

So, that's pretty powerful and breastfeeding and Baby-Friendly Hospital types of birth experiences can make a real difference here. So, we know that maternal hormones are very much affected by breastfeeding. Breastfeeding itself releases into the mother's body the hormone oxytocin, which is linked to maternal bonding and relaxation. The hormone prolactin, which was linked to the maternal care and responsivity. And dopamine, which of course is a neurotransmitter, which is associated with pleasure.

When breastfeeding releases all these things, you can see how it would not only be associated with positive responses, but also improve bonding with the child. Several of these slides I have gotten from wonderful colleagues including this one from Dr. Mark Erickson, psychiatrist at the Southcentral Foundation, who has a real interest and a wealth of knowledge in this area.

Why would that maybe be about this early life, so if those hormones are happening so quickly with breastfeeding, maybe there are some concrete examples of things that will make a difference. And so in this study, looking at it with functional MRI images of brains, of moms in the first postpartum month, compared with moms who are not breastfeeding, ones who are breastfeeding showed greater

activations in these brain areas associated with maternal infant bonding and empathy to their own infant's cry versus the cry of an infant they do not know. So, that's pretty amazing. It's not just that a crying infant stimulates these brain areas that are associated with maternal infant bonding and empathy, but it's their own infants that stimulates this, not just anybody. Very much involved with bonding and helping bring together, the mom and the baby in a very important way.

I suspect that Dr. Merewood is going to show a couple of these slides and she will talk much better about these studies, but I just want to mention that if that's the case, if this brain activation thing is happening and if these hormones are happening, then we should see good effects on how moms and babies interact. And in fact, that's what we're seeing. This was a study done in Russia, in a hospital that implemented the Baby-Friendly Hospital Initiative principles, so it looked at abandonment of infants by moms who delivered there six years prior to the Baby-Friendly Initiative and the six years since doing so. And what they found that the rate of infant abandonment decreased by about half from a little over 50 to not quite 28 infants abandoned per 10,000 births at that hospital. So, something was happening that made these moms more attached, more want to hang on to their kids. And breastfeeding may in fact also then protect against child abuse.

And this study from Australia, following 6600 mother/infant pairs, they found that mothers who breastfed for at least four months were almost five times less likely to maltreat their child than were moms who did not breastfeed. Now, breastfeeding moms have a lot of wonderful characteristics and advantages in their lives that are in common. So, trying to tease out which part of this was just moms who have a little more time, who are maybe a little better educated, and all kinds of things that may have contributed to this, that the authors controlled for 18 big potential confounding variables that would make, to try and tease out how much of these was really the breastfeeding. And it still was a very robust association that moms who nourish for at least four months were still more than two and half times less likely to maltreat their child.

So, what are the interventions then that can make breastfeeding more likely to happen and to increase the duration because that seems to be affecting all of this too? So, there are a lot of them and of course, the gold standard is the Baby-Friendly Hospital, which by all the evidence and literature is the gold standard, the most highly effective way of making breastfeeding happen and to increase the duration.

And other parts of the Baby-Friendly Hospital Initiative principles including immediate skin to skin contact between mom and baby postpartum support by other traditional type pregnancy support people during the birth and so on, which I'm sure we'll hear more about from Dr. Merewood and from Jana.

So, rather than go on any further here, I hope that this gives you an idea of the kinds of things that are happening with breastfeeding early that can have huge effects on bonding, attachment, as well as risk for the things like diabetes. So with that, I'll turn it over to Dr. Anne Merewood. Thank you.

Anne Merewood, PhD, MPH, IBCLC

Thank you. Thank you, Dr. Bullock. Just so you know a little bit about my background. I'm actually in Boston. I'm an Associate Professor of Pediatrics at the Boston University School of Medicine. As you may be able to tell from my accent, that's not where I came from. I'm actually English but I have been living here for over 25 years. I'm also the editor for the Journal of Human Lactation. And for about almost a year now, I've been a consultant to the Indian Health Service working almost exclusively with the Baby-Friendly Initiative and the things that have gone along with that in terms of breastfeeding and working with breastfeeding. So I'm very excited to have this consulting position. It's really one of the most enjoyable things I've ever done. I've been working with some really wonderful people out in the field. I'm just very much enjoying this position. And thank you very much for giving me the opportunity to speak to you all today.

I do have another colleague on the phone, Lori Feldman-Winter, who is -- Lori and I do a lot of our work together. She is a physician. She has a lot of expertise in that area of diabetes and breastfeeding. So, Lori will be able to help in the chat if people have very specific questions about the diabetes as well.

So, just looking here, this is a lovely picture that was sent to me by the Navajo Nation Breastfeeding Coalition. They have one of their signs stuck on the hogan here. That's really cute. And so, we're going to talk about, a little bit about an overview. We're going to talk about some of the literature briefly that talks about breastfeeding and prevention of diabetes and obesity.

