WHY IT'S IMPORTANT TO ESTABLISH EFFECTIVE COMMUNICATION AMONG THE DIABETIC PATIENT'S CARE TEAM


Successful outcomes depend on collaboration between all health care providers involved in disease management efforts.

BY SHERROL REYNOLDS, OD, FAAO, AND BREANNE MCGHEE, OD, MED, FAAO

Half of adults in the United States (133 million) are living with or are at risk of developing diabetes, with 37 million diagnosed with diabetes and another 96 million showing signs of prediabetes.[1] Nearly one in four adults don't even know they have the disease.[1] As the number of people living with diabetes increases, so does the risk of serious diabetes-related complications.

A new study shows that the prevalence of diabetic retinopathy (DR), the leading cause of vision loss in working adults, is much higher than previously believed.[2] One in four people with diabetes (9.60 million) has DR, approximately 5% (1.84 million) of whom have vision-threatening DR.[2] The study also found that Hispanic and Black patients have a higher prevalence of vision-threatening DR.[2] Preventing or slowing vision-threatening DR complications requires effective communication among all health care providers who participate in the care of patients with diabetes. This article outlines why it's important to effectively communicate with your patient's diabetes care team to produce the best outcomes.

ASSESS RISK

Diabetes is often called a silent killer because many patients don't know they have it, have no symptoms, lack knowledge about it, and/or are poorly controlled. As such, it's important to identify, communicate, and address risk factors that can contribute to

the onset, severity, and progression of DR. Factors such as diabetes type, patient age, disease duration, glycemic control, blood pressure, cholesterol, nutrition, BMI, smoking status, and sleep habits should be assessed.

The American Diabetes Association's 2023 Standards of Care in Diabetes report[3] highlights new and updated recommendations on diabetes that all health care providers should be aware of.

Glycemic Control

Although the recommended HbA1c target is < 7%, optimal glycemic control should be as close to normal (6%) as possible. It's important to note that HbA1c is unreliable in patients with anemia, hemoglobinopathy, and iron deficiency, and differs among ethnic groups.[4]

Time in Range

Continuous glucose monitoring is recommended for all patients on insulin, allowing for evaluation of the time in range, a more reliable parameter of assessing glycemic control. Specifically, it indicates the percentage of time a person's glucose value is within the target range of 70 mg/dL to 180 mg/dL during a defined period of > 70%.[5] The higher the time in range, the lower the risk of developing diabetes-related complications. The lower the time in range, the higher the risk. One study showed that patients who had advanced DR had a significantly lower time in range and higher measures of glycemic variability than those with less severe or no DR.[6] Time in range was significantly associated with the prevalence of all stages of DR.[6]

Blood Pressure and Cholesterol

New lipid management recommendations advocate for lower low-density lipoprotein cholesterol levels in individuals aged 40 to 75 years old with high-risk disease (< 70 mg/dL in general, and < 55 mg/ dL for those with preexisting atherosclerotic cardiovascular disease). Stricter blood pressure level targets (≤ 130/80 mm Hg for most patients) are also recommended.

Sleep

Patients with diabetes or prediabetes and symptoms suggestive of sleep apnea should be screened. A concise and easy-to-use screening tool is the STOP (snoring, tiredness, observed apnea, high blood pressure) questionnaire,[7] which consists of just four questions and was developed and validated in surgical patients at preoperative clinics.

Social Determinants of Health

New recommendations also include assessing the influence of social determinants of health, such as income, education level, and food insecurity, among those with or at risk for diabetes.

Weight

Individuals with diabetes or pre-diabetes who are overweight or obese may benefit from weight loss. ODs should be aware of drugs advertising weight loss with the GLP-1 drug semaglutide, such as Ozempic (Novo Nordisk) and Wegovy (Novo Nordisk).[8] Mounjaro (tirzepatide, Eli Lilly) targets GLP-1 and GIP.[9]

Medications

Newer options to keep in mind, such as semaglutide tablets 7 mg/14 mg (Rybelsus, Novo Nordisk), may help reduce the risk of cardiovascular events.[10,11]

