



VOLUME 3 - ISSUE 6

LISTEN TO PODCAST

DOWNLOAD PODCAST

PHYSICIAN POST-TEST

NURSE POST-TEST

Clinical Insights: Management of Type 2 Diabetes in Older Adults

- Summarize appropriate screening related to both chronic diabetes complications as well as general health for older adults with diabetes.
Discuss medication management in older adults with multiple comorbidities, including renal insufficiency.
Describe goals of care and medication management for patients with type 2 diabetes in nursing homes, as well as at the end of life.

Guest Faculty Disclosure

Dr. Wallia has indicated that she has received honoraria from Lexicon, has consulted for Glytech, and has served as a coinvestigator on a research study for Eli Lilly and Company.

Dr. Karam has indicated that she has no financial interests or relationships with a commercial entity whose products or services are relevant to the content of this presentation.

Unlabeled/Unapproved Uses

Both our guests have indicated that there will be no references to unlabeled or unapproved uses of drugs or products in their discussion.

MEET THE AUTHORS



Amisha Wallia, MD, MHS
Assistant Professor, Division of Endocrinology, Metabolism, and Molecular Medicine
Feinberg School of Medicine
Chicago, IL



Susan Karam, MD
Endocrine Fellow, Department of Endocrinology, Metabolism and Molecular Medicine
McGaw Medical Center of Northwestern University
Chicago, IL

Release Date: April 06, 2018

Expiration Date: April 05, 2020

LISTEN TO PODCAST NOW

DOWNLOAD PODCAST

SUBSCRIBE NOW

PHYSICIAN POST-TEST

NURSE POST-TEST

OTHER RESOURCES

Download the podcast transcript

Go to the companion newsletter

NEWSLETTER ARCHIVE

SHARE WITH A COLLEAGUE

PROGRAM DIRECTORS

Nestoras Mathioudakis, MD, MHS
Assistant Professor of Medicine
Clinical Director, Endocrinology, Diabetes & Metabolism
Johns Hopkins University School of Medicine
Baltimore, Maryland

Kathleen Dungan, MD, MPH
Associate Professor
Associate Division Director for Clinical Services
Division of Endocrinology, Diabetes and Metabolism
The Ohio State University
Columbus, Ohio

**Susan Porter, MSN, CRNP, CDE**

Clinical Nurse Practitioner and Certified Diabetes Educator  
University of Maryland, St. Joseph Medical Group Owings  
Mills Internal Medicine  
Baltimore, Maryland

**Podcast Transcript**

**BOB BUSKER:** Hello and welcome — to this eDiabetes Review podcast.

I'm Bob Busker, managing editor of eDiabetes Review. With us today, from the Northwestern University Feinberg School of Medicine in Chicago, are Dr. Amisha Wallia, assistant professor of medicine, and Dr. Susan Karam, an endocrinology fellow. Our topic today is a follow-up to their recent eDiabetes Review Newsletter issue on Management of Type 2 Diabetes in Older Adults.

eDiabetes Review is jointly presented by the Johns Hopkins University School of Medicine and the Institute for Johns Hopkins Nursing. This program is supported by educational grants from Merck & Co., Inc.; NovoNordisk; and Sanofi.

Learning objectives for this audio program include:

- Summarize appropriate screening related to both chronic diabetes complications as well as general health for older adults with diabetes.
- Discuss medication management in older adults with multiple comorbidities, including renal insufficiency.
- Describe goals of care and medication management for patients with type 2 diabetes in nursing homes, as well as at the end of life.

Dr. Wallia has indicated that she has received honoraria from Lexicon, has consulted for Glytech, and has served as a coinvestigator on a research study for Eli Lilly and Company. Dr. Karam has indicated that she has no financial interests or relationships with a commercial entity whose products or services are relevant to the content of this presentation. Both our guests have indicated that there will be no references to unlabeled or unapproved uses of drugs or products in their discussion.

**Dr. Wallia, Dr. Karam — thank you for joining us today.**

DR. WALLIA: Thank you for having me.

DR. KARAM: I'm glad to be here.