We're also going to look at a little bit at the initiative of exclusive breastfeeding in the United States and how it's going and how Indian country is comparing with that. I'm going to talk about hospital practices and the impact that they can have.

So, just looking at some of the literature, the biggest single report has been done and commissioned by ARC and they did a report back in 2007, looking at breastfeeding maternal and infant health outcomes in developed countries, and they looked over 9000 abstracts, 43 studies on infant outcomes, 43 studies on maternal outcomes and 29 systematic reviews. And they looked at all this with health-related to breastfeeding, but the ARC review -- I'm going to just present the results that are relevant here and I will speak up a little I hear -- I'm soft-spoken which is an interesting thing to hear about myself, but I'll try to speak up a little.

This is the result of the ARC report on type 2 diabetes and they found that looking at all these different studies and putting all the data together, that the pool's adjusted odds ratio of developing type 2 diabetes late in life when you compare it with people who had ever been breastfed to babies who were formula-fed with .61. So, breastfeeding had a -- any breastfeeding at all had a fairly dramatic protective effect against development of type 2 diabetes later in life of babies who were breastfed compared to those who were formula-fed.

Something that is somewhat less well-known although the literature is getting stronger and stronger and it's becoming more and more frequently known, but it's something that a lot of our moms I find don't know is that breastfeeding can actually help moms as well in terms of prevention of type 2 diabetes. And again, based on this particular study, the ARC looked at very different cohort studies and they found that a longer duration of lifetime breastfeeding was associated with a reduced risk of developing Type 2 diabetes in the mother, not just in the baby.

And also, there's a lot of data out there on obesity. And I'm just going to give you the one outcome from the ARC for the conclusion that they had. They looked at three systematic reviews and meta analysis of good quality and suggested that history of breastfeeding was associated with the reduction in the risk of obesity in later life.

Just a couple of things that are more pertinent and specific to this population and in a study on Native Americans, Native Canadians, they found that if you look at type 2 diabetes in infants, they found that breastfeeding for over 12 months was protective against the development of type 2 diabetes in Native Canadians.

And they concluded in the study that breastfeeding reduced the risk of type 2 diabetes among Native Canadian children and should be promoted as a potential intervention to control disease in that population.

And then, just one last one, this was actually done after the ARC study, but this is another really interesting study that was done on over 300 gestational diabetics who were followed for 19 years and 147 of those women developed type 2 diabetes eventually. But what they found was that the median

time to type 2 diabetes in women who had breastfed was 12.3 years compared to 2.3 years and women who have not breastfed. And the lowest risk of type 2 diabetes in those women were the women who breastfed for over three months.

So, there are a lot of data out there, I won't go on too much about the data, but it is interesting that we've been doing a lot of access in Indian Country in the last few years not just Baby-Friendly but this has been a priority for the Indian Health Service for quite some time now. And it's kind of interesting to see that actually where Indian, American Indian population fall and also where they have come from. So, this is the most recent data from the CDC. And if you look at the breastfeeding initiation, so this is any baby ever trying to breastfeed and you can imagine that sometimes babies just get a little bit for a few days and they're still counting these days. So these days are somewhat generous I would say. Seventy-five percent of all babies in the United States according to the most recent data initiated. And you can see these are the different population groups, so actually, minorities tend to have high initiation rates. Asian and Hispanics have higher rates than Whites.

American Indians, 73 percent initiation, but what I like about this data is that the American Indian population seemed the biggest jump in all the different racial and ethnic groups. Between the 2005 and 2007 data, they jumped up from 65 percent to 73 percent initiation. That's kind of nice.

So the question is, okay, so all of this breastfeeding is really good for them, for the babies and for the moms, so how can we best support breastfeeding as healthcare professionals and how can we help, but not only in the hospital but also out in the community. And that's what we're going to talk about a little bit more today.

So, the Baby-Friendly Hospital Initiative is an international program, it's not just IHS, it's not just the United States. It's an international program that was created by the UNICEF and the WHO back in 1991 and it supports breastfeeding and ensures perinatal care is up to scratch basically during this critical period of the life cycle.

The principle behind Baby-Friendly is that empowers women through educational best practices during delivery and that impacts child healthcare in the community by connecting moms with the referral network from prenatal preparation right through when they go home from the hospital. So, it's not just hospital-based.

Just so that you are familiar with the precept, the Baby-Friendly Hospital Initiative is based on 10 steps, 10 simple steps. And I have simplified them even more here so that we don't get lost in the details. But they're really basic things. It's not rocket science. So, what are the 10 steps?

