

PROVIDER TIPS FOR ENHANCED PATIENT COMMUNICATION

Communication barriers often exist between provider and patient

- Patients retain about 50% of information by health care providers, and approximately 50% of those who do remember the information accurately.¹
- Sometimes patients are unaware that they do not understand what is being taught to them.
 - In a study of patients who sought care in the ED, about 20% of patients self-reported comprehension difficulties, but 78% demonstrated a comprehension deficiency in at least one area of their visit as assessed by the provider.²
- Here are some suggested provider tips and techniques taken from the literature to use when educating patients on diabetic retinopathy, annual vision screenings, and beyond

Provider language is key

- Use presumptive language rather than suggestive language regarding the requirement for annual dilated vision screenings In a study looking at vaccine hesitancy, providers who used presumptive language (“We have to do some shots”) rather than suggestive (“What are you planning to do about vaccines) were 17.5 times more successful at having parents agree to vaccines.³
- Minimize medical jargon – remember that patients come from all different educational/ cultural backgrounds. Explain concepts in layman’s terms
- Ask for patient feedback/questions throughout. Be conscious of how you phrase concepts to allow for open communication:
 - For example, instead of saying “What questions do you have for me?” you can use “Are there any questions I can answer for you?”
 - Although the wording is slightly different, it shifts responsibility from the patient to provider

Utilize the Teach-Back Method

- One way to assess patient understanding is by asking them to “teach-back” what was discussed
- This allows the provider to see where lapses in understanding exist that warrant further explanation
- Potential prompts:
 - “Tell me in your own words what your understanding of diabetic retinopathy is”
 - “To make sure we are on the same page, can you tell me what the next steps are to check your eyes for diabetic retinopathy?”
 - “I understand that I might have given you a lot of information and want to make sure I explained everything clearly. Would you mind walking me through what we talked about today?”
- AVOID asking patient questions that require only a yes/ no answer
 - “Do you understand?” “Do you have any questions?” “Are we clear on the next steps?”

Verbal & Written Information

- Studies have found that compared to verbal information alone, patient’s retain information (and appreciate) verbal + written material better
- Providers can include printouts on diabetic retinopathy/ annual vision screenings (such as the one available in the toolkit)

Aim to E.D.U.C.A.T.E

- **E**nhance comprehension and retention
- **D**eliver patient-centered education
- **U**nderstand the learner and what they already know
- **C**ommunicate clearly/ effectively
- **A**ddress health literacy and cultural competence (written and visual materials)
- **T**eaching and **E**ducation goals for the provider should be planned out in advance

**Further tips to enhance each of the components of this acronym can be found here⁴:
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4346059/pdf/rhpb-2-482.pdf>

References

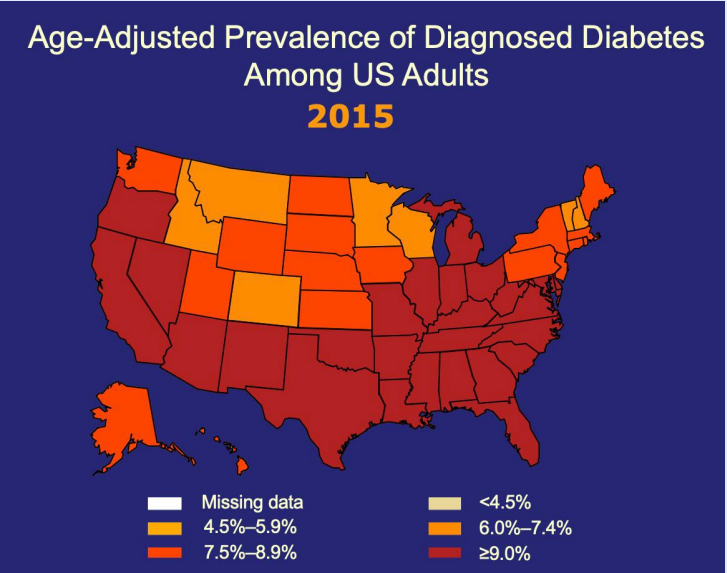
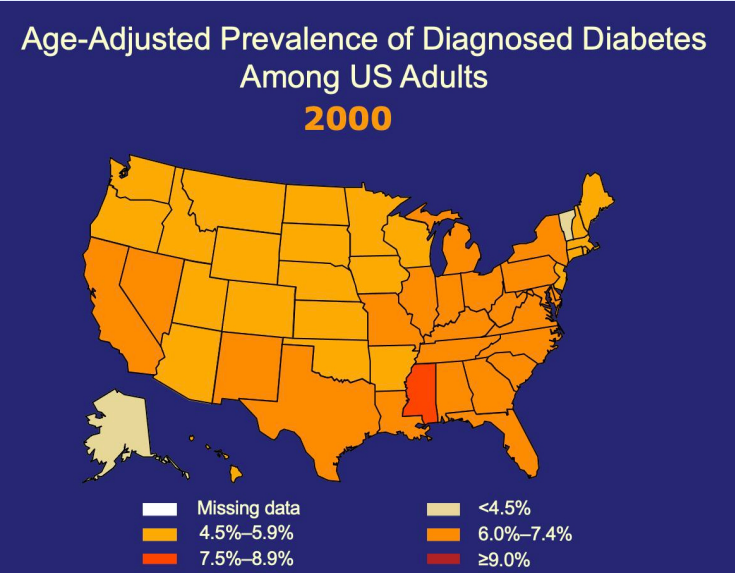
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DIABETIC RETINOPATHY

