Jorge Plutzky: 00:04

Welcome and thank you for joining us on the second episode of the 2020 Know Diabetes by Heart™ Podcast series. The purpose of this ongoing series is to reduce cardiovascular events, cardiovascular deaths, heart attack, strokes and heart failure, and people living with type 2 diabetes. It is based upon an exciting collaborative initiative between the American Heart Association and the American Diabetes Association. This series is brought to you by founding sponsors, Boehringer Ingelheim, and Eli Lilly, and the Company Diabetes Alliance, as well as Novo Nordisk. Along with national sponsors, Sanofi, and AstraZeneca, and Bayer. I'm Dr. Jorge Plutzky. I'm the Director of Preventive Cardiology at Brigham and Women's Hospital where I'm an active practicing cardiologist. And joining me today is Dr. Joshua Joseph, a well-respected and well-known endocrinologist who currently practices at Ohio State University. Dr. Joseph, thanks for being with us.

Jorge Plutzky: 01:07

We're all so excited to have with us two Know Diabetes by Heart™ ambassadors, Hyvelle Ferguson and Jacqueline Alikhaani, who will discuss with us challenges they face in terms of living with type 2 diabetes and cardiovascular disease, and how we as healthcare providers can best support them. We're going to take advantage of both of their experiences in terms of prompting questions for both myself and Dr. Joseph and have an interesting and I think very important conversation about these issues that hopefully all of you listening will also find to be valuable. I know it'll be always educational for me to be able to have a chance to talk to Know Diabetes by Heart™ ambassadors. So Hyvelle, why don't I begin with you and ask you to tell us a little bit about your story and to pose any questions you might have for Dr. Joseph and myself.

Hyvelle Ferguson: 01:57

Well, first of all, let me tell you how thankful I am that we are on this line today of the podcast because the information is necessary. So, when I was initially diagnosed it was like, "Wow, what do I do?" I know in my case there was communication gaps, and with communication gaps, especially with a specialist, how do we make the referral process of somebody who's been diagnosed with diabetes to make sure that a PCP is aligned with all the benchmarks?

Joshua Joseph: 02:24

Hyvelle, that's an excellent question. And this is Dr. Joseph. I think that communication between physicians is really a key component of effective patient care. This used to really be accomplished through via phone calls and faxes, but really it most commonly now occurs through the electronic medical record in many parts of the country. The majority of individuals with diabetes are cared for, just like in your case, by a primary care provider. And then endocrinologists see patients who

really have a higher level of need, including those with type 1 diabetes, uncontrolled diabetes, other what we call atypical forms of diabetes that are in between type 1 and type 2 diabetes, and then individuals such as yourself with new diagnoses who really need a helping hand to get started. Guidelines for a referral to an endocrinologist and back to the primary care provider are one potential solution to make sure that we have these smooth transitions of care and thoughtful, really thoughtful, conversations between the two of them.

Jorge Plutzky: 03:26

I think it's a great question and I appreciate Dr. Joseph's answer. Hyvelle, I think you're raising a key issue. The fact is that physicians and their staff nurses pull the teams there to support and help patients, but you can't escape it, healthcare is complicated. And we face that every day when we see patients. And we can gauge by the questions they ask, we can gauge by our own system and to what extent records are there when the patient says, I saw someone outside the system, or I had this test done in our system. And sometimes it's there and sometimes it's not. Those are small examples that I think that, in addition to the communications and referrals that Dr. Joseph was talking about, it's very important that patients and their families are their own advocates of making sure that notes and lab results are being shared, that the various members of the team are communicating with one another and that those members of the team are actually speaking when a more complicated issue comes up. It's very legitimate to ask the primary care physician, have you spoken with my endocrinologist because the last time I saw them they raised some questions that I had that I want to make sure you're on the same page about?" Or, "Have you spoken with the cardiologist?" if you have a cardiologist and have issues along those lines. I think that when people start doing that, they realize that the healthcare team appreciates when patients do that, when they have their own records and have made sure that they've gotten them, that everyone's on the same page, and that they're asking the key questions that need to be asked in order to make sure that the care is optimal.