Well, you need to have a breastfeeding policy in the hospital. And that breastfeeding policy does also address prenatal care and postpartum discharge. You also need to train all the healthcare staff in the hospital. You need to educate pregnant women about breastfeeding and perinatal care. You need to put infant skin to skin for one hour when they are born.

And as I'm going to keep saying during this presentation, this is not just for breastfeeding babies, so for example, all babies whether or not the mom chooses to breastfeed would be going skin to skin at delivery unless there are some clear medical indication that there is the reason the baby should not go skin to skin. And this includes cesarean moms as well. So, a baby that's born by cesarean section should have the same experience of going skin to skin on the mother's chest right after birth. And that's what the hospitals are working towards. They're making quite a lot of progress.

We also want to maintain breastfeeding if moms and babies are separated. In many bigger hospitals, we're talking here about the Intensive Care Unit, the NICU. For Indian Health, it would mean also when your babies are transferred out. You know if they're sent over to a different facility where there is

Intensive Care because you have to send them to a Level 3 nursery somewhere else, you would have to ensure that moms are able to get their milk to the baby.

The next step that is to give babies no food, other than breast milk unless it's medically indicated and we have an awful lot of supplementation going on in the United States, so we really want to reduce supplementation. We want to practice rooming in so that moms and babies are not separated during the hospital care. And again, this is something that refers to all moms whether or not they're breastfeeding, rooming in and doing everything in the room.

So for example, having their doctor come in to the room and speak to the mom in the room and examine the baby in the room rather than taking away the baby that would be an example of rooming in.

We also want to encourage cue-based breastfeeding. This is something that the community can really help with. We've gone away from that old, every three hours mentality to making sure that moms understand when the baby is hungry, looking at the cues. We want to avoid pacifiers and artificial teats for the baby and also, we want to work with the community both prenatally and postpartum to ensure that everyone is giving the mom the same message.

The Baby-Friendly Hospital Initiative as I mentioned was started in the early 1990s. It has been updated and in 2009, it was revised and revamped, bringing in the information that we had learned about HIV, which was not really around when it was first started. It asked for increased community support and just at that time, they did look at how many hospitals that had implemented this. And in between 1991 and 2009, there are about 20,000 hospitals in 156 different countries had they implemented the Baby-Friendly Initiative and become certified.

So, we do have data to show that this works. And I would -- I'll pause a little bit here. I mentioned skin to skin. It's a very nice picture actually. It was sent to us from Phoenix Indian Medical Center, which was the first Baby-Friendly Hospital in the whole of Arizona. And this is a mom who's receiving skin to skin care, post cesarean section. So, that's a very nice picture, the baby and mom are skin to skin. And you could see the drapes in the background that mom has just had a cesarean.

So, we know that Baby-Friendly Hospital Initiative works and they actually did do a randomized controlled trial of the Baby-Friendly Initiative by a researcher called Kramer. And this data was published in JAMA back in 2001. And what Kramer did was he looked at 31 different hospitals in Belarus, which is a former Republic of the Soviet Union. They looked at 31 hospitals with 17,000 mothers and babies. And they basically randomly distributed those hospitals, for half of them to have the baby-friendly type care and half of them have the kind of old traditional stuff that people have done for millennia, maybe the moms are separated and everything is done on a schedule, that kind of thing.

They found that in the intervention sites which became Baby-Friendly, the babies are much more likely to breastfeed at 12 months. Twenty percent of them were still breastfeeding at 12 months compared to eleven percent of the babies that were born in a non-baby-friendly hospital. They also found that those babies that were born in Baby-Friendly Hospitals are much more likely to be exclusively breastfeeding, which is really what we're aiming for. The initiation in this country is quite high. Exclusivity is very low. So, in those cases, we have 43 percent of babies exclusively breastfeeding if they were born in Baby-Friendly Hospitals versus six percent. And they also had better health outcomes. Kramer has done a lot of studies since looking at these babies in health outcomes.

There was another study, it was a kind of interesting, because these guys looked at Baby-Friendly practices in the United States to see how many women have received these practices and whether receipt of a number of baby-friendly practices actually promoted breastfeeding. Sadly, they found that only eight percent of the 1900 people that they actually interviewed had experienced six of the ten

steps. But they found that the women who haven't got any of the ten steps were thirteen times more likely to stop breastfeeding early than women who got some of the steps.

So, you can see that the Baby-Friendly Initiative does work and we do have data to show that. So how are we doing in the United States? Well, as of latest counts, unfortunately, out about 3000 to 4000, no one seems totally sure, but somewhere around three and half thousand hospitals in the United States do births, and also, only 154 or six percent of them are actually baby-friendly designated.

Healthy People sets a fairly low goal for only eight percent of those to be designated in 2020, I mean currently, if you look at the states in the United States, Maine is top. Twenty-eight percent of the babies in the state of Maine are born in Baby-Friendly Hospitals.

