



Katie Caviness-Crolley

Welcome to Medicine Made General – a podcast for patients brought to you by the Johns Hopkins Division of General Internal Medicine. I'm Katie Caviness-Crolley and I'm here with my cohost Dr. Bimal Ashar.



Bimal Ashar

Hello, everyone. Welcome to Medicine Made General – Month of November, which as some of you may know, is Diabetes Awareness Month. So, we took this opportunity to talk about one of the most common health conditions we see in primary care and that's type 2 diabetes.

And we're fortunate today because we have one of our esteemed faculty, Dr. Nisa Maruthur, who is a clinician and researcher at Hopkins, who studies type 2 diabetes prevention and treatment. Nisa also leads the Brancati Center for Advancement of Community Care, which is celebrating its 10-year anniversary this year. Nisa, welcome to Medicine Made General.



Nisa Maruthur

Thank you. So happy to be on today.



Katie Caviness-Crolley

Yeah, thanks for joining us. And I mean, in addition to Brancati Center, I mean, Nisa, I was looking at all of the titles that you hold. Medical Director of Green Spring Station, Director of GIM, like Medicine Fellowship, Co-medical Director, the Diabetes Prevention Education Program, the list goes on.

So I just wanted to note those because I think it's important for our listeners to understand that I think we have the best of the best on today to talk about this stuff. So let's start with the basics though when patients hear type 2 diabetes, it can sound. Gary, how do you explain what it actually means and what symptoms people should look out for?



Nisa Maruthur

OK, yeah. So diabetes mellitus is generally a condition of high blood sugar or glucose, and the glucose is elevated in your blood and it affects every organ in your body, pretty much having high sugar. It's type 2 diabetes is the most common type. About 95% of cases are type 2 diabetes.

And so that's really what we're mostly talking about when we talk about diabetes. And it's in particular thought to be caused by two things. One, the inability of the

hormone insulin to get glucose or sugar into your cells. And this is important because every cell in your body needs sugar. And then the other thing that can happen with type 2 diabetes is.



Nisa Maruthur

The reduced ability of your body, your pancreas, to make insulin. Oftentimes with diabetes, there are no symptoms at all, so a lot of people are unaware they have it when they get diagnosed. And if your if your glucoses or sugars are really high, you can't have symptoms.

You can have frequent urination, blurry vision, fatigue, weight loss. Those are some of the most common things that we'll see. And your local does have to be pretty high. So just because you feel fine doesn't mean you don't have diabetes.



Bimal Ashar

Yeah. And so you know Nisa along those lines, you know we in medicine we like to put pre in front of a lot of things. And so people get talk talk about you know having a precancerous condition or having prehypertension, pre hypertension pre and. Prediabetes is something that is getting a lot of press and I wonder, you know, how is that different? And you know, as a as a patient, should I really be concerned that this is serious?



Nisa Maruthur

Yeah. So pre-diabetes is a condition that precedes type 2 diabetes and basically your blood sugar, blood glucose is high, but it's so it's not normal, but it's not yet in the diabetes range. It's serious and important to know about for a few reasons.

One in itself, it raises the risk of nerve damage, kidney disease and cardiovascular disease that we oftentimes see with diabetes. A lot of times people don't know that.



Nisa Maruthur

Two diabetes right now will have diabetes next year and so there's a high risk for you to develop diabetes if you are in the pre stage. The other thing is being in this stage is good to identify because you can prevent type 2 diabetes which I think we'll talk about. So knowing that you're.



Nisa Maruthur

Risk with prediabetes means that you can also do something about it.



Katie Caviness-Crolley

That's helpful. Thank you for making that distinction back to preventing it. I think many people are surprised to learn that type 2 diabetes can often be prevented, delayed or even cured. Is that really true? Can you tell me more about that?



Nisa Maruthur

Yes. Yeah, the answer is yes to all three for preventing diabetes or delaying it. It's really about weight loss if you have weight to lose and then improving your nutrition, eating healthier and increasing physical activity. The diabetes prevention program, we have one that we do through the Brancati Center is a year-long program.



Nisa Maruthur

Program that's focused on diabetes prevention to help people meet those types of goals, and it really has the best evidence behind it to prevent or delay type 2 diabetes. Metformin also is a medication that we oftentimes use to treat diabetes that can be used to prevent diabetes when you have prediabetes as well.