**MR. BUSKER:** In your newsletter issue, you reviewed recent findings about individualizing glycemic targets in elderly patients and the use of both older and newer therapies to provide efficacy while minimizing the risk of hypoglycemia. I'd like to focus on translating some of that knowledge into clinical practice. So, Dr. Karam, please start with a patient scenario.

DR. KARAM: Our first patient today is a 91-year-old male who has type 2 diabetes that was diagnosed 12 years ago, who's coming into clinic with his wife. We're meeting him for the first time as he's switching his care providers. His blood pressure is 129/83 on losartan 100 mg daily. He reports some numbness and tingling in his feet, and on exam vibratory sensation is mildly decreased. Microalbumin-to-creatinine ratio is negative and a recent eye exam was without retinopathy. A recent HbA1c was 7.6%.

His current diabetes regimen includes nightly glargine 18 units, sitagliptin 100 mg daily, and 5 units of rapid acting insulin that he takes with his largest meal. He also uses a sliding scale when glucose is greater than 150. He reports few glucoses less than 70 and is also taking aspirin 81 mg daily and a statin.

**MR. BUSKER:** The first time you meet a new patient like this, Dr. Karam, what are your priorities? What do you most need to know about a new patient?

DR. KARAM: When I meet a patient like this I first like to gather information on his diabetes history including how long he's had diabetes, how well it's been controlled in the past, any known complications, his current antihyperglycemic regimen, whether he's having hypoglycemia and if present its severity, as well as any known comorbidities. Using all that information I then make decisions about what age-appropriate screening he should have and what his blood sugar targets should be, as well as any changes to his treatment that are needed.

Finally, I'd like to emphasize that screening is a particularly important part of the visit when meeting a patient like this,

because the results of the screening can affect our treatment decisions and glycemic targets to a greater degree in an elderly person than it would in a younger population.

**MR. BUSKER: What screening is likely necessary for this patient? What does the guidance recommend?**

DR. KARAM: Some screening recommendations have been made for older adults by the American Diabetes Association. Their standards of care, as well as a consensus report released in 2012, made specific recommendations for diabetes management in older adults. The American Geriatrics Society also made recommendations. Using these two sources of guidelines together can be very helpful when we're discussing older patients with diabetes, because a lot of our evidence-based recommendations for screening in a diabetes population come from younger patients.

In older adults I think of it as screening for both the typical diabetes-specific complications that include retinopathy, neuropathy, and nephropathy, as well as risk factors for cardiovascular disease like blood pressure and hyperlipidemia. But we also consider screening for overall health, which can be helpful in individualizing treatment for these patients.

**MR. BUSKER: What would specific screening for this patient be, based on his age? Dr. Wallia?**

DR. WALLIA: Screening in this population should largely be directed to things that can lead to functional impairment and/or short-term adverse events for older patients. Older adults with diabetes have more functional impairment than those without diabetes, and functional impairment can often be multifactorial. A lot of other comorbidities can affect this, such as peripheral neuropathy leading to unstable gait and unstable balance, vision and hearing loss, and some patients abuse alcohol or have significant alcohol use, so they should be asked about these things. Fall and fall risk should be assessed, and efforts to minimize hypoglycemia should be taken, as this can also increase falls.

Cognitive dysfunction and dementia are also much more common in people with diabetes and have also been associated with poor outcomes such as hypoglycemia. The American Diabetes Association recommends screening for cognitive dysfunction at age 65 and then annually; whereas the Geriatric Society recommends at time of diagnosis of diabetes and with any change in functional status. Both organizations recommend using a standardized screening tool, which can be either the Mini Mental Status Exam or a cognitive assessment called the Montreal Cognitive Assessment. Both of these assessments should be done in the office visit and they both take around ten minutes, so you have to try to find time and someone to administer the test if you are planning to do this in your clinic.

If cognitive dysfunction is found, there should be considerations for simplifying the regimen because the self care that revolves around diabetes — such as glucose monitoring, insulin injection, or other types of injections — can be very complex. Whenever possible, I recommend that my patients have their caregivers involved or family support and also remind them to monitor closely for low blood sugar.

