

## KDBH Podcast #7: Diabetes Educator

- Nancy D'Hondt: 00:04 Welcome and thank you for joining this podcast on cardiovascular disease and diabetes for healthcare professionals. The goal of this ongoing series is to reduce cardiovascular death and incidence of heart attacks and strokes in people with diabetes and is based on the new collaborative initiative between the American Heart Association and the American Diabetes Association, Know Diabetes by Heart™. This series is brought to you by founding sponsors Boehringer Ingelheim and Eli Lilly and Company Diabetes Alliance, and Novo Nordisk, and national sponsors Sanofi and AstraZeneca.
- Nancy D'Hondt: 00:41 I'm Nancy D'Hondt, a certified diabetes educator and registered pharmacist, and joining me are Dr. Lillian Khor, a cardiologist, and Dr. Jay Shubrook, an osteopathic family physician. We will discuss the benefits found from referring patients to a certified diabetes educator. Let's get started. We know that diabetes educators represent a variety of health disciplines to include nurses, dietitians, pharmacists. There are physical therapists, physicians, mental health specialists and others. And the benefits of diabetes self-management and education are many. Not only to the person with diabetes, but also to healthcare providers like yourselves and to healthcare payers. The intervention has been shown to be cost-effective by reducing hospital admissions and readmissions, as well as estimated lifetime healthcare costs attributed to lower risk of complications. There was a systematic review of the literature done by AADE, or the American Association of Diabetes Educators, and they found that engagement and diabetes education resulted in statistically significant decreases in the A1C levels.
- Nancy D'Hondt: 01:59 Beyond the clinical outcomes, diabetes education has positive effects on psychosocial and behavioral aspects of diabetes care, to include things like reduction in hospital admissions and readmissions, reduction in onset and complications of diabetes, and then we have improved quality of life outcomes, these patient-reported outcomes. These include things like better sleep, less depression, lifestyle behaviors that are in the positive, better eating habits, more regular physical activity. Beyond that, we're looking at things like enhanced self-efficacy and empowerment, improved ability to cope with the daily demands of managing diabetes, and decreased diabetes-related stress.
- Nancy D'Hondt: 02:46 So, it's not just about the numbers: A1C, blood pressure and cholesterol, but those quality of life measures that are important to our patients. Let's take a deeper dive into your experiences in this arena, Drs. Shubrook and Khor. So, within

the healthcare field, there is a growing awareness of the role that self-management plays in improving outcomes for people who have chronic conditions. There's an increasing burden on patients and their caregivers to make decisions that ultimately affect or influence outcomes, and the progression of disease. So within that context of cardiometabolic conditions, these decisions can be demanding and often difficult and overwhelming. Both of you likely have a huge patient load, and have very little time to help your patients navigate this self-management landscape, so how do each of you in your practices utilize the diabetes educator?

- Jay Shubrook: 03:42 That's a great question, so first of all, why would not every person have access to diabetes self-management and support, hearing all those benefits? But saying that, actually quite few primary care providers have access or awareness of the access of diabetes educators for their practice. My situation's unique; I actually have a diabetes educator in my practice, and that person is involved in all aspects of our patients' care, and it makes such a difference because it helps in terms of identifying areas that need to be addressed, assessing how we're doing, helping the patient know are they meeting goals, and then really increasing the touch points with the patients. And when we do that, we actually allow the patients to have better feelings about their plan, and they're more successful when they carry out that plan.
- Lillian Khor: 04:28 Well, with that question on how a diabetes educator could help my practice, I don't actually have a diabetes educator on site in my clinic, and I work in an academic institution with a diabetes and endocrinology center next door. And this center also provides inpatient glucose management, so in my practice, I tend to frequently refer my clinic patients to the Utah Diabetes and Endocrinology Center next door when I have specific concerns about their ability to care for their diabetes. I also oversee the outpatient rehabilitation program at our institution, and in this oversight position, I frequently run into situations with patients who are insulin-dependent, having either hyperglycemia prior to exercise, or hypoglycemia following exercise. And again in this setting, during my meetings with my teams, we will frequently discuss referral to the diabetes center for specific diabetes education to deal with these particular issues.
- Nancy D'Hondt: 05:36 And Dr. Shubrook, you have even published a paper that looks to the time that a person with diabetes spends on their own self-management in their daily routines. Can you comment on that?

