Host:	00:04	Welcome and thank you for joining us as we launch and new and informative podcast series on cardiovascular disease and diabetes for healthcare professionals. This series is being developed by the American Heart Association and the American Diabetes Association with the goal of reducing cardiovascular death and incidence of heart attacks and strokes in people with diabetes. I'd like to introduce Dr. Eduardo Sanchez, Chief Medical Officer for Prevention and Chief of the Center For Health Metrics and Evaluation from the American Heart Association and Dr. William Cefalu, Chief Scientific Medical and Mission Officer from the American Diabetes Association, who will kick off this podcast series based on the new collaborative initiative between the American Heart Association and the American Diabetes Association, Know Diabetes By Heart. The American Heart Association and the American Diabetes Association's Know Diabetes by Heart Professional Education Podcast Series is brought to you by founding sponsors, Boehringer Ingelheim and Eli Lilly and Company Diabetes Alliance and Novo Nordisk.
Eduardo Sanchez:	01:27	Thank you all for joining us today. I'm Eduardo Sanchez and Will Cefalu and I are going to chat about this awesome initiative that we're involved with. Will, why don't you explain it and then we'll just go back and forth.

Will Cefalu:	01:39	Okay, thank you Eduardo. Yeah, I am actually quite honored as Chief Scientific Medical and Mission Officer to represent the American Diabetes Association in partnership with the American Heart Association for this diabetes and cardiovascular disease initiative. As you know, the goal is really to help people with type 2 diabetes reduce their risk of disability and death due to cardiovascular events such as heart attacks and strokes. It's really designed to improve patients' public awareness and understanding about the link between type 2 and cardiovascular disease. It's designed to educate patients. It's designed to train healthcare providers and support quality improvement, all in the goal to ultimately reduce events rates from cardiovascular disease. This is a multi-year initiative and many platforms are involved, but the bottom line is we do know that the number one killer of those with diabetes is going to be cardiovascular events and this program, in partnership with our sponsors, Novo and BI and Lilly is designed to put together this collaboration so that we can educate patients and increase awareness toward that goal of reducing cardiovascular disease. Eduardo, would you like to add anything to that?

Eduardo Sanchez:	02:58	Sure, I think it's safe to say that our two organizations are each committed to the things that we do, ADA, the treatment of people with diabetes, type 1, type 2 and other forms of diabetes and the American Heart Association is dedicated to addressing the risk factors associated with cardiovascular disease and stroke with reducing death from cardiovascular disease and stroke and here recently with promoting ideal cardiovascular health. But, having said all that, the Venn diagram, if you will, of AHA and ADA has a group of people inside of it that we both feel it's critically important to double down and focus more attention than we have. We know that, as Will said, people with type 2 diabetes are at increased risk and the number one cause of death among people with type 2 diabetes, cardiovascular disease and stroke, but what maybe we don't know and share enough is that the degree to which we manage blood glucose, blood pressure and cholesterol is the degree to which we can dramatically reduce the risk of cardiovascular disease and stroke in persons with type 2 diabetes.
Eduardo Sanchez:	04:17	When you add to that, the advent of new medications that have been demonstrated to be cardio protective, that is, those people on those drugs who have type 2 diabetes to control their blood glucose, see a reduction in major cardiovascular events. That includes heart attacks, stroke, heart failure, all the things you don't want to have. So, there's no better time than now for the American Heart Association and the American Diabetes Association to be working together to deliver the message to patients with type 2 diabetes that getting cardiovascular disease risk factors under control is very important and getting the message to providers that paying attention to all 3 and making evidence-based algorithm-based decisions about medications will result in a dramatic reduction in the likelihood that their patients will develop cardiovascular disease, advanced cardiovascular disease or death from cardiovascular disease.
Will Cefalu:	05:21	I appreciate that, Eduardo. I think the most important thing and really, I guess a cornerstone of this initiative, is the science behind it and you alluded to that, but it's really the science that's driving this initiative. Again, the studies ... the cardiovascular outcome studies over the many past years have demonstrated that we have agents now, that not only improve glucose control, but can reduce cardiovascular mortality and many of our treatment algorithms are changing to reflect that direction. The other important thing about this initiative is again when we look at the number of individuals in this country that are living with diabetes today, over 30 million. And again, as was stated, they are twice as likely to die from a cardiovascular