Information for Providers

DIABETES IN THE U.S.

- More than 34 million people in the United States are currently living with diabetes, about 1 in 10 Americans¹
- An estimated 1.5 million Americans are diagnosed with diabetes each year, and this number continues to grow amidst the obesity epidemic
- The economic burden of diabetes complications for patients and the healthcare system is substantial - an estimated \$237 billion is spent each year on medical costs, with another \$90 billion on reduced productivity²

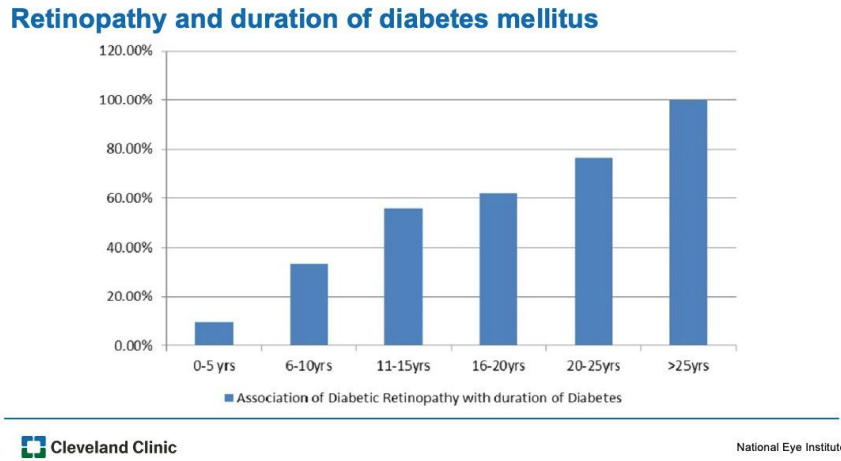


3. Centers for Disease Control and Prevention. https://www.cdc.gov/diabetes/statistics/slides/maps_diabetesobesity_trends.pdf

DIABETIC RETINOPATHY OVERVIEW

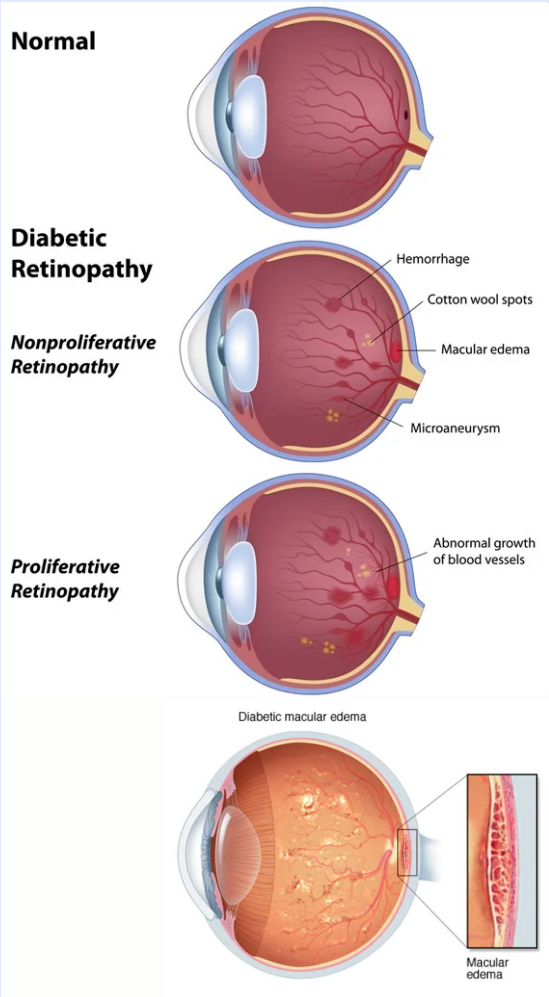
- Diabetic retinopathy (DR) is a microvascular complication of diabetes, and is the leading cause of blindness and vision loss in working age adults aged 20-65
- Risk factors for DR development include (but are not limited to):