- Jay Shubrook: 05:49 Sure, yeah. Certainly diabetes is a condition that's largely self-managed, and we really felt like we were not appreciating the burden of that, so we did a national survey of certified diabetes educators, and asked them essentially to put a time to all the things that they recommend based on their standards for diabetes self-management. And the short of what they found was that if you had type two diabetes as an adult, it was almost three hours per day of diabetes self-care that was needed. And if you had type one, it was more than five hours per day.
- Jay Shubrook: 06:22 So, we know that the burden of self-care is incredibly large, and it's probably unrealistic to do all of those things, but I think it really reminds us that we're going have to do things either segmentally, do it through education, or set individualized goals and let people integrate these things slowly, because it is a burden that I ask, "Can you give me three hours of every day of the rest of your life?" And that's just not realistic if you it that way. We have to find a way to better integrate it into everyday life.
- Nancy D'Hondt: 06:53 Right, and ease that daily burden to the person who has diabetes, and actually their caregivers need that same education, they need that support system. So, you said you had CDEs in your office. Can you tell me about how you utilize them, and how they function?
- Jay Shubrook: 07:08 Yes. Again, we're very lucky that we have a certified diabetes educator in our office, and our certified diabetes educator is a pharmacist. There are many different backgrounds that someone can have as a certified diabetes educator. So, we really feel like we don't want the patient to go it alone. They don't need to do this by themselves; we want to give them support, and least in my office, as much as we want to give them as much time as possible, it's not enough time.
- Jay Shubrook: 07:33 A patient spends an average of one hour per year with me, if they have four visits. There's more than, what, 8,000 hours in a year, so having more touch points, having the diabetes educator pre-screen the visit and say, "Hey, these are the things that we need to work on," or having that person help to implement processes of care, like making sure that we have a statin on board, making sure that they have their immunizations. And then really, most importantly, making sure that the patient and I agree on a plan, like we both understand what we agreed on, and helping that patient understand the disease, understand the needs for taking care of it, and then really how to operationalize the treatment plan.

- Nancy D'Hondt: 08:14 I love that you have that whole impact of the inter-professional team looking at helping the patient, because there are different issues that come up, as you know. There's such a landscape of self-management behaviors that need to be impacted, and so that team and that ongoing support, those touch points, are extremely important, and research has actually supported that the increased number of touch points leads to better outcomes. And speaking of outcomes, how are you guys doing? Have you seen an impact on those HEDIS and Star measures that we are so importantly looking at for payment in this whole value-based care arena?
- Jay Shubrook: 08:54 Yeah, so I guess I would just start with it. For those that are listening, if you don't measure your care, someone else is, and it would be worthwhile for you to know how they're measuring it, and what they're measuring. So when you look at the HEDIS guidelines, there are both outcomes of care that make a difference, as well as processes of care. And where I find that our certified diabetes educator is critically important, is those processes of care.
- Jay Shubrook: 09:16 Even though I do diabetes most of my time, there's still a lot to do and a lot to pay attention to, and our diabetes educator is critically important to make sure that we're doing the right processes, that we're documenting an eye exam, we're documenting an albuminuria check. Have we made sure people had diabetes education at the right times in their disease? Are we looking at patient adherence? Are we looking at blood pressure? For me, documentation of eye exams is one of my challenges.
- Jay Shubrook: 09:44 Having that additional set of eyes on the chart, and interfacing with the patient, really helps. And again, for me, I'm always amazed when our educators will come back and tell us what the patients didn't tell us. So that's really important. Having that extended team really gives the patients more access, but it gives us more access to the patient as well.
- Lillian Khor: 10:04 With regards to making my time with my patients more productive, I have always welcomed the input of a CDE, because the elephant in the room with a lot of my patients is their glycemic control, which interfaces with their level of physical activity, their compliance with their medication, and their diet. The diabetes educator having the time to focus on issues of self-care which are important to the patient allows me as a cardiologist to spend more time on the medications, pathophysiology of their condition, and the logic behind the testing as well as therapeutic management strategy that would

