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

Daniel Trobare  
*University of Oklahoma College of Pharmacy-Oklahoma City*

Katherine S. O’Neal  
*University of Oklahoma College of Pharmacy, Tulsa, OK, katherine-oneal@ouhsc.edu*

Jeremy L. Johnson  
*Southwestern Oklahoma State University, jeremy.johnson@swosu.edu*

Kevin Farmer  
*University of Oklahoma College of Pharmacy-Oklahoma City*

Angela Boston  
*University of Oklahoma College of Pharmacy, Tulsa, OK*

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

Daniel Trobace, PharmD Candidate1; Katherine S. O’Neal, PharmD, MBA, BCACP, CDE, BC-ADM, AE-C2-3; Jeremy L. Johnson, PharmD, BCACP, CDE, BC-ADM4; Kevin Farmer, R.Ph., Ph.D., FAPhA5; Angela Boston, PharmD Candidate6; Daniel Trobare, PharmD Candidate1; Katherine S. O’Neal, PharmD, MBA, BCACP, CDE, BC-ADM, AE-C2; 3; and Southwestern Oklahoma State University College of Pharmacy6

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

Diabetic Retinopathy

Prevalence and Projections

<table>
<thead>
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<th>Year</th>
<th>Cases</th>
<th>Projections</th>
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</thead>
<tbody>
<tr>
<td>2010</td>
<td>10,000</td>
<td>3,000,000</td>
</tr>
<tr>
<td>2030</td>
<td>100,000</td>
<td>4,000,000</td>
</tr>
<tr>
<td>2050</td>
<td>1,000,000</td>
<td>10,000,000</td>
</tr>
</tbody>
</table>

• ADA standards recommend annual screening for patients with type 2 diabetes to include an initial dilated comprehensive eye exam by an optometrist or ophthalmologist. 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.5
• 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.3
• 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 this goal.

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.6
• Previous studies have reported common barriers consisting of short duration of diabetes, lack of insurance coverage, and poor blood glucose control.7

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
• 13 clinical and demographic items, 1 yes-or-no question, 1 open-ended question, and 43 health belief statements

Survey Tools

CADEES Survey7
• Health belief variables related to the 6 constructs of the Health Belief Model (severity, susceptibility, benefits, barriers, cues to action, and self efficacy)
• Adherence items (e.g., satisfaction with eye care provider and depression)
• 13 clinical and demographic items, 1 yes-or-no question, and 43 health belief statements

Morisky-4 Medication Adherence Questionnaire8
1. Do you ever forget to take your medicine?
2. Are you careless at times about taking your medicine?
3. When you feel better, do you sometimes stop taking your medicine?
4. Sometimes if you feel worse when you take the medicine, do you stop taking it?

1-item health literacy screening question
• How confident are you filling out medical forms by yourself?
(Extremely, Quite a bit, Somewhat, A little bit, Not at all)

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.

References


Disclosure Statement

Authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.