We also want to make sure that nutritional issues such as poor appetite are addressed. Many older adults have limited access to food. They can have changes in smell and taste, which can affect their nutritional intake, and swallowing difficulties can occur in older patients. The American Diabetes Association recommends the Mini Nutritional Assessment, which is designed to help determine if an older adult's diet is adequate or if they would benefit from referral to nutritionists. In my own practice, I refer to a nutritionist because I think this is helpful.

The assessment, if you choose to do it in your office, is a validated six-question assessment that can help identify patients at risk for malnutrition. A high prevalence of people who are overweight and obese also fall into the category of older adults, and they may benefit from weight loss. However, this must be done carefully as you don't want to worsen sarcopenia or bone health, or exacerbate mild to moderate nutritional deficiencies that may also be happening concurrently.

A lot of older adults with chronic diseases are on a lot of medications, so polypharmacy is always an issue. I make sure to have a careful medication review every time I see an older patient in my clinic.

**MR. BUSKER: Screening for diabetes-related complications — how do you decide what's needed for this patient?**

DR. WALLIA: Even when you're talking about diabetes-related complications, a key consideration is a patient's functional status and quality of life in the short term. It's important to focus on things such as eye disease, retinopathy that could lead to visual impairment, and things like neuropathy that could lead to possible foot ulcers or amputations. These are major quality of life issues should they occur. You also want to balance the burden of frequent testing and clinic visits.

**MR. BUSKER: How so?**

DR. WALLIA: For example, there is evidence that in people with diabetes but no history of retinopathy, you can space out eye exams every two to three years. This recommendation has been supported by the American Diabetes Association in its consensus statement on older adults.

In this patient I would space out the eye exams. I would also consider pill burden, as this can be both a concern for quality of life as well as risk for medication interaction and noncompliance. I would continue losartan, as blood pressure is at goal on

this medication, as well as the statin, given the known benefit; however, I would discuss with the primary care physician and the patient the benefit of the aspirin, because it does lead to a risk of bleeding.

**MR. BUSKER: Anything to add, Dr. Karam?**

DR. KARAM: Yes. With a patient like this who is on insulin, I would like to ensure that his vision is adequate to be able to monitor his glucose, inject insulin safely, and distinguish between long- and short-acting insulin, as confusing these can lead to both hyper- and hypoglycemia. I also wonder for this patient, because his diabetes is fairly well controlled based on his current A1c and glycemic values, I wonder whether he even needs the rapid acting insulin with the largest meal of the day, as he's taking right now. You could consider, for example, changing his medication so that he's using an oral medication rather than the rapid acting insulin with his meal, or at least liberalizing his regimen so the scale he's using begins with a glucose greater than 200 and is not used at night before going to bed. I would also potentially consider moving his glargine to the morning from the evening so as to prevent overnight hypoglycemia.

**MR. BUSKER: His HbA1c is 7.6% — that's over the value that would usually indicate the need for intensification. Does 7.6% concern you?**

DR. KARAM: The guidelines recommend liberalizing HbA1c goals in older adults to prevent the risk of hypoglycemia. I believe for a patient such as this who is at an advanced age and has other comorbidities, a HbA1c of 7.6 is a reasonable goal, and over time you could even consider liberalizing that further to closer to 8%, particularly if he developed other comorbidities.

**MR. BUSKER: Thank you for sharing your insights. We'll return with Drs. Wallia and Karam in just a moment.**

**MR. BOB BUSKER**

**This is Bob Busker, managing editor of eDiabetes Review. eDiabetes Review is a combination newsletter and podcast program delivered via email to subscribers. Newsletters are published every other month. Each issue reviews the current literature in areas of importance to clinicians treating patients with type 2 diabetes.**

**In the month following each newsletter, a case-based podcast discussion, like the one you're listening to now, is available to help translate that new clinical information into practice. These podcasts are also available as downloadable transcripts.**