So, actually we and the Indian Health Service were actually doing better. We have five of the thirteen OB hospitals that are designated, which is already thirty-eight percent of our hospitals if my math is correct. And this is PIMC, which is the first Baby-Friendly Hospital in Arizona, was designated in June this year. Eight out of thirteen hospitals are almost there. So we're being optimistic and we're looking at how many are getting there and how many will be there within-- by the end of the 2014 is the goal.

If we can do that, which Tina Tah, who is on this call, and many of us are very determined to do, then actually ten percent of all the U.S. Baby-Friendly Hospitals will be hospitals from the Indian Health Service. As we said, the goal is to get everyone designated which is an external designation process - everyone designated by the end of December 2014. And that's really been the work that you have hired me to do here.

Just looking at a map of where we're at with this. If you look at the top here, all the pink stars are the Baby-Friendly Hospitals are Indian Health and all the other markers on here are also baby-hospitals throughout the rest of the country. You can see that we have rather a dearth of Baby-Friendly Hospitals in the Midwest, which is also the same way of saying Indian Health has a lot of opportunity because most of the hospitals for Indian Health are in the Midwest.

The PIMC, yes, congrats to all those of you who are on here and done tremendous amounts of work to get this going, because I know that it was a lot of work. You can see from how few were designated in the country as a whole. There's a huge amount of work to get this done.

Aberdeen's Hospital, Clifton Kenon Jr., up there in Aberdeen, he managed to get his first three hospitals up there in the Aberdeen Area as Baby-Friendly before any of the others and they were they first three Baby-Friendly Hospitals in the Dakotas and they all went Baby-Friendly at the end of 2012.

PIMC is the first in Arizona. Claremore became the first Baby-Friendly Hospital in Oklahoma, not the first Indian Health but the first Baby-Friendly Hospital in Oklahoma back in June this year. And I'm hoping Zuni may become the first Baby-Friendly Hospital in New Mexico, but they're competing hard with Shiprock. And we have -- actually Fort Defiance in Arizona, but we have a few hospitals in the Navajo Nation that really are very close to becoming and Zuni already has a date set for their assessment with Baby-Friendly USA. So, we're getting excited about that.

This is our timeline and these are our hospitals, so you can see that in 2012, it was Rosebud, Pine Ridge and Quentin Burke, which are the three Aberdeen hospitals, were the first ones to be designated. Claremore and PIMC in June 2013. Right now, in the middle of the assessment process, either having assessment, waiting for assessments, doing phone calls with Baby-Friendly USA, we have three more hospitals. One of which is Whiteriver and Jana's going to be talking from there. And also Chinle and Zuni. And then, our other hospitals are at some point in the process not too far away. So, you can see that that covers everybody. And we are all working on it very hard.

So, you may be sitting there saying, “Well, that’s all very well if you’re an OB hospital, but what can I do to help if I’m not an OB hospital?” And actually that’s why we’re doing this presentation. And there are a couple of reasons we kind of got behind this. One is that the Indian Health Service, now I have to tell you that I have just had the most wonderful time working with Indian Health, this kind of webinar and all these great connections that you have and all the -- it’s system and there’s so much in place to be able to connect people when you’re a nurse, your consultant nurses and everyone is just doing such a great job to help. So, we’ve got a lot of systemic backup which is brilliant, because we don’t have that when I’m working with individual hospitals and other programs, which I also do -- I’m working for some other groups as a consultant but we don’t have a systemic thing in place.

That said, this is being handled very ably by the nursing group and there are really a lot of physicians out there in Indian Health who are not very much aware of this or not as aware as some in nursing. So, that’s one reason we want to make sure that the physicians in and outside of the hospital are aware of the initiative. And also, there are a lot of diabetes programs out there that have a great deal of interest in here and a lot of dietitians. And I know that because people have contacted me.

So, that’s why we’re presenting, because it really is something that yes, we can do so much in the hospital setting. And when I talk to the hospitals, I say, “If you just do your piece right, that will be a huge part of the puzzle.” But also, we need people in other settings to work on this too. So, prenatally and even pre-pregnancy, we need women to be hearing about this. We need women to know that it prevents diabetes in children, that it is very protective for the mom, too. And people often are coming and they don’t have that message, so it’s very important to know that.

In community health, WIC can be a huge help to women, to support women when they go home from the hospital and they go out. Sometimes they are very long way from the clinic, from the hospital, WIC is one of their big support lines and you know, if we can have the WIC offices connecting with the hospitals, seeing how each one can support each other, that would be great.

And also, to make sure everyone is giving the message because as in all areas, I’m sure you know that getting everyone to say the same thing can be quite difficult.