Hyvelle Ferguson: 04:54

Now my question is once you've been diagnosed with type 2 diabetes, there's a new world that opens up to you and there's all type of medication, there is maybe insulin injection, there is a class that you need to take as far as knowing how to take your medicine and comply to the stringent process of take it on time, certain hours, compliant of writing down your numbers. Now, how do we get patients to comply with taking their medication knowing the dangers that may happen if they're not adherent to the plan? How do we combat that to make sure that patients are aware of the dangers that they may face?

Joshua Joseph: 05:32

Hyvelle, that's a great question. And I think you speak to the difficulties and challenges that can be there for some patients when they're treating their diabetes. In my clinic, we use the mantra, investigate, educate and motivate in really a judgment-fee and safe space. So, I want patients and work with patients to investigate what is important to the person, to them personally, and what is their personal understanding of diabetes. We really educate around the importance of diabetes management and strategies to effectively manage it. And lastly, we use some of that information that is garnered and gained in that process to really motivate patients to better manage their diabetes. The process takes a great deal of really patient-centered focus, cultural humility, and a lot of emotional intelligence, really how do you work with people effectively, which is something that we've been learning in the medical community over the last 15 or 20 years.

Joshua Joseph: 06:27

We also heavily encourage the involvement of diabetes educators on the team in order to have an additional source of knowledge in education, along with type 2 diabetes education classes. We do about eight hours of classes when someone has a new diagnosis split up over two sessions to really give them all that information. And then one more resource that is really invaluable is the ADA, and American Heart Association, Know Diabetes by Heart™ ask the experts series. It's a great resource for patients to get questions answered on topics commonly faced by people living with type 2 diabetes. I participated as an expert in 2019 and had an excellent feedback for participants on the call where we were actually able just to go through all the questions that individuals had answers those questions. And really the goal of all of this is to make living with diabetes that much easier because we know that diabetes really impacts every part of someone's life from the time, they wake up to the time they go to bed and even at night. And so, we really want to make it as easy as possible to manage, to be able to take those medications and to do all those lifestyle behaviors that we know are so critical to lowering the long-term risk of heart disease.

Jorge Plutzky: 07:35

My take on your question, Hyvelle, first of all is that I love the fact that you opened that up with finding out you have diabetes opens up a new world. And having worked with you before, I know you're a very positive person and so a lot of times that positive attitude isn't necessarily the first reaction patients have when you start talking about more medications. But I think you're exactly right because we now know that there are treatment plans, medications, and also lifestyle changes that protect people from running into the complications of diabetes like heart attacks and strokes. So there's a shared responsibility here, both

for the patient and for the physician, is to make sure that the treatment plan is clear, that the reason for it is well understood and that it bears to come up, a need to be addressed so that we can stick to it and make sure that a patient does well.

Joshua Joseph: 08:31

Dr. Plutzky I 100% agree with your comments there. And I would say that one of the keys I see when we see people in clinic is really trying to build that trusting relationship too so that they know that we care about them, that we want them to do well so that when we're giving advice, it's receptive and create an environment where we can have that trusting relationship. We talk a lot about team-based care and everyone's part of the team, whether that's myself, whether that's a nurse practitioner, whether that's a diabetes educator, whether that's the patient, and really the patient being the all-star on that team. Because you need physicians, and practitioners, and individuals to be able to give medications, but you need the patients to be able to take the medications, as we're talking about here. And so, having a trusting relationship of all members on the team I think is one of the critical concepts of that. And then as you said earlier, Dr. Plutzky, really how do you break down those barriers so that someone who is having issues, how do we help them to overcome those barriers? Whether that be through the healthcare organization or whether that be through community partners. So really trying to overcome some of those barriers.

Jorge Plutzky: 09:42

Yeah, it is a great one. And the fact is that often doctors, very busy days, the next patient, lots to do, maybe they're on duty, inpatient service. They don't always have time to spend as much time as they should. And so, these other resources, whether through organizations or online can be really helpful in terms of filling in the gaps to make sure people are informed.