**Subscription to eDiabetes Review is provided without charge or prerequisite.**

**Continuing education credit for each newsletter and each podcast is provided by the Johns Hopkins University School of Medicine and the Institute for Johns Hopkins Nursing. For more information on this educational activity, to subscribe and receive eDiabetes Review without charge, and to access back issues, please go to our website: [www.ediabetesreview.org](http://www.ediabetesreview.org)**

**Thank you.**

**MR. BUSKER: Welcome back to this eDiabetes Review podcast. We've been speaking with Dr. Amisha Wallia and Dr. Susan Karam from Chicago's Northwestern University Feinberg School of Medicine about some of the clinical aspects of managing Type 2 Diabetes in Older Adults. So, to continue with that focus, Dr. Wallia please bring us another patient scenario.**

DR. WALLIA: This next patient is a 76-year-old African American male with type 2 diabetes for four years, high blood pressure with stage 2 chronic kidney disease, a history of myocardial infarction, and a recently diagnosed mild, new onset heart failure. His current HbA1c is 9.5 on metformin 1,000 mg daily. His main complaint is excess urination. His BMI is 27.5 and he has very mild cognitive impairment, is not frail, and has had no recent falls or fractures, and he lives with his wife.

Today he is here for additional medical management, given his worsening HbA1c.

**MR. BUSKER: His current A1c is 9.5%. What should it be for this patient? What factors do you consider to determine his proper A1c goal?**

DR. WALLIA: The American Diabetes Association guidelines and Inzucchi et al discuss modifiable and nonmodifiable risk factors when setting HbA1c goals, especially for adults who are older. It's important to remember that we are not driving down to a number per se; we're looking for a safe range for the patient, taking the comorbidities into context.

This patient has macrovascular complications and mild cognitive impairment, both likely nonmodifiable, and he is at high risk for hypoglycemia given renal insufficiency. I would aim for a HbA1c around 8 but also screen for both severe and moderate hypoglycemia. I would not be reassured by the HbA1c being high in this case, but it is high enough in this case that it does need to be addressed.

**MR. BUSKER: Share your thoughts on medication management. He's currently on 1000 mg of metformin daily...**

DR. WALLIA: The FDA and other organizations around the world have liberalized the recommendations for metformin in mild to moderate renal insufficiency, and the FDA has recommended that people with a GFR between 45 and 60 can be started on metformin or remain on metformin at a lower dose. Those with a GFR between 30 and 45 can remain on metformin but should not initiate therapy. Those below a GFR of 30 should not be on therapy. In this case, there is no perfect drug. Fortunately, now we are in the age where we have large cardiovascular randomized controlled trials that are helping us decide what drug to use in various situations. But remember, there are differences among each drug and each class and the molecular action and subsequent efficacy, differences in side effects, and also nonglycemic benefits and risks that may be different, even within drugs within each class.

We know that sulfonylureas are efficacious, but we'd like to avoid the longer acting ones because of the high risk of hypoglycemia. And DPP-4 inhibitors, while they may not be as efficacious, are generally well tolerated. Linagliptin and sitagliptin can be used in renal insufficiency; however, there is no big improvement in weight, and caution does have to be taken with this class for those who have a heart condition such as heart failure.

**MR. BUSKER: So metformin, the sulfonylureas, the DPP-4s — what about the more efficacious medications? Dr. Karam?**

DR. KARAM: You could consider several other options for a patient like this. One would be adding a long-acting insulin, which is very effective and would allow a considerable amount of flexibility with titration of the dose. It is, however, associated with increased weight gain as well as hypoglycemia, which should be taken into consideration. You would also have to take into consideration a patient's ability to give insulin that can be limited by things such as vision issues and dexterity.

Another alternative would be the SGLT-2 inhibitors, which could be a nice option because they're oral medications. These have also been shown to have some benefit for hypertension, heart failure, and weight loss, and they've also been shown to have some benefit in early diabetic renal disease. However, on the flip side, they're not as efficacious in patients who have a lower GFR. So that has to be taken into consideration as well.