		event, the leading cause of death in this population. So, the idea is to educate regarding this link between cardiovascular disease and diabetes and hopefully begin to shift this toward where there is increased public awareness and better treatment. The other important factor now is that someone with diabetes, although having twice the risk, is expected to have a life expectancy about 12 years shorter than someone without diabetes due to cardiovascular disease.
Will Cefalu:	06:35	So, if anything, this initiative is designed to help those people live longer and happier lives and reduce the incidence and that is, again, a fact that I think most of our patients don't appreciate, the fact that most providers don't know the proper way to treat or advise on cardiovascular disease. So, again, about 2/3 of people living with diabetes say they're at increased risk for cardiovascular disease so they recognize that, but less than half say they've actually discussed this risk with a healthcare provider. So, really, the goal of this initiative is to reverse that and to change that and to get patients and physicians talking about this increased risk and actually putting in management strategies to address it.
Eduardo Sanchez:	07:21	Well, Will, those are such important things to highlight. I think another really important point, just a reminder to our clinician brethren is that people don't walk around with just one thing and when we look at the numbers or the percentages of people who, as an example, have diabetes and hypertension, that represents about 10% of the adult population in the United States and when we look at the percentage of people who have hypertension, diabetes and high cholesterol, that represents about 6% of the population. Now, admittedly, this initiative is focused first on people with type 2 diabetes, but let's remind all of us that of adulthood diabetes, 90 plus percent have type 2 diabetes. The important thing there is that managing those various contributing concurrent diseases is critically important.
Eduardo Sanchez:	08:19	Some data that comes from a diabetes care paper just a couple of years ago, reminds us that the degrees to which we control the risk factors, or the conditions involved, blood glucose, blood pressure, blood cholesterol, if any one of the three are controlled, cardiovascular disease event risk is lowered by 36%. Any two of the three, that risk reduction goes to 52% and if you are controlling all three of three, that risk reduction goes to 62%. So, it is critically important that we manage blood glucose, blood pressure and lipids in our patients. So, Will, would you mind sharing with me, so I can hear it again and just with the folks listening, the new algorithm, which will provide

		guidance to individuals taking care of people with type 2 diabetes so that in addition to managing blood pressure and blood cholesterol and blood glucose, choice of any hyperglycemic agents is now informed by a new algorithm.
Will Cefalu:	09:29	Absolutely. And actually, the newer algorithm was released at the European Association for the study of diabetes on October 5th. About every three years, the ADA and the EASD have a consensus conference and statement on treatment of hyperglycemia and this past year, it was really a paradigm change, again based on the direction of the recommendations and based on the evidence over the past few years. About a year ago in our standards of care, we suggested that treatment of individuals with type 2 diabetes, if they're not at goal, obviously should be on metformin, but that was the first time the ADA actually recommended that if there is underlying atherosclerotic disease, that you consider one of two classes of compounds, an SGLT-2 inhibitor or a receptor agonist, based on the evidence to date.
Will Cefalu:	10:27	Well, the new consensus statement actually takes it a step further. What I really like about the consensus statement is first and foremost, is this is a patient-centered approach. The goal is not only to reduce complications, complications being small vessel disease, that's eye disease, kidney disease and nerve disease, but also macrovascular complications, the heart disease and the stroke. So, the first order of business is to actually have that discussion with the patient, assess underlying cardiovascular risk factors, assess psychosocial conditions, age, gender and, at that particular point, there should be shared decision-making with the patient on what's the best treatment option for that particular patient.
Will Cefalu:	11:14	Now, if the patient is not at goal and a lifestyle is the cornerstone of treatment, metformin is added, but the patient who is not at goal, then it's further stratified. Further stratified if atherosclerotic cardiovascular disease predominates or whether heart failure and chronic kidney disease predominates, again, you would choose either a receptor agonist in that class or of the class of SGLT-2 inhibitors. So, the decision point is made early on in talking to the patient, whether one of these new agents is going to be utilized.
Will Cefalu:	11:49	Another important thing is the decision on hypoglycemia that reduces quality of life. You will have options as to which classes are used and recommended to reduce hypoglycemia. Another recommendation may be if it's important about weight gain,