Joshua Joseph: 10:03

100% agree.

Hyvelle Ferguson: 10:04

Well, my next question, how do we get patients to understand the role of nutrition in getting healthier and making better food choices?

Joshua Joseph: 10:14

I will say that nutrition is probably the most critical aspect to management of diabetes. When I'm in clinic, I say that you can out eat any diabetes regimen that I can give. So, if someone's on insulin and they're on 50 units total per day, you can take in enough carbs to not

have good control even with that 50 units of insulin per day. We really focus that really from the very first visit and every visit that's subsequent to that is how can you make those changes that are right for you? There's obviously a cultural competency lens to that as well. Trying to understand for different racial/ethnic groups, for different geographic groups, what are the eating patterns and what are the things that they can eat that would be healthy for them, but also have a moderate amount of carbohydrates within them?

Joshua Joseph: 11:05

Another aspect of it is that I see a lot of people who are maybe struggling with some other things in their lives, whether that be anywhere on the spectrum from stress all the way to depression, and those kind of mental health disorders can really lead to eating that is subconscious in nature. So, it's not even really conscious eating, it sometimes could be even subconscious eating. So, really trying to think through with the patient, and like I say again, I always go back to this trusted relationship and really team based approach, but really thinking through it with them to think about what are those things they can do and those small steps. A couple of things that we do at Ohio State is that we have individuals schedule with our diabetes educators. We don't only do it during the day, we do it in evenings, we do it on weekends, really trying to find a convenient time for patients. We also really work to identify patients with food insecurity, because individuals who don't have enough food to eat at home often are not able to make the best choices about what foods they eat. We have a food prescription program so that those individuals can get healthier options into their homes for those, like I say, who have food insecurity.

Joshua Joseph: 12:13

Lastly, we have a research program called Cooking Matters for Diabetes, a six-week program that focuses on how to shop for and cook healthy meals. The reason why that is, is we found that a lot of patients that come in really don't know how to cook, and especially don't know how to cook healthy meals. So, we make a healthy meal for six straight weeks together, really coming from the grocery store forward and everything that is needed within that. All of these ways are ways that we're really thinking about how can we focus on patients, focus on individuals, and focus on people to make better food choices? One of the things we talk about is that diabetes is a family disorder. That if we can get buy in from everyone in the family, all the better for the actual patient. And that when we cook healthily, we're actually teaching the next generation about what things they should eat so that they can grow up and lead a long healthy life maybe without diabetes for those that have had diabetes for generations in their family.

Jorge Plutzky: 13:09

I often ask who does the cooking and if it turns out that it's the husband, it's the wife, and it's like, well, the next visit, your wife needs to come and she needs to go to the nutritionist or to get these sources. And then also who does the groceries. Those are going to be key steps. So, I'd love to get Jacqueline involved in this discussion. Jacqueline, can you tell us a little bit about your own story, and I'd love to hear any questions you have.

Jacqueline Alikhaani:

13:35

Wow. This is such a great dialogue. I'm so happy to be a part of this program. I'm a heart patient and when I was first diagnosed it was just an overwhelming experience for me. And what resonates with me is just the fact that awareness and education are really what's helped me a lot. And as a heart patient and a family member of other heart patients and as a caregiver, I really would like to see getting other people in the family involved and going to the doctor's appointments. And I'm wondering, doctors, what kind of approaches in your experience have worked well?

Joshua Joseph: 14:23

Yeah, so thank you so much for that question, Jacqueline. And this is Dr. Joseph. We know that family support really is a key ingredient to improving the lives of those with diabetes and heart disease. And you mentioned all the different family members there. You mentioned the caregivers, you mentioned providers, really trying to think through how can all those folks really come together to improve the lives of someone living with diabetes and heart disease. So, in our diabetes education classes we actually have providers. We have researchers that actually come to the class. And in that class what's great is as we were talking about earlier, it's not only the patient that comes with diabetes, it's their whole family.