Another class of medications we use often is the GLP-1 agonists. A GLP-1 agonist such as liraglutide has evidence from recent cardiovascular trials that show lower rates of development and progression of nephropathy than with placebo. So that's certainly a benefit. The main side effects of the GLP-1 agonists include GI distress and the potential for worsening hypoglycemia, and they also are injectable medications. So with both insulin and the GLP-1s we have to take into consideration whether: 1) a patient is able; and 2) if they're willing to use a daily injection, as not all patients are. I think for this patient you could consider a choice from any of these three classes of medications. Ideally, he would probably benefit the most from either a long-acting insulin or a GLP-1, but an SGLT-2 inhibitor could also be considered.

**MR. BUSKER: What if his renal insufficiency progresses? Dr. Wallia, how would you proceed?**

DR. WALLIA: When renal insufficiency progresses, that's always a concern. We do know that use of insulin is safe in those with moderate to severe CKD or end-stage renal disease, but we also have to look at hypoglycemia. We know from inpatient studies that when using insulin in CKD you can reduce the amount of insulin by half in patients with moderate CKD and still have adequate glycemic control, with the benefit of having less hypoglycemia. Algorithms have been published for simplifying insulin regimens, especially for those who may be at risk for hypoglycemia and/or may not be able to handle injections four times a day.

Most of the guidelines agree that insulin should be started when the A1c is greater than 10, although some say greater than 9, and we have good evidence with randomized control data in type 2 diabetes showing that one long-acting injection with one short-acting insulin bolus with the largest meal can be just as effective as a long-acting injection plus three prandial injections a day. In my clinic anecdotally, especially with older adults with or without renal insufficiency, I have used long-acting insulin once a day and then used an oral agent such as a DPP-4 inhibitor, which does have some postprandial effect, to reduce A1c. This regimen seems to have fewer side effects and less hypoglycemia, and you can titrate additional medications or titrate the long-acting insulin, increase it or decrease it with various changes in clinical status.

**MR. BUSKER: Thank you for that case discussion. I believe we have time for one more patient scenario, Dr. Wallia.**

DR. WALLIA: Our patient is an 85-year-old female with metastatic colon cancer, with a history of diabetes for 10 years, type 2. She is on glargine 25 units daily and aspart 8 units with meals, as well as sliding scale insulin for blood sugar greater than 200 at mealtime and bedtime. Her A1c is currently 10.

She was recently admitted to the hospital for severe anemia and is now ready for discharge; however, because of increasing care needs she will be admitted to a nursing home.

**MR. BUSKER: For people with diabetes who enter nursing home facilities, Dr. Karam, what special concerns need to be considered?**

DR. KARAM: The long-term care population is a very diverse group of people. It includes patients who need complete assistance, some assistance, or no assistance at all so diabetes management must be individualized for these patients. The American Diabetes Association released a position statement in 2016 that reviews their recommendations on managing patients in long-term care facilities and this can be a good guide.

Avoidance of hypoglycemia is one of the most important factors in making treatment decisions for this population because they can have significant negative consequences. We also know that hypoglycemia is more common in long-term care residents because of changes in things such as renal function, poor appetite or dietary restrictions, polypharmacy, and loss of hypoglycemia awareness, that's been proved in studies.

On the other hand, you have to weigh this with the risk of symptomatic hyperglycemia, which should be avoided as it can put patients at risk of dehydration, lightheadedness leading to falls, electrolyte abnormalities, and urinary incontinence. In general, it's recommended that a fasting and premeal glucose goal between 100 and 200 is acceptable.

The individual treatments should be patient specific, but a rule of thumb is that reliance on sliding scale alone should be avoided because that leads to large fluctuations in glucose. You're always chasing your tail to try to catch up with the high sugars, rather than preventing them. The ADA position statement also includes a helpful chart that can help guide a change from sliding scale insulin to a basal bolus regimen.

Finally, I would like to say that it's important to consider the diet people are given when they enter long-term care facilities. It's recommended against using the traditional diabetic or no concentrated sugar diet, because these are often very restrictive and lead to patients not getting the nutrition that they need and can exacerbate nutritional deficiencies or cause unintentional weight loss.