And then the cured part is a little tough. It is true that the definition of cure of diabetes is it's actually pretty easy to meet that criterion and that is to have say you're in, say your blood sugar is high in the diabetes range if you have a normal measure of your glucose or hemoglobin A1C.

For three months and you're not on any medications for diabetes, that's considered remission of diabetes. I personally think that three months is a little bit short. It used to be a year, but the idea is that your blood sugar or blood glucose are controlled or not in the diabetes range and you're not on medication.

The best way to get to that point. So if you got if you get diagnosed with diabetes and are interested in this cure or remission and really want to get to that point, losing 10% or more of your body weight is really that's that's really the best evidence is.

To get to that, but it is very difficult. We'll talk more about behavior change and how difficult it is. So I would say the majority of my patients don't end up in that cured or remission situation, but they can have really good control.

BA Bimal Ashar

Yeah, along along the lines with what we just mentioned, right, is you've done a lot of work, a lot of research on how to best prevent or manage type 2 diabetes. You know, what are some of the steps that you recommend for your patients and others to control?

Prevent or manage diabetes or prediabetes.

 **Nisa Maruthur**

Yeah. So first, well, I'll divide, I'll start with prevention and then go to management cause there are two different things as as many of you will know. So prevention of type 2 diabetes, it's all about lifestyle or health behaviour change. I mean that's what you can modify the, you know, we think type 2 diabetes is probably 50% genetics and 50% your environment and health behaviour, so.

Some people are going to have type 2 diabetes because their genetic risk is high, but the part you can control is is about your health behaviour. So maintaining weight loss if that's needed, healthier nutrition, increasing physical activity and I've I've already said these things.

And most people know that that's what they need to do, but it's really hard to do it. And the diabetes prevention program, which I mentioned is an excellent evidence-based program for this. But something that we've learned over the last several years, even though we have, you know, that program available is most people don't do it and it's not available to everyone.

The other thing that I think is really relevant to diabetes prevention, which is not something that oftentimes patients or or, you know, people can control, is that insurance coverage, while it exists for the DPP, the Diabetes Prevention Program for Medicare and Medicaid in many states.

The coverage isn't enough to have enough programs for everyone who needs them. The other thing that we kind of know about diabetes prevention is, and I mentioned metformin as an option, is that online versions of the diabetes prevention program can be effective too, so can reach more people.

But again, the the coverage of those programs is probably not sufficient to get them to everyone that needs them. For managing diabetes, once you have it, the story has really been about the medications that are relatively new. They're not so new anymore. A lot of them have been around for 10 years or more.

That reduce the risk of cardiovascular disease, kidney disease, heart failure. So those are the GLP-1 receptor agonists and the SGLT2 inhibitors. And then of course everyone knows about the GLP-1 receptor agonists and their effects on weight. So those are the ozempic Manjaro.

Et cetera. Those are game changing medications, but not everyone has access to them. And we know that many people who meet criteria when we look at our own data, if they meet criteria to be on them, they're oftentimes not. But those are some of the kind of the biggest things that, you know, I'm thinking about these days for. Lending and managing diabetes.



Katie Caviness-Crolley

So I mean, just in discussing the biggest barriers that people face, you know, specifically when trying to reverse and prevent diabetes, you know, can we just think about this a little bit more and maybe like a quick list of, you know, what do you think gets in the way?

Most people start to touch on a little bit there in your previous answer.



Nisa Maruthur

Yeah, and I I want to acknowledge again that changing your health behaviours is really, really, really, really hard. I think anyone who's who tries to make changes and again, it's about health behaviours here. I'm talking about healthier nutrition and and increasing physical activity and then weight loss that can come with that.



Nisa Maruthur

But it's the thing about about that, and it's not simple, is that it's really about figuring out how to incorporate those things into your day-to-day life when there's so much stress in everyone's lives and our environment does not support that. We don't live. We live in an environment where being sedentary is, is, is.

A very easy way to be where access to unhealthy food is everywhere and access to healthy food may be very limited in a lot of places. So I'd say to sum up, it's really time and then resources that are major barriers.

Programs like the Diabetes Prevention Program can be helpful. The reason it's a year long is because no one really figures out how to do this in two months or one month, and it's really important to the program really focuses on helping people

make those changes in the context of their own lives. There's not like a one-size-fits-all approach.