- Duration of diabetes
- Poorly controlled blood sugars (high HbA1C)
- Obesity
- Hypertension
- Dyslipidemia
- Smoking



Pathophysiology of DR

- DR occurs when high blood sugars causes formation of advanced glycosylation end products (AGEs) in the body
- AGEs are known to accumulate in retinal pericytes, structural cells that support retinal vasculature, and induce oxidative stress and inflammation. This results in pericyte apoptosis and eventual breakdown of the blood-retinal-barrier (BRB).
- BRB compromise leads to blood vessel leakage, capillary closure, and subsequent hypoxia of the retina - the tissue in the back of the eye necessary for good vision.
- With prolonged hypoxia, this increases production of vascular endothelial growth factor (VEGF) that promotes abnormal blood vessel growth of the retina or vitreous (the gel that fills the eye).
- These new, fragile vessels are prone to leak and bleed, causing even poorer vision and promotes the growth of scar tissue that can lead to further complications
- DR can be classified into early stages of disease (**nonproliferative DR**) and late stages (**proliferative DR**).



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Nonproliferative diabetic retinopathy (NPDR)

- Occurs when there is swelling and leakage of damaged vessels onto the retina
- Classified according to stage:
 - Mild NPDR
 - Moderate NPDR
 - Severe NPDR
- Symptoms are typically **mild** or **nonexistent** in early stages, which is dangerous since disease can progress to advanced stages where vision changes may be irreversible

Proliferative diabetic retinopathy (PDR)

- Occurs when new, fragile blood vessels grow onto the retina that leak and bleed easily
- New vessel growth also causes scar tissue formation, that may pull on the retina and lead to a **tractional retinal detachment**
- Considered the most advanced stage of disease since abnormal vessel growth and scar tissue formation can cause **long-term vision loss** and **blindness**

Diabetic macular edema (DME) is a complication of DR that can occur at any stage, and is the most common cause of vision loss in DR.

- DME is swelling of the macula, the part of the retina responsible for central, fine vision, that occurs due to accumulation of fluid caused by damage to the BRB.

SYMPTOMS OF DIABETIC RETINOPATHY

- In early stages of disease, the patient may be **ASYMPTOMATIC** with no reported vision changes - this is dangerous because DR can insidiously progress until a point where vision changes are irreversible
- Visual symptoms often occurring in advanced stages of retinopathy include:
 - Blurriness
 - Floaters
 - Altered color vision
 - Loss of vision
 - *If the patient reports a sudden loss of vision, or the appearance of a "curtain falling down" in their field of vision, this may be a sign of retinal detachment



6. Spectrum EyeCare. <https://spectrumeyecareofop.com/blog/81219-how-do-you-see-when-you-have-advanced-diabetic-retinopathy>

SCREENING & DIAGNOSIS

- The American Diabetic Association recommends that all patients with diabetes should receive **dilated eye exams each year**, to screen for DR, check for vision changes, and to assess overall eye health⁷
 - Those with Type 2 diabetes should have their first dilated eye exam **when they are diagnosed**
 - Those with Type 1 diabetes should have their first dilated eye exam **within 3-5 years of diagnosis**
- Detecting early signs of DR and DME through annual dilated eye exams are crucial due to the asymptomatic nature of disease
- However, **only 50%** of patients meet this annual screening requirement, with even lower rates in low income communities

WHAT ARE POTENTIAL BARRIERS TO SCREENING?

Patient Barriers:

- Perceived financial costs/ lack of insurance
- Lack of time
- Tedious to follow-up
- Absence of symptoms in early DR
- Limited understanding of DR and its complications

Provider Barriers:

- Lack of time/ work pressures
- Absence of symptoms in early DR, and silent progression of disease for patients
- Difficult communicating need for screening to less health literate patients

More patient & provider barriers found here: https://www.cdc.gov/pcd/issues/2016/16_0193.htm