Joshua Joseph: 15:06

Sometimes we have everyone from the grandparent down to a two-week-old in the class with a family member, five, six, seven people coming in with one person so that they can support that individual. And so, when the providers come and when the researchers come and when everyone's there, we give these presentations and these presentations are really vast. I mean, they go from things like different types of diets. We had a presentation recently on the ketogenic diet and how that impacts diabetes, all the way to things like mindfulness based cognitive therapy or how can we deal with our mood and our choices and where we are in our own space.

Joshua Joseph: 15:45

And when we do that, we note that it not only helps our patients because they get to hear from experts in a really a low stress environment. But we've also noticed it helps our doctors and it helps our healthcare providers, it helps our researchers, so that we really can be more patient focused and really tailor our care to the needs of our patients and tailor our research to the needs of our patients. So, I would just say in closing on that that really it takes a team. We keep talking and coming back to this concept of a team and everything I see in your question is really about how can we use the team to most effectively care for someone who has diabetes.

Jacqueline Alikhaani:

16:23

Thank you. Thank you so much. That's really good feedback. I really appreciate that. And as an African American and as a woman, I would really like and one of the things I would like to see and my experience is to have more inclusion, more diversity within the community and stakeholder engagement, and also using more existing community resources to help get the word out to patients and family members where they live and work. There are great resources out there, but a lot of people just don't know about them.

Jorge Plutzky: 17:08

Yeah, I think it's a very good point. I will say things have changed and shifted and we've been thinking a lot more in the medical community about going to where people are and not asking them to come to us always. And we are certainly trying to do that and to get into the community. I think that is a place where the internet can be very valuable because it increases dissemination of information, but it often does have to be in the right cultural context. And I know because from my own experiences of in now living in the North, but I spent a lot of time, I grew up in and did all my education in the South and come from Latin background and sort of grew up in a home that had that. Those can be very helpful when I'm trying to connect with someone and understand where they're coming from. And it doesn't mean that we can't reach across those kinds of issues, but we have to ask about them and understand those issues and values. And that often comes just from asking about someone and where they're from and what do they do and who's with them at home and what kinds of foods they eat and what they like to do. And then to build from there because you understand the situation. And I think I'm also happy to see the medical community itself having grown in its diversity in terms of there being many medical schools or more women in the medical school class than men now, which is terrific. And also increasing numbers of different communities in those classes. And now populating among physicians. And so those are steps in the right direction. Also allow us to learn from our peers

who may be from a different background if we're not reaching or connecting with someone.

Joshua Joseph: 18:39

Dr. Plutzky, I 100% agree with that. And you know, I'd say that last point about our peers and kind of diversity in medicine. We focused on a lot at Ohio state. That's been one of our primary aims over the last 10 years is how can we grow diversity in medicine so that when decisions are made, there's a diversity of thought in the room so that we have greater inclusion and diversity in all the things that we do, including probably most importantly patient care. So, when I'm with my colleagues, I talk a lot about the concept of cultural humility and that's really the ability to maintain an interpersonal stance that is really thinking about the other person. So, you're really open to the other person instead of your own experiences. And that's really important in relation to aspects of cultural identity that are most important to the person.

Joshua Joseph: 19:27

And so, I feel like in my clinic when I work with the fellows and the residents and the med students, we have long conversations about this, about how can we grow that provider patient relationship and foster engagement across groups. And those groups could be different socioeconomic status, they could be different racial ethnic groups, could be LGBTQ+ groups. But this has to be a point of emphasis I think, in the healthcare setting. And so, we at Ohio State really make that a point of instance. We also need better tools to promote engagement with community resources. So at Ohio state for instance, I'm the principal investigator of an exercise is medicine program where we're actually referring folks out of our system, out of our four walls and the Ohio Western Medical Center and into the community with our partners, the YMCA, as well as the recreation and parks so that they can do physical activity among folks that they feel comfortable with in the communities in which they live. And we know that physical activity is one of the key cornerstones of both diabetes and heart disease management. So that's kind of an example of how I think that healthcare organizations can work with community partners to really advance the health of not only individual patients, specifically in this context, those with diabetes and heart disease, but also more broadly to help focus on how do we transform communities to be healthier. And a healthier community will help all individuals in that community.