Speaking specifically to the diabetic settings, it’s very sad but diabetic women as a whole in this country are less likely to breastfeed than other women. And there are often reasons for that. As we know, when we’re working in the hospital, diabetics have very big babies. Sometimes those babies have issues with regulating their glycemic control and those babies may end up sometimes in special care or they get formula.

Often, they’re separated from mom. If they’re going into special care or into the Intensive Care Unit, that can be one of the places that we must have something set up for the mom to be pumping or getting the milk to the baby, that can be a problem.

And then, you know one thing that is really worth telling, we really have to work harder as a society, as a medical profession to ensure that we don’t just reach for the bottle when there’s a problem, because for a diabetic baby, the data are very clear that as they get formula, that we think it’s perhaps because of the exposure to cow’s milk protein, that’s a theory that’s being examined, if they get a formula early on it, it could set them up to get diabetes later. At the same time, if you’re faced with a baby who’s got really low hypoglycemia, what do people do?

Well, the most easy thing and perhaps the most safe thing right there in that moment is to go for a bottle of formula if you’re not used to doing anything else. But, we know very well that that’s not what the AAP protocol is. And Lori, would you actually like to just say in a couple of phrases of what the AAP recommends because Lori Winter is on the phone. She’s a physician that I worked with a lot. And

she works with the AAP on this. And you know, often formula is the first line of defense, but that's not actually what's recommended.

Lori Feldman-Winter, MD:

Yes, hi! Thank you for again inviting me. I'm a pediatrician from New Jersey. As you know, there is a tendency because many of these babies are large as you say. These babies will automatically be on protocol, meaning that they will be considered at risk for having low sugars or low glucose immediately after delivery. And so, many of those protocols were written in a time when formula feeding was the norm, so the first response is to feed early, to feed with formula early, and then to test blood sugars on a regular basis.

And, quite honestly, the threshold for when to react to a low glucose or what is a low glucose was really set too high for a long time. We now know that we can tolerate, babies can tolerate blood sugars as low as 40 or 50. And, if they're completely asymptomatic, those babies actually would do quite well if they're skin to skin and can breastfeed and even get small amounts of colostrum.

So we know that the hypoglycemia protocols in hospitals need to be reexamined. There are many hospitals that require revisions. And I think it's important for moms who are diabetic to be aware of how protective skin to skin care immediately after delivery is for maintaining good blood sugars. There's a great Cochrane Review looking at how well skin to skin immediately after delivery can in fact help the baby to maintain normal glycemic control.

Anne Merewood, PhD, MPH, IBCLC:

Thanks, Lori! Thank you. And I don't take away too much from Jana's time, so I just want to have a couple of last lines before we move over to what Jana's going to present, just to emphasize how the Baby-Friendly Initiative supports optimal care for all women by emphasizing many different things through the 10 steps, such as staff training, prenatal education, skin to skin, rooming in and step 10 fostering links through the community.

And you know, we do have to get address in this community. I mean in all other community, some of the reasons that women don't breastfeed, we may never know why women don't choose to breastfeed. And we need to avoid pressuring people, being aware of abuse issues and other reasons that women may choose themselves not to breastfeed.

However, I think the point of this webinar is that we need to practice optimal care because at the other end of the scale, we may prevent the mom who does want to breastfeed from achieving her goals if we undermine them by doing things like giving formula in the hospital.

So, from our perspective as professionals, as healthcare professionals, you know women and babies have a right to breastfeed. The community -- I can assure you the community out there is asking for your support and we have many, many people who really need greater support for breastfeeding. They know they're being told to do this. They know they're supposed to do it and in fact, it's a tradition in our communities, in the Native American communities. It's a huge tradition. It's something that's been done for millennia.

We've kind of come in here and it's got messed up, but you know, the tradition is to breastfeed. So, we really need to make sure that the professional environment supports that. So, things that you can do, is to liaise with your hospitals on prenatal care, community-based programs, like perinatal, prenatal, even pregnancy, pre-teen prevention pregnancy programs, those kinds of programs where you get to people very early.

Work with non-IH hospitals; insist on the IHS standard care, which is baby-friendly. There are many, many women who are seen in the prenatal setting, who then have their babies in non-IHS hospitals. Those hospitals may well not be doing it. They're very few and baby-friendly. So, get the word out there. This is the IHS standard of care. And we want people to have this kind of care.

And also, promote it amongst your physician colleagues, because this not just a nursing initiative, it's an initiative for everybody. And I'm going to turn it over to Jana. This is a nice picture of the Fort Defiance and the Navajo Nation WIC Program presenting on breastfeeding at their recent World Breastfeeding WIC celebration. So, without further ado, I'm going to turn it over to Jana who is telling you how it's been implemented in the Whiteriver area.