Medical nutrition therapy can be very effective for managing diabetes, but we don't want to go too far and make these diets overly limiting. In general, I recommend using a general diet with a consistent amount of carbohydrate at each meal. This allows patients more options and also helps avoid hypoglycemia while they're on fixed doses of insulin.

**MR. BUSKER: What about her diabetes medication management? What changes would you make?**

DR. KARAM: One of the first things I did was move her basal insulin from at bedtime to morning to help prevent nocturnal hypoglycemia, which is a risk for a patient like her. I also considered a trial of discontinuing her mealtime insulin and started a DPP-4 inhibitor, I would consider a medication such as linagliptin or sitagliptin, as these can have a lower risk of hypoglycemia but can also be effective in controlling postprandial hyperglycemia.

For her I would target a goal glucose, both fasting and pre-meal, in the 100 to 200 range. The benefit of discontinuing the mealtime insulin also means that we can consider spacing out how frequently her glucoses need to be checked. You could consider monitoring twice a day rather than before meals and at bedtime as we typically do. This helps improve patient comfort.

I also requested that the patient remain on a general diet with relatively consistent carbohydrates with each meal, as her appetite was poor to begin with and I wanted to ensure that she was able to maintain adequate nutrition.

**MR. BUSKER: You presented us with an 85-year-old woman, type 2, with metastatic colon cancer. Elderly patients in nursing homes — particularly those with advanced diseases — may eventually elect to enter hospice care. How do you approach diabetes management for patients in hospice? Dr. Wallia?**

DR. WALLIA: The goal of glucose control in patients at the end of life is to promote comfort and quality of life. This can be a balance between minimizing glucose monitoring and treatment while avoiding severe hyperglycemia, which can also cause symptoms such as polyuria and polydipsia. A goal glucose of 200 to 300 can be reasonable, depending on patient symptoms.

I would take into consideration the balance between hypo- and hyperglycemia which is present, as well as anticipated nutritional intake. It is reasonable to decrease monitoring the blood sugars in patients with type 2 diabetes, although this could vary from twice a day to every few days depending on the patient and their control. Insulin regimens should be simplified, and if possible oral medications should be used.

It's important to discuss the goals with the patients and their families as they may feel uncomfortable with the change in glycemic targets or they may refuse testing and blood sugar checking and monitoring. Their wishes for further testing and medication should be discussed and honored, as long as it's safe for the patient.

For this patient we continued the DPP-4 inhibitor while she was easily able to tolerate that medication. This class of medication can be a nice choice in this instance, given the low risk of side effects in hypoglycemia and the control of postprandial blood sugars. We also decreased the glucose monitoring to daily.

**MR. BUSKER: Thank you both for sharing your insights today on managing type 2 diabetes in older adults. Let's wrap things up now by reviewing today's discussion in light of our learning objectives. To begin: the appropriate screening for both chronic diabetes complications as well as general health for older adults with diabetes. Dr. Karam?**

DR. KARAM: Screening for elderly patients with diabetes should include screening for typical complications such as retinopathy, neuropathy, and risk factors for cardiovascular disease such as high blood pressure and hyperlipidemia. It's also important to include general health screening for depression and vision loss, as these factors can have a large impact when choosing the appropriate treatment for patients, as well as preventing adverse effects such as hypoglycemia.

**MR. BUSKER: And our second learning objective: medication management in older adults with type 2 diabetes with multiple comorbidities, including renal insufficiency. Dr. Wallia?**

DR. WALLIA: The choice of medication must largely take into consideration comorbidities, particularly as patients with multiple comorbidities, including CKD, are at high risk for things like hypoglycemia. Each medication has unique risks and benefits that must be considered individually, especially in regard to age, obesity, presence of cardiovascular disease and renal disease. A1c goals should be considered individually, keeping in mind that a high A1c does not always indicate safety or lower risk or presence of hypoglycemia.

**MR. BUSKER: Finally: the goals of care and medication management for patients with type 2 diabetes who are in nursing homes, as well as those at the end of life. Dr. Karam?**

DR. KARAM: The long-term care population is diverse, but overall, they have an increased risk of hypoglycemia for a variety of reasons, including comorbidities, poor appetite, and changes in renal function. For this reason, efforts should be made to simplify medication regimens and ensure safety for these patients. And this can often include minimizing insulin and replacing insulin with other agents, as able.