be best for them. I often try to use as much information that we can gain within the electronic medical record to show the patient why they have their condition, and help guide the patient through their process of coming up with a therapeutic plan for themselves, so that they can be as engaged and as empowered as possible in their care.

Nancy D'Hondt: 11:06 That's a great utilization of your CDEs. And Dr. Shubrook to your point, I think the patient feels like they're getting more time with you and your team, so they feel like their satisfaction level with the healthcare delivery and the new healthcare systems is going up. I wanted to look at, you talked about more productivity with your time spent with your patients, so it's more focused and you're able to address the patient needs. Yet, the research shows that only 5% to 7% of patients on Medicare receive diabetes self-management education and support.

Nancy D'Hondt: 11:40 It's a standard of care recognized by the American Diabetes Association and there are even some publications in cohort with the American Diabetes Association, American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics. They published a joint position statement defining four critical times to refer a patient with type 2 for diabetes education to include, one, at the new diagnosis of a patient with type 2, annually for health maintenance and prevention of complications, when new complicating factors influence self-management, and when transitions of care occur. So, Dr. Shubrook, why do you think the uptake of these recommendations is so low and how can we improve that?

Jay Shubrook: 12:28 Yeah, I think it's crazy that we do not have everybody going to diabetes education when they're newly diagnosed. When I talk to patients, I tell them, "Would you let your kid start driving the car without going to driving school?" And they kind of look at me like I'm insane. And I said, "Well, quite honestly they'll figure it out. It might require a few bumps, bruises, a few accidents," but we would not do that because people usually are not prepared for the complexity of driving a car without some training.

Jay Shubrook: 12:54 Well, diabetes is even more complex, and so yes, people can figure out how to manage the disease, but less than 5%, 7% actually get diabetes education, they're really at a handicap. So in my opinion it's the provider's responsibility to endorse and strongly encourage diabetes education at diagnosis.

Jay Shubrook: 13:16 We talked about our team. I relate the diabetes educator's part as part of my team. I need you to see our educator who's going

to really help you get a good plan. So, when I see you again, you've got something that we can really work with. So, I think that introduction is critically important. And, I really like the four times where we recommend as a minimum that people get diabetes education. And of course Medicare pays for this.

- Jay Shubrook: 13:38 I often see someone when they have a major change in their life, the two most glaring examples is when a spouse dies, and then we suddenly uncover that the spouse was the one doing all the self-care. So that person who has diabetes no longer has that support could really flounder. Or when someone has a new complication and doesn't know how to integrate the new complication into the care. A classic example would be maybe CKD. I hear patients who come in and like, "Well, how do I have a diet now that it meets the heart and my diabetes and my kidney?" And I say, "Yes, I know you don't have to be a breatharian," which means you only live on air, "but we really need some expert help to find out what you can eat and what you can do to balance those three diseases."
- Jay Shubrook: 14:17 So, for me, I think the biggest responsibility is on the provider to say, "This is critical to your care." And then we need more diabetes educators and we need access. Primary care providers need to know where they are. But I think our endorsement is the most important step to getting people there.
- Nancy D'Hondt: 14:34 That's great. You know what? I love your driving a car, because if we think about it, driving a car isn't just mechanical. There is a mental piece to that effectively driving because you have to be aware. You have to drive both offensively and defensively and you really have to think about what you're doing. So thanks for bringing that to light. Some people have compared not understanding some of the complexities of diabetes with basically putting a blanket over your dashboard and driving without any barometers. So, I really like that.
- Lillian Khor: 15:07 Yeah. The literature on the percentage of Medicare patients being referred to a CDE is concerning. And I think that it sometimes comes to cardiologists and primary care physicians realizing or understanding what a CDE can offer. The four reasons I refer patients to a CDE are when I feel they need help interpreting their blood glucose trends. I mentioned that I direct a cardiac rehab program and it's often the hyperglycemia before or the hypoglycemia after exercise that challenges patients and actually discourages them from exercise. So in this scenario a referral to a CDE is very empowering for patients, as well as reassuring for us in the cardiac rehab program.