there will be options suggested for weight gain or, for that matter, if you're in resource-constrained areas, options for glucose improvement, based on resource constrained areas. So, the algorithm basically starts stratifying treatment based on the underlying conditions and the preferences and a choice between the patient and the physician, so really, this is a paradigm change and I really like the fact that early on in discussions with the patient, there's a discussion cardiovascular disease, cardiovascular risk and talking about all the risk factors that you alluded to, Eduardo. Blood pressure, weight and have all those factors accounted for in a treatment strategy for type 2 diabetes. Again, type 2 diabetes and cardiovascular disease is linked. It's time that we heighten awareness for the patients, it's time that we provide the tools for the provider because this, again, is the paradigm change as far as treatment strategies moving forward.

Eduardo Sanchez: 13:08 So, Will, one of the things you mentioned a moment ago was about lifestyle being the cornerstone. I mean, I think it's worth us reminding ourselves that lifestyle is critically important across the 3 conditions that we've been talking about. Type 2 diabetes, high blood pressure, dyslipidemia and in all of those instances, it is fundamentally about eating more healthfully and engaging in more physical activity than probably one is currently engaged in. And both of those things contribute to weight maintenance and maybe even weight loss, when that's appropriate, and in some instances, there is some specific instruction given to what one should eat and what one shouldn't eat. But, let's not forget that how you eat and what you eat and how much you eat affects every one of these conditions and affects even how well your medications are going to work and affects your weight and how physically active you are is also one of the factors that we want to make sure that we are highlighting as a cardiovascular risk factor modification on the one hand or type 2 diabetes management on the other hand. It's two sides of the same coin. A very, very important part of the treatment regimen.

Eduardo Sanchez: 14:27 That extends, then, to another thing that we've talked about in our partnership and that is a team-based approach to care. So, Will and I do not believe that all of this can or should fall on the shoulders of the physician or the other non-physician provider, who is doing the direct patient care, that this will take a team-based approach. It may and should involve diabetes educators, dietitians, perhaps even exercise trainers, working with pharmacists and pharmacies. So, really a systems approach to accomplishing the goal, the ultimate goal, which is saving lives

		by managing diabetes and cardiovascular disease risk to the maximum.
Will Cefalu:	15:17	So, Eduardo, you make a very good point, as far as the focus of this initiative is to address at the primary care level as we recognize most of diabetes is going to be treated at the primary care level and your point is very well-taken, that we're not talking about just primary care providers, but allied health is incredibly important in this fight. When we talk about certified nurse educators, physician's assistant, nurse practitioners, etc., and providing them the tools they need first and foremost, to recognize the risk is going to be incredibly important, but equally important is what management strategy needs to be put in place and how you discuss this with your patient and bring it up with your patient is going to be incredibly important. We know that primary care providers are incredibly busy, so it's going to be very important that we provide the tools appropriate at that level, so that they can assess cardiovascular risk, discuss it with the patient and then put in place a management strategy.
Eduardo Sanchez:	16:22	Will, that's perfect. Our initiative has four pathways. One is to raise awareness among the general population that type 2 diabetes and cardiovascular disease go together, and people should be paying attention to both. And that's the general population. It's not just people with type 2 diabetes, but people who know people with type 2 diabetes, which is probably the entire adult population. The second pathway is raising awareness among patients, themselves. That yes, if you have type 2 diabetes, managing diabetes is critically important, but as we've said over and over, lifestyle is important, managing your blood pressure is important, managing your cholesterol, your lipids, is also important. The third pathway is providers, themselves, to raise awareness again with this, perhaps, new knowledge to them or a reminder to them that managing all three well equals much better outcomes for those patients.
Eduardo Sanchez:	17:24	And then the fourth pathway is really part of what you were talking about before, Will, which is the pathway that is about health systems. Those are the practices or the multiple practices or the health systems that the providers are working in because what we know is that process changes and helping not only by providing tools, but by providing new pathways, new processes to get things done that might offload some of the work from provider to other members of the team that might streamline the process for patients and the team can result in