Jacqueline Alikhaani:

20:50

Thank you so much. Those are great, great factors that you pointed out. Very important areas that you touched on. There are so many areas that come into play. So many issues that come into play as we deal with addressing the needs of patients. And a lot of it also centers around

education and training in the educational setting and cross training. Training for patients, training for providers, and how do we help facilitate better training opportunities across the board?

Joshua Joseph: 21:34

And so, I would say that what's you're describing there, Jacqueline, is really the Know Diabetes By Heart™ program where there are training opportunities for providers to learn about all the new medications and how they work and how to help patients to take them and all those processes on that side. But then also a lot of training for patients and for people where they can learn a lot of the same things. What is the link between diabetes and heart disease? How does diabetes lead to heart disease over time? What can I do to control that? What can I do to prevent heart disease? What can I do to better treat heart disease? So, it really has training on both sides. And then I think the cross training opportunities come in when you think about some of the newer programs where the individual organizations can do like the target type two diabetes program, where the goal in the outpatient setting is really to help folks to maintain a really good hemoglobin A1C, to maintain a really good blood pressure and be on the right treatments for cholesterol. And so I think that when those things come together, those are those kind of cross training opportunities.

Jacqueline Alikhaani: 22:44

Thank you so much for that. As a heart patient and as a patient living with diabetes, I volunteer a lot, as much as I can. I try to get involved in my community and I volunteer with different research projects. And I've learned more about the big picture of how changes have to come about to improve clinical care and I know that we can't get the right care without the right design research.

Jorge Plutzky: 23:14

Yeah, I think you're right. Research is essential. We've made so much progress and yet we don't have answers to everything. I think one of the things that's exciting to see is the adaptation that the medical community has made in terms of doing research about what works in terms of the clinics, all the things we've been talking about, about what works in terms of making sure people take their medicines. About what works in terms of educating doctors, what's the impact that has. Something we call clinical effectiveness, research implementation science. You can do the greatest study in the world and show that medicine has benefits, as we've done over the last few decades with just breathtaking advances in terms of the benefits of lowering your LDL with statins. And the impact that can have on people with diabetes is very impressive. With some of the new diabetes medicines that have come out, that have for the first time ever shown a decrease in heart

attacks and strokes that people need to know about. But those don't matter if we don't get them out there and get them used. And so, research is at the core of all of this. Both the AHA and ADA have that as part of their mission. Not only are they educating people about these issues and educating physicians, but they also support research to say, "What don't we know and how can we move things forward?"

Joshua Joseph: 24:33

And for me I spend about 90% of my time as a researcher. And so, as you said, the right designs research is really important to me. And currently I'm working on a couple of different initiatives in that sphere that I think kind of speak to your question. And so, one, we have a center for clinical and translational sciences. It's like a center at Ohio state where it helps us support all the researchers in the work that they're doing. And as part of that, we have a Community Scientist Academy, which is a six-week program for lay members of the community to learn about research, and then being engaged with focus groups and research development right here at the medical center. So, they're actually a part of the team, helping to develop those next advances that will help individuals with diabetes and heart disease. Additionally, participants from this Academy, they sit on our institutional review board, so they make sure what we call the IRB or the Institutional Review Board ... It's the job of that to make sure that all the research that is going on is ethical, and that is not harming people, right? And not harming the participants in the study. So that is one of the elements. Earlier we talked about diversity and inclusion, but that's one of the ways that we're diversifying our institutional review board.