## KDBH Podcast #7: Diabetes Educator

- Lillian Khor: 15:55 Another reason I refer patients is to help with troubleshooting their glucometers or their insulin pumps. Sometimes patients will report to me that they're getting erroneous numbers or they can't figure out how to work the machine. So this is an obvious reason why refer them to a CDE.
- Lillian Khor: 16:11 A third reason is they often need guidance with regards to their diet. A lot of my patients are overweight or obese, and the guidance they receive from the CDE with regards to carb counting, as well as calorie reduction is extremely helpful so that they can make the changes in concert with their changes in insulin administration.
- Lillian Khor: 16:32 Fourthly I also have a lot of patients who have peripheral neuropathy. Often this is tied in with heart failure, peripheral edema, and diabetes, and I always have a concern that their neuropathy or feelings of pain are related to an actual diabetic process that they've had for many years. And having them empowered to self-check and understand their risk of injury and infection through the guidance of a CDE is extremely helpful.
- Nancy D'Hondt: 17:01 Dr. Khor, what you have to say is very important for the cardiologists given the fact that two out of four patients who have diabetes also have underlying cardiovascular disease. And if they do not have active disease, they are at an increased risk for developing those cardiovascular complications. So your referral processes are extremely important to the cardiologist. So thank you for that.
- Nancy D'Hondt: 17:26 Let's move on. I'm going to talk a little bit about the future diabetes educator because American Association of Diabetes Educators has really started to take a look at the future educator and how they can fit into the future healthcare models. We've been pegged oftentimes as just being glycemic managers. But we have more than a singular focus. And as you know, patients with diabetes have or are at increased risk for cardiovascular disease, and our focus as educators is not just on a single glucose reading or how to manage glucose, but addresses all the underlying psychosocial, behavioral, and clinical aspects, and we really look at holistic patient care to include all of the comorbidities and chronic conditions that are associated with or run concurrently. So, that means we have to touch on several different aspects of care and understand all of the disease states that patients are facing with their diabetes.
- Nancy D'Hondt: 18:24 So, knowing this, what would you suggest to our listeners about this expanding role of the diabetes educator?

- Jay Shubrook: 18:31 Yeah, boy, that's an important and complex question and it has multiple components. I would say that first of all, for the primary care providers, diabetes educators can lighten your load. If you have a good communication stream, you're working together, you have shared responsibility, they can really help you and help your patients. And that can mean something in terms of improved patient care, but it can also mean improved scores on your quality measures. So I think we need to find a way where we're communicating regularly just like we would communicate with a cardiologist or a nephrologist to say, "Hey, we're working together to the same goal," and that communication would be the first step.
- Jay Shubrook: 19:10 I guess the second step is to acknowledge that this is too big to go it alone as I mentioned earlier. So, if I only get an hour a year with my patients, I'm going to have to find ways to get involved in their care with our team. And that team might be fluid. It might be people in my office. It might be people in the community. It might be community health workers. It might even be lay leaders. And so, I think as healthcare changes, we're going to have to adjust with it. And, many of these changes, while they may seem threatening, are actually ways to make it easier for care.
- Lillian Khor: 19:43 So, with regards to the cardiovascular outcomes following hyperglycemia or hypoglycemia, I tend to like to focus on the concerns we have particularly with regards to hypoglycemia and the tachycardic response they might get with this, particularly with how it relates to exercise and the challenges that fear with exercise and hypoglycemia can engender. And, so one of my dreams in the future really would be to have a certified diabetes educator within our cardiac rehab program to help be present right then and there if and when it happens so that patients can understand the importance of their diet, their timing of their insulin with regards to how they can safely exercise.
- Lillian Khor: 20:29 With regards to hyperglycemia which is a slightly less fear inducing in my patients in cardiac rehab, we do have guidelines as to when it is safe to exercise patients simply because of the concern of dehydration in the setting of their multiple cardiovascular medications. When patients have a glucose level above 300 and if they appear in our cardiac rehab gym, with these numbers on a recurring basis, it becomes a challenge for us because we don't want to discourage them from exercising, and we definitely don't want to push them away when they've made the effort to come the gym.