		more effective care and better outcomes. So, it's all four of those things.
Will Cefalu:	18:12	So, one of the questions that we've been asked, Eduardo, and I think you and I have been present when this has been asked, it's the question of, okay, why now? Why has the American Diabetes Association and American Heart Association come together at this time? And I think we recognize that the problem is just too big for each one of us to do it alone. I think we both recognize from the work that's been done at the American Heart and you've mentioned the control of risk factors and what that has done and what the American Diabetes has proposed as far as management for diabetes in general. But, again, as a medical community, we've made great strides in reducing the rate of complications, be it a large vessel or small vessel disease that we've seen the medical advances over the last couple of years. Even though we have the medical advances and dramatic reductions in complication rates, when you look at mortality due to cardiovascular disease, either in an individual with type 1 or an individual with type 2, compared to individuals that do not have diabetes, there is still increased residual risk.
Will Cefalu:	19:26	So, even today, you look at the increased risk between an individual with diabetes and someone who doesn't have diabetes, we've stated again at least twice the risk and maybe a reduction of 12 years of quality life. But, given the fact that there's so many more individuals with diabetes in this country and around the world, despite the reduction in rate of complications, the overall burden is tremendous.
Eduardo Sanchez:	19:53	I think it's fair to say that this initiative, Know Diabetes By Heart, is the first step in our finding the opportunities where working together makes really good sense. There is the one out of three adults who have pre-diabetes, who are on the path to developing type 2 diabetes, who are probably on the path to have high blood pressure and have dyslipidemia and be defined as people with metabolic syndrome and, to your point, if as we go forward with this initiative, we don't find the way over time to expand our initiative to pre-diabetes and I would love to see us talking about persons with type 1 diabetes as well because those risk factor realities are true for people with type 1 diabetes, we won't be fulfilling the promise that our working together might be able to achieve and address.
Eduardo Sanchez:	20:54	One of my favorite quotes, it's an African proverb that says, "If you want to go fast, go alone. If you want to go far, go

		together." We want to go far and actually; the American Heart Association and the American Diabetes Association are but two of the organizations that will be working on this. We've reached out and had conversations with some other organizations that are interested in advocating for patients or advocating for reducing the burden of diseases and the outcomes of those diseases. Those strategic alliances will be pursued. They will be a part of what we're doing.
Eduardo Sanchez:	21:33	I do want to add one more thing. As we talk about reducing mortality among people with type 2 diabetes, particularly reducing cardiovascular disease mortality among people with type 2 diabetes and we look at, at least one study that looked at the percent of persons who were at target levels for any one, two or all three of blood pressure control, LDL control, that would be cholesterol or hemoglobin A1c, blood glucose, hear the numbers. They're pretty striking. And this is from a study published in Diabetes Care in 2016. Any one of the three, 41% of patients were there. Any two of the three, that number goes down to 26.5%, roughly one quarter. But, all three of three, only 7.2%.
Eduardo Sanchez:	22:29	Now, glass half empty would say that's awful. Glass half full would say there's opportunity to do a much better job. We can improve on the any one of three. We can definitely improve on any two of three and we must, we must improve on three of three. We're below 10% of persons with type 2 diabetes, at least in this study, looking at three different pretty large cohorts of individuals, only less than 10% have blood pressure, cholesterol and glucose hemoglobin A1c actually at target levels. There is real opportunity to make improvements, and I think that's part of the why now? We've been doing this independently or as separate organizations and while things are better, there's no doubt things are better than they've been, there is so much opportunity to do even better than we've done, that we've come together and said let's partner up.
Will Cefalu:	23:32	I think what I'm most excited about is leveraging the strength of both organizations and actually the architecture that we've put in place. As we stated earlier, the Consumer Activation Campaign that is going to increase awareness and is going to be one of the first things we roll out, but providing patient resources, professional resources and quality improvement is really going to get us where we need to be, but down the road we have an architecture in place that, hopefully, is going to bring in other partners and strategic alliances to help us achieve our goals, again, as far as what we're going to do for policy, so

		the sky is unlimited as far as what we can do with this initiative over three years.
Will Cefalu:	24:15	We've only been together just a few short months and have already put together, I think, an exciting program, so I'm really ready to get started and, again, for us, we know that we're going to be launching this in November and we'll anxiously await what the outcomes would be, but I think this is an exciting time that the leading organization for cardiovascular disease and the leading organization for diabetes, partner and show the importance of the link between diabetes and cardiovascular disease.
Eduardo Sanchez:	24:44	Well said, Will.
Speaker 1:	24:49	Thank you very much for listening and stay tuned for upcoming podcasts.