Nisa Maruthur

So you know that that those are some of the biggest barriers and how I how I think about addressing them.



Bimal Ashar

So I want to shift gears a little bit, but not not completely. And you know you've you've spent a lot of time thinking about how to get care to the community and meeting people where they are and and as director of the Brancati Center.

I wonder if you could tell us about some of the work that you do with the Brancati Center and how that tries to address some of the things that you just mentioned.



Nisa Maruthur

Yeah, thanks for asking about that. I love talking about the Brancati Center. So back in 2015, when we founded the Johns Hopkins Brancati Center for the Advancement in Community Care, the idea was really to develop and implement new models of care that are outside the walls of the hospital, knowing that most people spend most of their time, thankfully, outside of the hospital and outside.

Outside of the clinic. And so one of our sole goals has really been to bring evidence-based interventions to our community. So for example, when we started our diabetes prevention program, we before the pandemic, we conducted all of our classes at community sites, mainly churches in East Baltimore because this is, you know, the community we serve is it's like.

Bolt more, we've expanded a lot, but doing that, you know, being where people really are instead of making people come to our clinic or you know, come to the clinical setting really helped us get the kind of engagement that you just don't see nationally. That's why I think our program is one of the best.

And it really helps our participants meet their goals as they support each other in their own, their own community. And so that's really the goal of the Brancati Center. The DPP is one thing that we've done, the Diabetes Prevention Program.



Katie Caviness-Crolley

So looking back at the past decade, you know, I would just love to know what are you most proud of from the Center's 1st 10 years?



Nisa Maruthur

Hands down, I'm most proud of the connections that we've made with our community partners, engaging or earning trust and implementing programs that actually change health outcomes. Those things have been the highlight of my career and it was really the goal that we set out.

That was the whole point of the Brancati Center. So it's really been about the people. Thanks.



Katie Caviness-Crolley

That's beautiful. Yeah. So as you look ahead, you know, next 10 years and beyond, what's what's next for the Brancati Center?



Nisa Maruthur

Well, we're in, we're in uncertain times. Things are, we're in a totally different time from when we, you know, back in 2015. One of the things the Brancati Center, we've done a lot of work with diabetes and diabetes prevention, but that's not been our sole goal. It just happens that we've had a lot of expertise around that.



Nisa Maruthur

And our community is very interested in diabetes and preventing diabetes. But right now we're in a situation where the infrastructure that supports basic preventive care is under attack, whether it's insurance coverage or loss of other social benefits. And one of the things that we've learned through doing the diabetes prevention program is how to help our community navigate the existing resources mainly through the work of our excellent community health workers. And to this point, you know, like I said, we've been focused on diabetes, done some work with high blood pressure. But I think what's really next for us is how we're going to help our community navigate the health system in this new and uncertain era.

And which resources are just vanishing. And I think that that's where we have to be. It's like, you know, what is it that our community needs now?



Bimal Ashar

You know, as we kind of look to wrap up, Nisa, I wonder whether there's one or two kind of tidbits or messages you'd like to give to our listeners about diabetes awareness. You know, this being Diabetes Awareness Month, you know anything that?

That you think that they should just focus on.



Nisa Maruthur

Yeah. So I'm a general internist, as you know, and we care about prevention. So I'm a prevention person. So I think the first message would be make sure you've been screened to see if you have prediabetes or diabetes. For the reasons that we've already discussed, if you have prediabetes, think about joining a diabetes prevention program.

So if you have diabetes, making sure that you get all of the preventive care and tests because we can prevent some of the complications. Diabetes is the leading cause of blindness, kidney failure and limb amputation, and doing the preventive testing is really important to avoid those things.



Katie Caviness-Crolley

That's great advice, Nisa. Thank you. And as we wrap up, you know, I just want to say thank you so much for joining us. Congratulations to the Brancati Center. 10 years is no small milestone, so that is fantastic. I just really appreciate you taking the time to speak with us today.



Nisa Maruthur

Thank you. I appreciate you guys asking me.



Bimal Ashar 16:04

And thank everyone for listening to this podcast. To learn more about diabetes prevention in the Brancati Center, please check out the links in our show notes.



Katie Caviness-Crolley

This has been Medicine Made General from GIM at Johns Hopkins. Thank you for tuning in. We hope you found today's conversation helpful. Until next time, stay informed, stay healthy.