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Adherence to and barriers to diabetic eye exams: A survey of patients with type 2 diabetes

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Adherence to and barriers to diabetic eye exams:
A survey of patients with type 2 diabetes

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Background
- The prevalence of diabetes in the U.S. totals 29.1 million people with more than 60% of individuals having some sort of retinopathy within the first 20 years of diagnosis.1,2
- Diabetic retinopathy is the most frequent cause of new cases of blindness among adults aged 20-74 years.3
- ADA standards recommend annual screening for patients with type 2 diabetes to include an initial dilated comprehensive eye exam by an ophthalmologist or optometrist. If no disease is present after 1 or more exams, then further examinations can be considered every two years instead of annually. If retinopathy is present, examinations should occur annually. If progressing or sight-threatening disease is detected, exams are required more frequently.4
- According to the CDC, 50% of patients do not have routine eye exams completed or are diagnosed too late for treatment to be effective.5
- Because retinopathy is often asymptomatic, routine screening is important to detect treatable disease before onset or disease progression. Once treatment is needed, visual acuity cannot be regained but disease progression can be slowed.6
- It is important to improve the frequency of properly completed eye exams. Understanding perceptions of the importance of eye exams and barriers to obtaining them may help achieve problem resolution.
- Poor health literacy is common among patients with chronic conditions. It has also been shown to be associated with a higher incidence of retinopathy when compared to patients with adequate health literacy.7
- Previous studies have reported common barriers consisting of short duration of diabetes, lack of insurance coverage, and poor blood glucose control.8

Objective
- To identify potential barriers and perceptions (e.g., knowledge, insurance) to comprehensive eye exams from the perspective of the patient as well as health literacy, glycemic control, and medication adherence.

Methods
- This study has received approval by the University of Oklahoma Institutional Review Board.
- Sample
  - 150 randomly selected patients having type 2 diabetes actively seen in the OU Physicians Internal Medicine ambulatory care clinic in Tulsa, OK.
- Study Design
  - Prospective, observational survey
  - Patient barriers assessed include: eye exam cost, insurance status, knowledge about diabetic retinopathy, perceptions, health literacy, and overall medication adherence.
- Study Implementation
  - Patients will be surveyed, via telephone or in person, on knowledge, perceptions, barriers of utilizing dilated comprehensive eye examinations and potential barriers using the validated surveys.
- Survey Components
  - 45-item Compliance with Annual Diabetic Eye Exams Survey (CADEES)7
  - 4-item Morisky-4 Medication Adherence Questionnaire8
  - 1-item health literacy screening question9

Statistical Analysis
- A combination of qualitative and quantitative methods will be employed for data collection.
- Descriptive statistics will be used to describe patient characteristics. Common themes will be identified and reported from the qualitative responses.

Survey Tools

Diabetic Retinopathy

Prevalence and Projections

<table>
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<th>Year</th>
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References

Disclosure Statement
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