TREATMENT OPTIONS

- While there is no cure for diabetic retinopathy, scientific advancements have led to treatments that help prevent, and potentially improve, vision loss.
- The eye doctor will assess each patient regarding their severity of disease, age, control of diabetes/ hypertension/ dyslipidemia, and other factors to decide which option is optimal
- Treatment options include:
 - **Observation:** usually for patients with early disease. The doctor may recommend more frequent eye exam visits (every 2-6 months).
 - **Laser therapy:** lasers can be used to shrink leaking blood vessels and prevent vessel growth
 - **Injections:** anti-VEGF injections (aflibercept, ranibizumab, bevacizumab) have been revolutionary in helping slow down and prevent vessel growth associated with DR
 - anti-VEGF are first line for resolving **DME**, in which retinal fluid accumulation can obscure the view necessary to perform laser therapy
 - Can also administer steroid injections to reduce inflammation associated with DR
 - **Vitrectomy:** surgery can be done to clear the vitreous (the gel that fills the eye) and any blood and scar tissue build up caused by DR

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2. American Diabetes Association. Economic costs of diabetes in the US in 2017. Diabetes Care. 2018;41:917-928.
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PROVIDER TIPS TO IMPROVE DIABETIC RETINOPATHY SCREENING RATES

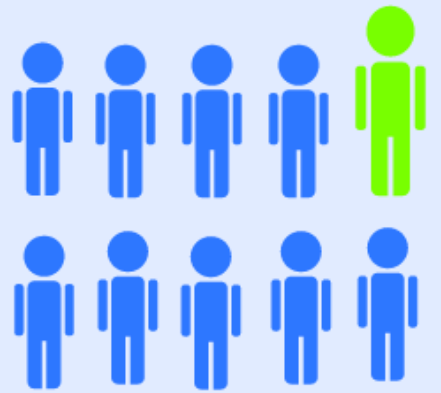
- As first line providers who regularly monitor and manage patients with diabetes, you play a crucial role in helping patients become aware of the risks of diabetic retinopathy and how to prevent it
- **Patient Education:** inform your patients on what diabetic retinopathy is, especially for those who have never received a dilated eye exam.
 - Explain the anatomy of how the retina works, and how diabetes damages blood vessels in the eye, leading to DR and associated complications
 - Discuss how even if they have perfect vision, diabetic retinopathy is often asymptomatic and can silently progress to more advanced stages where the damage may be irreversible
 - Stress the value of annual, dilated eye exams, since they are a way to screen for early signs of DR and DME
 - Printable handouts for patients to learn more about DR can be found [here](http://intranet.ccf.org/peis/peis2/health-info/docs/3000/3062.asp?index=8591);
- **Track patients' last dilated vision exam:** aim to regularly ask and document in your notes when your patients' last dilated eye exam was, and with whom.
 - Ensure to specifically ask about their **last dilated exam**, since some refractive exams (i.e. for glasses/ contacts prescription) may not require dilation.
 - You may have to explain to the patient what warrants a dilated exam, and how it is necessary to view the retina in the back of the eye.
 - Example of what to write in notes:
 - "Last dilated eye exam: - list date, name of provider seen, if they are UTD with annual screening requirement, and if there were signs of retinopathy noted on exam"
- **Ask about any changes in vision since their prior visit:** while the majority of DR are asymptomatic, changes in vision such as blurriness, floaters, loss of color vision, or loss of vision may be symptoms of DR. Make referral to eye doctor if needed.
 - If the patient reports sudden loss of vision or the appearance of a "curtain falling over the eye," this may be a sign of retinal detachment and may require urgent referral to the ED and/ or an eye doctor
- **For patients who see eye specialists outside of Cleveland Clinic:** you can request the patient to provide their most recent eye exam results to you. Scanning these (and subsequent visit documents) into the EMR is beneficial for tracking continuity and for catching when an eye exam is due.
- **Place referrals when needed:** if patient's annual vision exam is overdue or soon to be due, you can refer them to an eye specialist at Cole Eye Institute or an outside provider for a dilated eye exam.
 - Can also have your office scheduler call the patient after your appointment to help them schedule a dilated eye exam
 - If they refuse even after you discuss the need for one, you can provide them information on how to set up an appointment if they change their mind.
- **Patient Prevention:** many risk factors for DR development or progression are modifiable. Thus, working with the patient to achieve certain health behavior goals can significantly reduce this risk.
 - Keeping blood sugars, hypertension, and/ or dyslipidemia under good control (medication adherence)
 - Provide patient information handouts and resources on the topic of DR
 - Encourage healthy dietary choices and physical activity
 - Counseling on smoking cessation
 - Regularly checking if they have received an annual dilated eye exam, and setting up referrals when needed
- **Provider Education:**
 - The diagnosis and management of DR is an ever-changing field. Provider resources to learn more about this disease and changes to the field can be found through these resources:
 - <https://www.asrs.org/patients/retinal-diseases/3/diabetic-retinopathy>
 - <https://www.uptodate.com/contents/diabetic-retinopathy-prevention-and-treatment>
 - <https://www.noweyesee.com/resources>

DIABETIC RETINOPATHY

Information for Patients

DIABETES IN THE U.S.