- Lillian Khor: 21:05 However, we have guidelines in how and at what levels it is safe for patients to exercise to avoid dehydration and side effects from their concomitant medications. So in general what we tend to do is if the patient comes in, hyperglycemic at levels over 300, we will ask them to review their diet and to just take a break from exercise that day using the opportunity to educate them perhaps about why their levels are high that day.
- Lillian Khor: 21:32 Again, although it is important to have patients exercise, it is also important for patients to exercise knowing where they are with regards to the glycemic levels. This is why we encourage patients to check their levels before they initiate exercise in our gym.
- Nancy D'Hondt: 21:47 Thank you. That's great. The other piece of it is that the future educator's really looking at technology and becoming an expert in integration of technology. So you and I know that we have technology that affects our practices. In the patient world technology
- Nancy D'Hondt: 22:00 has a huge impact because we have not only new medications, but we have new processes and procedures for utilizing technology to better self-manage. And understanding these technologies is important not just from a patient perspective, because it can be very complex. What do I do? How do I use the information I receive? But also then as a healthcare provider, how do I integrate that information? Not only the teaching mode, but the integration of that information that the patient is giving me to help design a better care plan and integrate patients' needs and wishes into that care plan. You want to comment on that?
- Jay Shubrook: 22:43 Sure. So first of all, most private care providers don't use technology in the care of the patient. So I think our first step is really to educate. There is technology that helps both us and help our patients manage their diabetes. I think that's one great interface where diabetes educators who might be more familiar with some of these technologies could really help the patient prepare for a visit by helping them download their meter, download their CGM, and also could really be a resource. For example, I think many providers would say, "I could send a patient to a diabetes educator to learn how to use a meter and how to take a shot." We could also interface with CGM downloading reports, even interpreting those reports. And so again, I think it's time for us to let the tools help us, not threaten us.

KDBH Podcast #7: Diabetes Educator

- Nancy D'Hondt: 23:28 Yeah, I think beyond that too, even the patient understanding how to read their own blood glucose numbers and be able to troubleshoot and respond to them and learn more about how to self-manage more successfully.
- Jay Shubrook: 23:43 I think you hit a really important point because after all, diabetes is self-managed, so the ultimate goal is for them to be able to act upon their information and take care of themselves.
- Nancy D'Hondt: 23:52 Right. And you know, that's part of the quadruple aim is to improve on health care experience, save on costs, and I think the other part of this, is physicians and care providers forget about that whole piece of physician burnout, which has really risen to the top and is part of that quadruple aim. We have to better utilize the physicians to deliver care rather than to work on all of the numbers and the integration. They need a team effort so that they can deliver the care that the patient is looking for. Have you had more success in that realm?
- Jay Shubrook: 24:26 We have, you know, I work in a FQHC, so we have a team that's built in, in our environment. And we really utilize all members of our team, so we have medical assistants, we have nurse managers, we have case managers, we have certified diabetes educators, we have licensed social workers. And because we're all housed under a single roof, that has really made, it so much better for us, but even better for the patient because they don't go to ten places. They can get all of this in one place, and I think in many respects, this is a model that really can excel in chronic disease management. We like it and it improves our collaborative effort and I think it improves patient care.
- Nancy D'Hondt: 25:04 Yeah, I think it has definitely improved on de-fragmentizing care and the care approach so that patients feel like they're more engaged and more satisfied with the experience. I want to ask you a question about the ever present Dr. Google. So more and more patients are getting information off of the internet. They're learning from internet sources. Some of them are reliable, some not so much. Not only do patients go into data overload because they don't know what is quality information and what is not, but also some of the information that comes to us. So how have you integrated the educator in this whole patient centered decision-making process to help them navigate online resources that are quality resources and integrate that into the health experience within your offices?
- Jay Shubrook: 25:55 Yes, I think that varies a little bit per patient. I think some patients will constantly bring outside information and so each of our touch point people can help with that. If there's someone