Jana Town, RN:

Good morning or good afternoon everybody, depending on where you are. And as mentioned, my name is Jana Town, and I'm the Nurse Exec. back at the Whiteriver Service Unit and I have been in Indian Health Service for quite some time. I've been a nurse for 20 something years and was raised in the system as well myself, I'm Haida and Tlingit from Southeast Alaska.

And I want to start -- it looks like my slides are loading, but I'd like to start with a little bit of a caveat. I have the honor of being able to share with you today what Whiteriver has been doing. But that's only because I stand on the shoulders of a great task force who has really done all the hard work and a good lead who has done all of those 10 steps that Anne shared with you before. And let me just check in with our -- oh, there it is! It's finally loaded.

In fact, I actually have some of the task force here with me right now, backing me up and supporting me, two of our public health nurses, Carmelita Estenson and Jan Bykelli, and then Lorena O'Brien, who is the supervisor of our Birthing Unit and then the Lead for the program as well.

So, let me go ahead and move on. So, one of the things that you might ask joining this is why this really matter to you, a lot of our listeners may be folks that aren't affiliated with a hospital at all or maybe even not a clinic. There might be a community diabetes program out there, but as Ann alluded to, your part in this is equally important.

One of the things that we've heard about in the Whiteriver community, is if this is so important why aren't we hearing about it? You know, we in the healthcare community have been talking about a lot of what you heard from both Dr. Bullock and Dr. Merewood for a long time, all of these great benefits, many of which I didn't include on here, because I would have had a very busy slide. But we know that it can help reduce diabetes risks and overweight and chronic disease, and it can help with bonding. And we've been talking about it a long time but why is it that our communities aren't hearing it? And I think it's something that our diabetes program learned a long time ago, is that the living really happens outside of the four walls of the hospital or the clinic. It happens out in the community and that's where you are. That's where they all hopefully hear that message and be supported in choices that they make regarding feeding.

And then the other quick point to make here is that it really isn't just about breastfeeding. You heard about a lot of other benefits, domestic violence reduction. There's another one, bonding, a lot of things that we face in Indian Country. This can be another tool in our belt to address some of the issues around health and wellness of our people.

So, you've heard a bit about the 10 steps. And I'm going to go through just really quickly some other changes in the hospital at Whiteriver and then move on to the community portion of that.

One of the things that Whiteriver started out with was developing a multi-disciplinary team. We have OB staff. We have folks in our diabetes team, our public health nurses. We have some of our dietary staff and our social workers, medical staff in different variations. And that has been a really successful approach for us. It helps get that information out in lots of different settings and with different voices and different contacts. And in fact, social services and dietary staff had been some of our more active, I'd say on our team. And that's been a good strategy.

Leadership involvement. I think we all know that this is really a key in moving things forward. And early in, this was a little bit of a struggle for us at Whiteriver, but one of the things that did occur is the Assistant Nurse Exec. that pulled in. And actually, kind of engaged the task force to be more involved not just to be meeting attenders but to be actual participants and get involved.

And then, of course, some executive staff representation. You obviously are hearing from me, supported by the staff that we have working on this. In fact, they've all confessed, they even got to pirate most of my slides from work that our task force had done.

Another really important step for us was linking it to another initiative. Many of you may be familiar with the Improving Patient Care Initiative, that's been a big effort in the Indian Health Service now for the last seven years or so. And, some learning for us at Whiteriver is let's utilize this avenue that's already out there and work that's already being done. And what you see on your screen now is actually some of the measures that the IPC team tracks. And if you look at this, we still have a long way to go. But the one that I'd like to point out too is the one in the far left corner. You can see that we weren't doing so great in the end of last year, but that big jump that you see in January, February, and March actually is the result of that partnership with that other initiative. And now, we're just waiting until the babies start to get farther out into that six month age period so that we can see those numbers start to increase as well.

Other efforts, we really try to have lots of different ways that we were sharing this information. It was being shared through bulletin boards and email quizzes that went out to our entire staff and the person who got the most correct answers would get a free lunch ticket.

I think my favorite story about all that is that our housekeeping supervisor has been one of the ones to actually win the quiz and get the free lunch. I think that's wonderful. We utilize our skills there for nursing to be able to reach all of our nursing staff so that they can be exposed to how to do manual expression and other aspects of Baby-Friendly. There have been presentations to staff and new hires, every new hire orientation that happens, our new staff are introduced to the Baby-Friendly Hospital Initiative and what Whiteriver has been doing to try to get there.

So that's a lot about what's been going on in the hospital, but this is where we hope that maybe we can have you all come in because as you heard a little bit from both of the Ann's, the more opportunities that we have for Native American and Alaska Native women to be able to get information about breastfeeding and to make an informed decision that makes sense for them, the more avenues that they'll have to find the support that they need and the more that we can start to change the environment to be able to support that for our Native American population.

