Barriers to Diabetic Retinopathy Screening and the Need for Diabetes Education

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PURPOSE
To investigate the compliance with screening for diabetic retinopathy.

BACKGROUND
Diabetic retinopathy is a common complication, and is the leading cause of blindness among adults aged 20–74 years in the United States.1 Diabetic retinopathy is classified into 2 main categories: nonproliferative and proliferative diabetic retinopathy. Based on its clinical characteristics, diabetic retinopathy can further be subdivided into mild, moderate, and severe stages.2
According to CDC 2011, between 2005 and 2008, 4.2 million (28.5%) people with diabetes aged 40 years or older had diabetic retinopathy, and of these, 655,000 (4.4% of those with diabetes) had advanced diabetic retinopathy that could lead to severe vision loss.3
The development of severe vision loss due to diabetes can be reduced by approximately 50% to 60% through timely laser treatment.2
ADA recommendations for screening of diabetic retinopathy:1
- Initial dilated and comprehensive eye examination is recommended for adults and children aged 10 years or older with type 1 diabetes within 5 years after the onset of illness and patients with type 2 diabetes shortly after the diagnosis of diabetes.
- Follow-up annual eye examination is recommended for most of patients; less frequent eye exam (every 2-3 year) may be considered after one or more normal eye exam; or more frequent eye exam needed for progressive retinopathy.
- A dilated and comprehensive eye examination should be performed by an ophthalmologist or an optometrist.
- Retinal photographs read by a trained eye care provider may serve as a screening tool, but it is not a substitute for a comprehensive eye exam.

DESIGN
The survey was conducted in one inpatient (N=70) and two outpatient settings (N_A=25 & N_B=38).
Participants were referred for diabetes education at these sites.

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Inpatient N=70</th>
<th>Clinic A N=25</th>
<th>Clinic B N=38</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (years)</td>
<td>54</td>
<td>59</td>
<td>60</td>
</tr>
<tr>
<td>Gender (Male/Female)</td>
<td>M=25, F=44</td>
<td>M=9, F=16</td>
<td>M=26, F=12</td>
</tr>
<tr>
<td>Race: Caucasian African American</td>
<td>40</td>
<td>30</td>
<td>23</td>
</tr>
<tr>
<td>Classification of diabetes: Type 1 Type 2</td>
<td>7</td>
<td>63</td>
<td>23</td>
</tr>
<tr>
<td>Mean most recent A1C</td>
<td>9.3% (N=56)</td>
<td>7.6% (N=25)</td>
<td>8.7% (N=27)</td>
</tr>
<tr>
<td>Medical insurance coverage</td>
<td>57 (81.4%)</td>
<td>22 (88%)</td>
<td>37 (97.4%)</td>
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</tbody>
</table>

CONCLUSIONS and RECOMMENDATIONS
- 44% of participants didn’t meet the screening guidelines for diabetic retinopathy. Knowledge deficit and affordability were the two most common reasons (83.4%) for non-adherence.
- Diabetes educators can play a key role in increasing patient awareness of the benefits of routine retinal screening.
- Affordable, convenient screening programs are necessary to improve the compliance with current retinal screening guidelines.

REFERENCES