Finally, the goals of treatment should be discussed with patients and their families. It may be reasonable at the end of life to consider stopping glucose monitoring, as well as diabetes medications.

**MR. BUSKER: From Northwestern University's Feinberg School of Medicine — Dr. Amisha Wallia, Dr. Susan Karam — thank you for participating in this eDiabetes Review Podcast.**

DR. WALLIA: Thank you so much for having us, it was a pleasure.

DR. KARAM: Thank you so much for including us, it's been wonderful to be here today.

**MR. BUSKER: To receive CME credit for this activity, please take the post-test at [www.ediabetesreview.org](http://www.ediabetesreview.org). This podcast is presented in conjunction with the eDiabetes Review newsletter, a peer-reviewed literature review certified for CME/CE credit, emailed monthly to clinicians treating patients with type 2 diabetes.**

**This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the Johns Hopkins University School of Medicine and the Institute for Johns Hopkins Nursing. The Johns Hopkins University School of Medicine is accredited by the ACCME to provide continuing medical education for physicians.**

**The Johns Hopkins University School of Medicine designates this enduring material for a maximum of 0.5 *AMA PRA Category 1 Credit*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in this activity.**

**The Institute for Johns Hopkins Nursing is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation. For nurses, this 0.5 contact hour Educational Activity is provided by the Institute for Johns Hopkins Nursing. Each podcast carries a maximum of 0.5 contact hour.**

**This educational resource is provided without charge, but registration is required. To register to receive eDiabetes Review via email, please go to our website: [www.ediabetesreview.org](http://www.ediabetesreview.org).**

**The opinions and recommendations expressed by faculty and other experts whose input is included in this program are their own. This enduring material is produced for educational purposes only.**

**Use of the names of the Johns Hopkins University School of Medicine and the Institute for Johns Hopkins Nursing implies review of educational format, design, and approach. Please review the complete prescribing information for specific drugs, combinations of drugs, or use of medical equipment, including indication, contraindications, warnings, and adverse effects, before administering therapy to patients.**

**eDiabetes Review is supported by educational grants from Merck & Co., Inc., NovoNordisk, and Sanofi. This program is copyright with all rights reserved by the Johns Hopkins University School of Medicine.**

## CME/CE INFORMATION

### ACCREDITATION STATEMENT

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the Johns Hopkins University School of Medicine and the Institute for Johns Hopkins Nursing. The Johns Hopkins University School of Medicine is accredited by the ACCME to provide continuing medical education for physicians.

### CREDIT DESIGNATION STATEMENT

The Johns Hopkins University School of Medicine designates this enduring material for a maximum of 0.5 *AMA PRA Category 1 Credit*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in this activity.

The Institute for Johns Hopkins Nursing is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

For nurses, this 0.5 contact hour Educational Activity is provided by the Institute for Johns Hopkins Nursing. Each podcast carries a maximum of 0.5 contact hour.

### POLICY ON SPEAKER AND PROVIDER DISCLOSURE

It is the policy of the Johns Hopkins University School of Medicine and the Institute for Johns Hopkins Nursing that the speaker and provider globally disclose conflicts of interest. The Johns Hopkins University School of Medicine OCME has established policies in place that will identify and resolve all conflicts of interest prior to this educational activity. Detailed disclosure will be made in the instructional materials.

[INTERNET CME/CE POLICY](#)

[INTENDED AUDIENCE](#)

[DISCLAIMER STATEMENT](#)

[CONFIDENTIALITY DISCLAIMER FOR CME ACTIVITY PARTICIPANTS](#)

[STATEMENT OF RESPONSIBILITY](#)

[HARDWARE & SOFTWARE REQUIREMENTS](#)

[STATEMENT OF NEED](#)

[COMPLETE CME INFORMATION](#)

All rights reserved - The Johns Hopkins University School of Medicine. Copyright 2018.

This activity was developed in collaboration with DKBmed.