So, with some of the community involvement, some of the benefits of that is it offers information in different settings and different context. So what does that mean?

We're working hand-in-hand with a community diabetes program. They're hearing about the importance of breastfeeding in a setting that they're already engaged in. They are interacting with you because of other reasons. And so, being connected to something that may already be very important to them in their life and it helps to leverage that. It may be affiliated with the WIC program as you also

heard and that gives an opportunity again until we get into events that are happening in the individual's life.

Continuity of messaging. You've heard Dr. Merewood reference that a little bit. If they're hearing a consistent message everywhere they go about the importance of breastfeeding and that it's a viable choice that they can make, then it lends more weight I think to that for them and maybe helps them to think, maybe I could make that choice, to make this work for my family.

Varied methods. The community program often interacts with customers in a way that's much different than we do within the healthcare setting. And that is a wonderful opportunity again. If I've learned anything from the whole social media and Facebook boom that we've seen over the last several years is that you really do need to appeal to people in many different ways. I think that's part of why Facebook has all that it does, it has so many different features to it. And I think engaging the community gives us the opportunity to that as well.

And finally, population reach. A lot of times, we're focused in healthcare, on the individual, that's an individual interaction we're talking about their particular health issue. But in the community, that reach is much more broad. You're addressing population; you're addressing families, community programs. It gives the opportunity to address the importance of breastfeeding on a broader level and maybe you'll reach the grandma or the dad, or the aunt, or the cousin, or the friend, who can then be the support to that woman when she is making that choice.

So, how are we doing it in Whiteriver? Fostering community support is step 10. What are the things that we're trying to do to make that happen? And one of them is to provide support structures. So, we have some of those more formal ways that we go about that.

If you hear that, we have breastfeeding classes that are offered in the WIC conference room, and that's actually a tag team with our public health nursing staff and some of the tribal staff. So there's a formal opportunity that's out there. And then we have additional avenues with our childbirth classes and our postpartum, and our newborn classes, those are all pulling in breastfeeding content as well to give women opportunities to hear this again in another setting, or maybe at a time that they might be ready to hear that information.

And then, we have additional support groups as well. You see the two fliers here for support groups that are offered in the community as well for our moms that are nursing or maybe considering nursing. So we have kind of developed some formal structures around supporting breastfeeding. And then, providing support resources outside of those settings.

So in the middle of the struggle, who do they call? If they're having trouble getting the baby to latch or they have a question about how frequently they should be feeding the baby or whatever. We have also worked to provide avenues for them to have that resource. And you can see on this flier, there are quite a few opportunities for our population to interact with folks either through the tribal support or through the hospital or even through a national support line.

Another strategy is that we've tried to kind of look at this in a variety of ways. So, many voices and many ways. We have public service announcements that are on the radio. Those of you that are out there in Indian Country know how important the radio is and how much reach that could potentially have with our population. Articles in the Apache Scout. We have that delivered here to the hospital and it's usually gone within a couple of hours. So articles that are reaching out to the community in that sense.

Social media, we've touched on briefly. Whiteriver has a Facebook page and we've utilized that as well as a way to share some of the information or opportunities that women have to connect to some of the

supports around breastfeeding. There are posters throughout the hospital and bulletin boards. When we had our mock survey, they thought that we might have put them all up for them and I was very proud to say that has nothing to do with it.

Anne Merewood, PhD, MPH, IBCLC:

That was me.

Jana Town, RN:

I thought it was you, wasn't it Anne?

Anne Merewood, PhD, MPH, IBCLC:

It was too good to be true.

Jana Town, RN:

And you can walk down our halls right now and I'll show you pictures that I took actually that days and that go in a moment here, but and there are printed materials and coloring books in healthcare so you can see that we've really tried to reach out in lots of different ways to our population. And this is one of our breastfeeding posters. This is actually right outside of dietary. Our dietary staff put this up and all those fliers you see on the sides are not only for why you want to breastfeed but how you can get connected.

This is in our pharmacy waiting room, so patients get to wait for their medicines, and read a little bit about rooming in. This is one of the posters that are on our walls within the organization and this is yet another bulletin board that is actually right outside our birthing center. But I took all of this within about a week's time and we're not being surveyed. So, the Task Force is really getting the board out there and that's so great.

And then this is a children's coloring book that one of our wonderful task force members put together with Apache words and it was disseminated at the health fairs in the recent tribal fair, obviously showing that it's a natural process for a lot of nature to breastfeed and start to set that understanding really early in our young one.

And then, coming soon, I am really very excited about this. We have a five-generation digital story that is currently in production right now. We have a family of five generations that have chosen to breastfeed their babies and they're going to share that for us. It'll be displayed on our education panels and probably used in other mediums and sources when it is available. And we are also developing a puppet show which I learned that I get to be part of when it's ready, I get to act in our little puppet show. But that will also go on our education panels that are in our waiting rooms and throughout our facility.