Joshua Joseph: 25:44

So, we hope to really engage individuals in ongoing efforts really across the sphere. Individuals with disabilities, racial ethnic minorities, LGBTQ plus communities. And so, we're doing that through this community scientist Academy, and it's second, we've been working with our local public health agency, the Franklin County Public Health. They have these community health action teams. And these community health action teams are really out in the community, in many different areas around Columbus, Ohio where I practice. And those community health action teams, we actually go present to them and they say, "Okay, Dr. Joseph, that project that you're doing sounds good, but if you did this, this, this and this, it would better help our community." And so, they actually participate in the design of our diabetes and cardiovascular disease research. And I will say that, they are a critical component to making the research better. And so I 100% agree that the right care of individuals really depends on research that is designed appropriately.

Jacqueline Alikhaani:

26:41

Great response, great response. It's really exciting to hear about all of this programming that you have. It's really there to help make health care more patient center and more of what actual patients like myself and other healthcare consumers and family members and caregivers want to see in their health care. So I'm so impressed with all these different programs that you have going in with everything that you said here, and one of the things that we all know about these days is that, there are a lot of different apps and different data being generated from a lot of different resources, and I understand that to help facilitate better, more effective research, we also have this incredible opportunity to make better use of the power of big data and small data generated by patient reported outcomes and all these different kinds of ways. What do you think about that?

Jorge Plutzky:

27:51

I'll chime in here first. It is transforming our world in so many different ways, and it's certainly the case in terms of medicine and science that we're able to capture a lot more information about people and about their outcomes. It allows us to do clinical studies in a different way. It allows us to know patterns of disease of who does better and who does worse with issues like diabetes and heart disease. We can start integrating things like genetics and different markers where we can analyze blood samples, the much greater depth and now look across very big populations of what predicts how someone's going to do and also find trails that can lead to new therapies, because we know we still have needs out there that aren't being completely met by the therapies we have.

Jorge Plutzky:

28:42

So, I think big data is going to drive a lot more insight. We've already seen that with some drugs that have gone from the identification of a genetic variant of someone who had a different gene that protected them against heart disease, to their being a drug that tried to reproduce that benefit for people who didn't have that genetic change, was on the order of 10 years, which is unheard of, when we look at the history of medicine advance that we made before. So I think there'll be more to come and I'd love to get Dr. Joseph's opinion about that because actually endocrinology and diabetes has been in the forefront of ways in which you can individually monitor people and get information that might help you in their treatment plan. Dr. Joseph, you have thoughts about that?

Joshua Joseph:

29:28

Yeah, so we are using continuous glucose monitors more and more every day. And these are devices that go on the skin, they're no bigger

than the size of a quarter and the depth of maybe two quarters. So, they're pretty small devices. If someone was wearing one, unless you knew they are wearing it, you wouldn't even know. And these devices continuously measure the blood sugar throughout the day. And when we use these devices, it dramatically improves blood glucose control because, the individual can see going back to some of our earlier conversations, the individual can see everything for themselves. They can see the impact of a meal, or a specific stressor or exercise. They can see it right on their phone, or on a device. And when they have that level of detail of data, it allows individuals ... What I see is that, they're helpful to me as a provider, to help individuals to make medication changes, but where it really helps, is it helps individuals to make better choices. And it really helps with that lifestyle therapy component. And so, I 100% agree that big data and small data, will really help us to advance care for folks going into the future.

Joshua Joseph: 30:39

We are rapidly moving into a place where we will have an artificial pancreas that someone with diabetes will be able to put on a device, and we're very hopeful that that device will help to control blood sugars throughout the day with very minimal management from the patient perspective. Because that would have a great improvement in quality of life for that person. Not having to do needle sticks, not having to think about what are my carb ratios and what is my sensitivity factor. But having a device to do all of that. And that's what the power of big data and then also small data from the individual perspective does. So, I think you're 100% correct that we really have to harness and utilize the power of that data, to really advance treatment and care, and really improve the quality of individuals lives that are living with diabetes and heart disease.