- More than 34 million people in the United States are living with diabetes, about every **1 in 10** Americans¹
- About 1.5 million Americans are diagnosed with diabetes each year, and this number continues to grow alongside the obesity epidemic



WHAT IS DIABETIC RETINOPATHY?

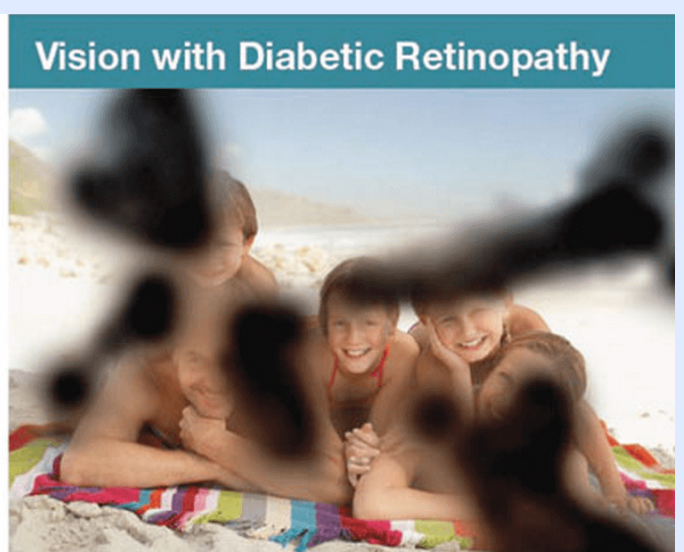
- Diabetic retinopathy is a leading cause of vision loss and blindness in adults ages 20-65
- Diabetic retinopathy is a complication of diabetes that occurs when high blood sugars damage blood vessels supplying the eye, and can cause poor vision
- The risk of developing diabetic retinopathy is 50%-60% in patients with Type 2 diabetes, and up to 90% in patients with Type 1 diabetes
- Diabetic retinopathy can be divided into early stages of disease (**nonproliferative diabetic retinopathy**) and advanced stages of disease (**proliferative diabetic retinopathy**)

SYMPTOMS OF DIABETIC RETINOPATHY

- Most people with early stages of diabetic retinopathy experience **NO** symptoms or changes in vision
- Symptoms of more advanced stages of disease include:
 - Blurriness
 - Dark spots in vision (floaters)
 - Loss of color vision
 - Loss of vision



Normal Vision



Vision with Diabetic Retinopathy

5. Spectrum EyeCare. <https://spectrumeyecareofop.com/blog/81219-how-do-you-see-when-you-have-advanced-diabetic-retinopathy>

SCREENING & DIAGNOSIS

- It is recommended that all patients with diabetes should receive **dilated eye exams each year**, to screen for diabetic retinopathy and to check your eye health
 - Those with Type 2 diabetes should have their first dilated eye exam when they are diagnosed
 - Those with Type 1 diabetes should have their first dilated eye exam within 3-5 years of diagnosis
- Early detection through eye exams is important since diabetic retinopathy is often asymptomatic - however, **only 50%** of patients get yearly exams

TREATMENT OPTIONS

- While there is no cure for diabetic retinopathy, there are treatments to help prevent vision loss.
- The eye doctor will assess each patient to decide which option is best
- Treatment options include:
 - **Observation:** usually for patients with early disease. The doctor may recommend more frequent eye exam visits (every 2-6 months).
 - **Injections:** medicine can be delivered into the eye through injections that slow down disease
 - **Laser therapy:** lasers can shrink diseased blood vessels that worsen vision
 - **Vitrectomy:** surgery can be done in the eye to clear blood or scar tissue caused by diabetic retinopathy

DIABETIC RETINOPATHY PREVENTION

Annual dilated
eye exams



Keeping blood sugar, blood pressure,
and cholesterol under good control
(medications and a healthy diet)



Quitting
smoking



Regular follow-up with
providers managing your
diabetes



Exercise



ONLINE RESOURCES TO LEARN MORE

- <https://my.clevelandclinic.org/health/diseases/8591-diabetic-retinopathy>.
- <https://www.diabetes.org/diabetes/complications/eye-complications>
- <https://www.aoa.org/healthy-eyes/eye-and-vision-conditions/diabetic-retinopathy?sso=y>.
- <https://www.noweyesee.com/>

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