And finally, a little bit more about partnering with the community programs and agencies. We at Whiteriver are I think lucky to have public health nurses as part of our service unit, but in other places, they may be part of their community or maybe a tribal program. But for us, they really are the liaison and the outreach to our community. They are already out there. They're providing home visits as you saw from a lot of those education classes and things, that's usually our public health nurses that are providing those as well. They offer home visits for breastfeeding support in addition to that and cover everything from manual hand expression, to latch, to pacifiers' use, to rooming in. We've partnered actively with our tribal diabetes program. We've partnered with them all along, but even more recently that's become more active and they provide lactation counseling as well, so that's an opportunity for us to link the patient to somebody in the community when they leave us to go back to their life.

The WIC program we shared, we actively work with them as well and they have -- part of that process for WIC is to --they're required to attend classes to obtain WIC vouchers. And our WIC program has actively made one of the classes a breastfeeding class. So, all of the WIC participants get at least one exposure through WIC to breastfeeding.

And then, finally, that local referral hospital, we have a birthing center, so about two-thirds of our deliveries has actually occurred outside of our facility. I mean when they get prenatal care here but then have to be transferred out, so our task force actually met with the OB and Quality Management Leadership of our local referral hospital to share with them information about the Baby-Friendly Hospital Initiative and why it's important to our patients. We know that we have higher rates of acute illnesses like pneumonia and chronic illnesses, like diabetes and overweight, and breastfeeding obviously is one avenue that help change that for our population and also share how formula provision may impact them.

Our WIC program doesn't provide vouchers for formula for a month and in a population that may have some financial challenges that can be a really tough process for them that they didn't even know they began if they got started on formula.

So, partnering with our local facility has actually been a really important part of the work. And we also provided an avenue for them to refer our patients back to us and to get them connected with our Public Health Nursing staff.

So, this is where we hope you all also began to sit in, so to partner with Community Diabetes Programs and grantees provides just yet one more avenue, another way to reach out to our women out there and for them to hear it in a different voice, a different avenue, maybe by somebody else. Maybe it's grandma who comes home and talks to that young granddaughter who's expecting a baby and encourages her to breastfeed. So we're hoping that this can be a part of really beginning that partnership in an even more, in a stronger way that it occurs now.

So, thank you, I know we are at time. I'm going to turn it back over to Ann and thank you for giving us the time to share a little bit about what's going on Whiteriver.

Ann Bullock, MD:

Thank you Jana and thank you the other Anne. This is Ann Bullock. We're just -- pretty quickly because we are at the top of the hour, so just a couple of thoughts. Some of us on the line are already involved in Baby-Friendly. It's wonderful to see a lot of names in the participant list that we don't usually see in our Advancements in Diabetes webinars. We invite you all to come back for other sessions that are of interest to you where you can get CME/CE credits. And many of you on the line are also involved in diabetes programs and I'm so glad that both Anne and Jana have said how we, in the diabetes world can make a difference here.

So just quickly, let's be sure we're promoting these principles for baby-friendly and the whole idea of bonding and attachment and connection and good nutrition early in life. Breast milk is the best possible food there is for infants and it's tailored to that individual child. Breast milk is one of the most complex things around. We don't even know everything that's in it, but we know that things that are contained in there are not only good nutrition but also communicate about mom's own state, her stress or lack thereof to help get baby ready for whatever the baby needs to deal with.

So, breastfeeding and skin to skin and all of these things are wonderful. Let's be sure we provide space and time for our staff, for breastfeeding. And our clients who come to our facility so that they feel welcome to breastfeed or to pump. We need to talk to young women in our diabetes clinics about

contraception. We haven't mentioned that here but let's make sure that when they're ready to have children, that they are planning those pregnancies. If they have diabetes, that their sugars are properly controlled ahead of time if possible. Let's talk them about food insecurity because that's an important part of in utero experience.

Ask about trauma history and domestic violence that may be going on. Trauma-informed care is a whole other discussion we hope to have at some time in the near future, that factors in here very much as Dr. Merewood mentioned. We need to understand that whether it's diabetes or heart disease or all kinds of problems in our communities, it's a very complex web of these risks that we should never judge anyone in our communities. We need to support women in doing the best they can for themselves and their children. We need to do this as clinicians, as well as we are all members of families and communities. Finding ways to help promote healthy, happy, well-loved, well-nourished children will help us to heal the cycle of intergenerational trauma that has so much affect in so many in our communities and beyond.

With that, I want to thank you all so much for participating in this. We hope you've gotten some ideas for how you can promote the healthiest of in utero and early life experiences for as many people as possible in our communities. And we thank you for your work.