DETECT EARLY

Many people with diabetes, especially those from minority populations, typically do not undergo yearly comprehensive dilated eye examinations. However, approximately 35% of individuals with type 2 diabetes have some degree of DR at diagnosis, underscoring the importance of proper detection and management efforts.[12]

Advanced imaging modalities have dramatically improved early detection, care, and patient education. Ultrawide-field (UWF) imaging not only images peripheral diabetic lesions, but it also assesses areas of retinal nonperfusion for early detection of DR and/or maculopathy (Figure 1). A recent study also highlights the advantage

AT A GLANCE

- Half of adults in the United States have or are at risk of developing diabetes, and one in four people have diabetic retinopathy (DR).
- If the current trend continues, the risk for serious macrovascular and microvascular diabetic complications is projected to increase.
- Communication is crucial in addressing the burden of diabetes and DR and supporting better patient care and compliance.
- Preventing or slowing vision-threatening DR complications also requires effective communication among all health care providers who participate in the care of patients with diabetes.

of UWF imaging in predicting DR progression.[13]

Spectral-domain OCT allows the early identification of structural changes and center- or non-center involved diabetic macula edema (DME) (Figure 2). OCT angiography can aid in detecting subclinical vascular changes (microaneurysms, vascular loops, tortuosity, and vessel dilation), intraretinal microvascular abnormalities, neovascularization, and diabetic macular ischemia, which appears as areas of capillary nonperfusion, impairment of the choriocapillaris flow, and enlargement of the foveal avascular zone.

Telemedicine screening and AI are supported by the American Diabetes Association; however, a dilated comprehensive eye examination is still recommended. Newer technologies, such as RETeval (LKC Technologies), allow early detection of DR using full-field electroretinography that provides a DR score to help predict which patients are most likely to require therapeutic intervention over the following 1 to 3 years.[14]

INITIATE MANAGEMENT

Staging of DR and/or DME to determine treatment is based on the Early Treatment Diabetic Retinopathy Study Diabetic Retinopathy Severity Scale.[15] All stages of DR require close follow-up and monitoring every 3 to 6 months. There is a 5% risk that mild DR will progress to proliferative DR within 1 year, while moderate disease has up to a 27% risk of progression, and the risk is greater than 50% for severe retinopathy.[16]

Patients with vision-threatening DR (ie, severe nonproliferative, proliferative, and DME) should be referred to a retina specialist—even those with 20/20 vision and no visual complaints. Anti-vascular endothelial growth factor (VEGF) medications are the first-line treatment for any patient with center-involved DME and proliferative DR, but in cases of persistent edema after three to six injections, the retina specialist may elect to switch anti-VEGF agents, add laser, or use steroids. For patients with non-center–involved DME, treatment may include focal laser, anti-VEGF, or observation if vision is not compromised.

New therapies that extend treatment intervals and reduce the burden of frequent injections have emerged in the past year, including faricimab-svoa injection 6 mg (Vabysmo, Genentech), the first dual anti-VEGF and anti-angiopoietin drug. Similarly, high-dose aflibercept 8 mg (Eylea HD, Regeneron) has been shown to significantly extend the treatment interval for patients.[17,18]

PROVIDE EDUCATION

Communication is crucial in addressing the burden of diabetes and DR and supporting better patient care and compliance. Advising patients of the appropriate preventative measures and treatment options can help mitigate vision-threatening complications and address potential concerns.

TAKEAWAYS

Addressing the diabetes epidemic requires all members of the patient's care team to collaborate to ensure better outcomes. Consistent and continuous communication leads to decreased risk of sight-threatening retinopathy, fewer systemic complications, more successful clinical outcomes, and improved quality of life in patients with diabetes. ■