Jacqueline Alikhaani:

31:26

Thank you. Thank you so much for that. This is such an important area and has so many opportunities and also challenges as well, but it's very encouraging to hear and learn about where we can go with that in the future. So, I'm very excited and feeling very positive about everything that you've said, and I appreciate you sharing that with me. Also, another area that I as a patient have learned that's really important, is engaging and training for hospital systems and staff. Because I'm a patient with several different medical conditions, and oftentimes when sometimes I have an emergency, I end up in the hospital, in the ER being admitted to the hospital. Sometimes that happens more than once and I've heard this same type of thing with other patients and family members, and I think it's really important to engage all systems, all community stakeholders in health care improvement. So how do we get more people from hospital systems and their staff also on board with helping to better address as much as possible, in more and more

dynamic ways, the needs of heart patients and diabetics. Especially since now we know that diabetes and heart disease are related, this is something that I didn't know about before I was diagnosed.

Jorge Plutzky: 33:11

Yeah, it's an important issue. It really comes back to one aspect of it on the patient side is the advocacy and being able to ask the question to your provider and say, "Why are we using this plan and what about these new agents that have benefits? Because I learned about them through resources like Know Diabetes by Heart™. So, there are a variety of ways that I think that can be advanced. I think even some of the things we're talking about in terms of how things have changed here at the Brigham we're very involved with programs in which we use our electronic medical records to find people who may not be optimally treated. And then to reach out to those patients and their doctors, and the patients about the fact that we could see through our electronic medical records that their LDL number wasn't right, and given their clinical history that we also have, so there's going to be more opportunities along those lines and inevitably as a part of that process, we educate the patient and we also educate the doctor, sometimes who may just not have been aware of a change in terms of guidelines and practices or most recent studies or thought the patient was doing something that the patient wasn't doing. So, I think that's an example of how we're going to change the ways in which we engage.

Joshua Joseph: 34:22

So, in central Ohio where I practice, we have a hypertension network that there's about 20 of us that sit on a committee, to really think about blood pressure. And we know that blood pressure is one of the critical components as far as prevention of heart disease among those with diabetes. And so, in that network, one of the things that we monitor, is the Get with The Guidelines program from the American Heart Association around blood pressure control. I think it's just a fantastic example of education of not only individual providers, but also health care organizations. So, we work with these organizations on provide education on things like how do we measure a blood pressure? So, someone has to be seated for five minutes, feet flat on the ground and the blood pressure cuff at the right level, et cetera. And we found that many healthcare organizations were not measuring blood pressure correctly. You run in from the car, you get seated in the chair, and you're thrown right in there to get your blood pressure done. And so, through that program, that Get With The Guidelines program, we've seen over the last four years, large improvements in blood pressure control, in many healthcare organizations in central Ohio. And I'm really excited that on the diabetes side, now there's going to be the target type 2 diabetes ambulatory program. And the goal of that program is really education. Not only of individual providers, but also of healthcare

organizations, so that organizations can make sure they have better Hemoglobin A1c control, make sure that we have patients on statin medications. And make sure that we're controlling high blood pressure. And so, I think really the American Heart Association is really taking the lead in this area, as far as education of not only individual providers, but also health systems, to once again improve the lives of those living with diabetes. So, I think that that's a great example of a program that will have a wonderful benefit for individuals just like yourself, really around the country.

Jorge Plutzky: 36:28

Yeah. There's this partnership between the American Heart Association, the American Diabetes Association, working hand in hand, to try and improve outcomes is exactly that kind of model. Well, I have enjoyed having the chance to talk with both you Hyvelle and you Jacqueline and more lucky to have you as part of the Know Diabetes by Heart™ program. You are truly ambassadors, and I hope you continue to share your own stories and messages and Dr. Joseph I'm very appreciative not only for joining us today, but also all the things you're doing to move things forward, both there in Ohio where people are fortunate enough to work with you and benefit from your expertise, but also nationally and internationally as you bring your research forward about ways to improve things. Thank you all very much and the audience for listening and taking part there's much more available through the Know Diabetes by Heart[™], including upcoming podcasts in that series. I encourage you to seek that out and also to look for the website where a lot of this information exists, and more opportunities for learning and improving outcomes are available. Thank you.

Jacqueline Alikhaani: 37:34

Thank you.

Jorge Plutzky: 37:35

Thank you.

Joshua Joseph: 37:36

Thank you.