who is starting a new regimen, I will often just say, "Here are the topics I'd like you to learn about before you meet with our educator," and they might bring that material plus new stuff in at that time to that visit. Often when you're bringing outside information into the visit, it's going to take longer and at least in our practice, our diabetes educator has one of the longest appointment times so that they really could spend meaningful time talking about why a source of data is good or not good. So we rely on our entire team with that, but it is an opportune place to have a good discussion about outside information.

Nancy D'Hondt: 26:38 So let's go to the Doctor Google and all of this information and misinformation because that affects cardiovascular outcomes as well. Both diabetes and cardiovascular disease. These are chronic conditions, so given that this underlying self-management component is so important to successful outcomes and better quality of life for our patients, how do you integrate addressing some of the good information and the misinformation that they received on the internet?

Lillian Khor: 27:09 Yeah, that's a tough question. Doctor Google has a lot to offer, but yes, the information load can be misinformation. What I do, is I try to emphasize with all the patients how they can get a standardized and reliable information from their local CDE. In our case, again, I try to refer them to our diabetes and endocrinology center. I also try to refer them to sites like the American Diabetes Association that are going to be peer reviewed and standard and obviously evidenced based, but I also try not to discourage their interest in Doctor Google. I always feel that it's important to encourage and endorse their interest and engagement in information and try to use my role as more to guide them as to where their sources of information may be most reliable.

Lillian Khor: 27:59 We are fortunate to have an electronic medical record system with an access point in a system called My Chart for patients. And through this we are able to provide our patients with evidence based information and education pieces. And it's through this that I'll often send my patients short kind of, newsletter type information or infomercials about their condition that they can look into further, which often have links that are more evidence based than just Doctor Google itself.

Nancy D'Hondt: 28:28 And one final point I want to ask you, so we know that several different members of the healthcare team and community, as you mentioned, contribute to patient education and ongoing support. And it's important for healthcare providers in their practice settings to have resources and a systematic referral

process if they don't engage with the CDE within their office or a diabetes educator than a referral process to a program in a consistent manner so that these patients have access. So what suggestions or processes have you initiated that you could share with our listeners today?

- Jay Shubrook: 29:05 So at first, I think you have to know what resources are available in your community, because they're different in every community. As I mentioned early on, each diabetes educator might have a different background. So you know, we have the luxury of both a dietitian certified diabetes educator and a pharmacist certified diabetes educator. And both are excellent components of our team, but they provide somewhat different information sometimes. So you know, you'll need to find what's available in your community. And then I think it's actually really valuable to have a conversation with that resource to say what's their approach to diabetes? And they need to know your approach because often this team member can really reinforce some of the things that you mentioned. But if they don't know your unique approach, it's going to be harder to do that. And the last thing you want to do is have conflicting information. So I think, find your resources, talk to your resources in advance, find out what they can do and then have an ongoing discussion. And I think that's really the best way to provide care for both the patients and the practice.
- Nancy D'Hondt: 30:04 Awesome. And if they need any direction, I would refer them to the AADE website because they do have Find An Educator In Your Area. So if they're looking for a connection, that might be one resource. I'm so glad that you joined us today, both you and Dr. Khor, and I thank you and thank all of our listeners for joining us today and ask you stay tuned for some upcoming podcasts.
- Lillian Khor: 30:30 Thank you.
- Jay Shubrook: 30:31 It was nice speaking with you both.