1. National diabetes statistics report. Centers for Disease Control and Prevention. Reviewed June 29, 2022. Accessed October 19, 2023. www.cdc.gov/diabetes/data/statistics-report/index.html
2. Lundeen EA, Burke-Conte Z, Rein DB, et al. Prevalence of diabetic retinopathy in the US in 2021. *JAMA Ophthalmol*. 2023;141(8):747-754.
3. American Diabetes Association. *Diabetes Care*. 2023;46(Supplement 1):S203-S215.
4. Selvin E. Are there clinical implications of racial differences in HbA1c? A difference, to be a difference, must make a difference. *Diabetes Care*. 2016;39(8):1462-1467.
5. Lu J, Ma X, Zhou J, et al. Association of time in range, as assessed by continuous glucose monitoring, with diabetic retinopathy in type 2 diabetes. *Diabetes Care*. 2018;41(11):2370-2376.
6. Andrade M, Gabbay L, Rodacki M, et al. Time in range: A new parameter to evaluate blood glucose control in patients with diabetes. *Diabetol Metab Syndr*. 2020;12:22.
7. Bibbins-Domingo K, Grossman DC, Curry SJ, et al. Screening for obstructive sleep apnea in adults: US Preventive Services Task Force recommendation statement. *JAMA*. 2017;317(4):407-414.
8. Ghusn W, De la Rosa A, Sacoto D, et al. Weight loss outcomes associated with semaglutide treatment for patients with overweight or obesity. *JAMA Netw Open*. 2022;5(9):e2231982.
9. Lin F, Yu B, Ling B, et al. Weight loss efficiency and safety of tirzepatide: a systematic review. *PLoS One*. 2023;18(5):e0285197.
10. Husain M, Consoli A, De Remigis A, Pettersson Meyer AS, Rasmussen S, Bain S. Semaglutide reduces cardiovascular events regardless of metformin use: A post hoc subgroup analysis of SUSTAIN 6 and PIONEER 6. *Cardiovasc Diabetol*. 2022;21(1):64.
11. Chous AP. Eye care space shows new developments in 2023 for diabetes care. *Optometry Times*. Published May 16, 2023. Accessed October 19, 2023. www.optometrytimes.com/view/eye-care-space-shows-new-developments-in-2023-for-diabetes-care
12. Naserrudin NA, Jeffree MS, Kaur N, Syed Abdul Rahim SS, Ibrahim MY. Diabetic retinopathy among type 2 diabetes mellitus patients in Sabah primary health clinics—Addressing the underlying factors. *PLoS One*. 2022;17(1):e0261249.
13. Marcus DM, Silva PS, Liu D, et al. Association of predominantly peripheral lesions on ultra-widefield imaging and the risk of diabetic retinopathy worsening over time. *JAMA Ophthalmol*. 2022;140(10):946-954.
14. Brigell MG, Chiang B, Maa AY, Davis CQ. Enhancing risk assessment in patients with diabetic retinopathy by combining measures of retinal function and structure. *Transl Vis Sci Technol*. 2020;9(9):40.
15. Wilkinson C, Ferris F, Klein R, et al. Proposed international clinical diabetic retinopathy and diabetic macular edema disease severity scales. *Ophthalmology*. 2003;110(9):1677-1682.
16. Eye care of the patient with diabetes mellitus. American Optometric Association. Accessed October 19, 2023. bit.ly/aoaeyecare
17. Wykoff CC, Abreu F, Adamis AP, et al. Efficacy, durability, and safety of intravitreal faricimab with extended dosing up to every 16 weeks in patients with diabetic macular oedema (YOSEMITE and RHINE): Two randomised, double-masked, phase 3 trials. *Lancet*. 2022;399(10326):741-755.
18. Hutton D. Aflibercept shown to work at higher dose, longer intervals. *Ophthalmology Times*. Published September 8, 2022. Accessed October 19, 2023. www.ophthalmologytimes.com/view/aflibercept-shown-to-work-at-higher-dose-longer-intervals

BREANNE MCGHEE, OD, MED, FAAO
- Optometrist, Ochsner Medical Center, New Orleans, Louisiana, and Ochsner Health Center, Destrehan, Louisiana
- Residency Co-Supervisor, Southern College of Optometry, Memphis, Tennessee
- drbreeyedoc@gmail.com; Instagram @drbre_eyedoc
- Financial disclosure: None

SHERROL REYNOLDS, OD, FAAO
- Associate Professor, Nova Southeastern University College of Optometry, Fort Lauderdale, Florida
- Director, The Eye Care Institute Retina Clinic, Fort Lauderdale, Florida
- sreynold@nova.edu
- Financial disclosure: Paid Consultant (American Diabetes Association)